

SAMPLE COLLECTION:

# LOCAL ACTIONS FOR BIODIVERSITY



Inspiring examples from the Nordic UNESCO  
Biosphere Reserves

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This publication is also available online in a web-accessible version at:  
<https://pub.norden.org/nord2025-011>



# MAB-LAB

MAB-LAB is a collaboration between the UNESCO Man and Biosphere Reserves in the Nordic countries. LAB stands for Local Actions for Biodiversity, and the overall purpose of MAB-LAB is articulated as follows:

*To strengthen Nordic cooperation between Biosphere Reserves under the auspices of UNESCO, in order to improve the Nordic countries' implementation of the Global Biodiversity Framework (GBF) and contribute to the realization of the Nordic Council of Ministers' vision of being the most sustainable and integrated region in the world.*

MAB-LAB is developed in collaboration with and funded by Nordic Council of Ministers' Nordic Working Group for Biological Diversity.

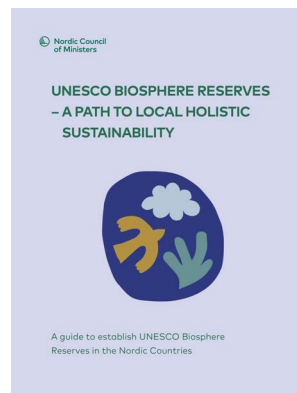
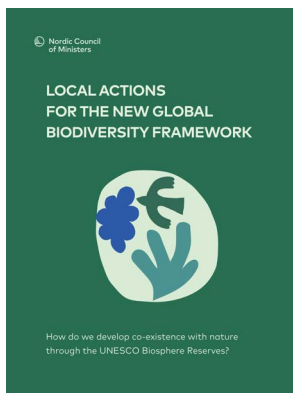
First phase of MAB-LAB resulted in the adaptation of the GBF for local implementation through UNESCO Biosphere Reserves.

*MAB-LAB I completed the following:*

1. *Translated the GBF into the context of UNESCO Biosphere Reserves,*
2. *Developed a guide outlining the requirements for becoming a UNESCO Biosphere Reserve, and*
3. *Mapped potential new UNESCO Biosphere Reserves in the Nordic region (not published).*

Read the translation: <https://www.norden.org/en/publication/local-actions-new-global-biodiversity-framework>

Read the guide to establish an UNESCO Biosphere Reserve:  
<https://www.norden.org/en/publication/unesco-biosphere-reserves-path-local-holistic-sustainability>



# THRIVING OF ALL SPECIES

The interaction between nature and humanity is a critical focus in today's world. As we have distanced ourselves from nature, it's crucial to understand that in the Earth's ecosystem, one cannot take without also giving back. Creating a better balance is imperative, necessitating a holistic approach to living, dwelling, and cultivating for the thriving of all species.

Establishing an UNESCO Biosphere Reserve is one way to initiate local collaboration to strengthen the interactions with environments that sustain both nature and people.

UNESCO Biosphere Reserves are designed to deal with one of the most important questions the world faces today: How can we reconcile the conservation of biodiversity, the quest for economic and social development and the maintenance of associated cultural values?

As UNESCO's Man & the Biosphere (MAB) Programme has evolved, its biosphere reserves have become its principal means of implementation. The biosphere reserve concept has proved its value beyond the protected areas that each biosphere reserve contains. It is also increasingly embraced by scientists, planners, policymakers, businesses, and local communities as a way to link diverse knowledge, scientific investigations and experiences to biodiversity conservation and socio-economic development for human well-being.

An UNESCO Biosphere Reserve is not merely a conservation title but a tool for the well-being of both humans and the environment. Local engagement, representation, and a bottom-up approach are crucial. The location must be representative of its biogeographic region, significant for biodiversity, and involve effective governance, diverse funding, and a focus on three functions: Conservation, Development, and Logistic Support. Get more details in the guide to establish an UNESCO Biosphere Reserve:

<https://www.norden.org/en/publication/unesco-biosphere-reserves-path-local-holistic-sustainability>

## Local implementation of the Global Biodiversity Framework

If we are to meet the goals and targets of the Kunming-Montreal Global Biodiversity Framework (GBF) we need a diverse approach. To reach these goals, a range of instruments, tools, actions, and traditional protection measures are necessary and needed.

The UNESCO Man and the Biosphere Program (MAB) offers a holistic and well-documented tool to address global challenges such as climate change and the biodiversity crisis through local actions.

With the agreement on the GBF, Nordic Cooperation is presented with a unique opportunity to lead the way globally with holistic, integrative, and bottom-up contributions, directly interacting with national and global perspectives, frameworks, and priorities.

In a collaboration between the UNESCO Man and Biosphere Reserves (MAB) in the Nordic countries we have invented the MAB-LAB project. LAB stands for Local Actions for Biodiversity, and the overall purpose of MAB-LAB is articulated as follows:

*To strengthen Nordic cooperation between Biosphere Reserves under the auspices of UNESCO, in order to improve the Nordic countries' implementation of the Global Biodiversity Framework (GBF) and contribute to the realization of the Nordic Council of Ministers' vision of being the most sustainable and integrated region in the world.*

MAB-LAB is developed in collaboration with and funded by Nordic Council of Ministers' Nordic Working Group for Biological Diversity.

First phase of MAB-LAB resulted in the adaptation of the GBF for local implementation through UNESCO Biosphere Reserves:

<https://www.norden.org/en/publication/local-actions-new-global-biodiversity-framework>

The purpose of the MAB-LAB project is to facilitate local implementation of the GBF and to strengthen the opportunities and competences of local communities to work strategically and place-based with sustainable development, including a recognition of the need to improve the relationship between nature and culture.

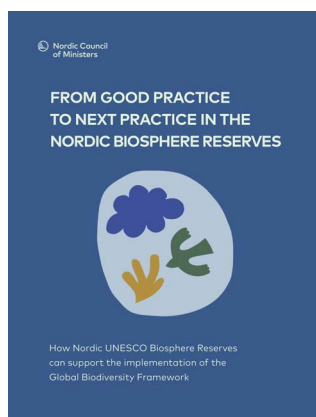
To follow up on the reports from the project MAB-LAB I, we are in MAB-LAB II looking into good practises in Nordic UNESCO Biosphere Reserves (BRs) have conducted how BRs already contribute to the different goals set in the GBF.

This report is a sample collection of good cases in Nordic UNESCO Biosphere Reserves work with biodiversity and related initiatives for the GBF.

Some of the samples are also the backbone in the MAB-LAB II report *"From good practice to next practice in the Nordic Biosphere Reserves - How Nordic UNESCO Biosphere Reserves can support the implementation of the Global Biodiversity Framework"* which contains a method for moving from *"Good practice to next practice"* with a view to increasing the capacity and catalyzing actions locally for the GBF.

[LOCAL ACTIONS FOR BIODIVERSITY: From good practice to next practice in the Nordic Biosphere Reserves](#)

This project and publication are supported and funded by the Nordic Council of Ministers - Nordic Working Group for Biological Diversity.



# UNESCO MAN AND THE BIOSPHERE

A UNESCO Biosphere Reserve is an area designated by UNESCO as part of the Man and Biosphere (MAB) programme. Explained by UNESCO in the following way:

*"The Man and the Biosphere (MAB) programme is an intergovernmental scientific programme that aims to establish a scientific basis for enhancing the relationship between people and their environments. It combines the natural and social sciences with a view to improving human livelihoods and safeguarding natural and managed ecosystems, thus promoting innovative approaches to economic development that are socially and culturally appropriate and environmentally sustainable.*

*Its World Network of Biosphere Reserves is a dynamic and interactive network of sites of excellence that foster harmony between people and nature for sustainable development through participatory dialogue; knowledge sharing; poverty reduction and human well-being improvements; respect for cultural values and society's ability to cope with change."*

[www.unesco.org/en/mab](http://www.unesco.org/en/mab)

Please look into how to establish a UNESCO Biosphere Reserve in the previous MAB-LAB report: <https://www.norden.org/en/publication/unesco-biosphere-reserves-path-local-holistic-sustainability>



# SAMPLE COLLECTION OF LOCAL ACTIONS FOR BIODIVERSITY

		Delivery to the focal points: X = Main focal point					
Biosphere Area	Activity	No. 1	No. 2	No.3	No. 4	No. 5	No. 6
DENMARK							
Møn UNESCO Biosphere	Biosphere Ambassador Programme	X	X		X		
	Supported by Nature	X			X		X
	Leaving No Trace	X	X		X		
	LIFE Orchids	X	X		X		
FINLAND							
North Karelia	Land of epic poetry: Koitajoki watershed restoration	X	X	X	X	X	X
	Communal Wetlands of Issakka, Ilomantsi	X		X	X	X	
	Collaboration Group and Koitajoki-Koitere forum of Koitajoki river Watershed	X	X	X	X	X	X
	Concrete actions for biodiversity in the villages of NKBR	X	X	X	X		X
	SUPER: Sustainability Under Pressure: Environmental Resilience in areas with intensive recreation			X			X
Archipelago Sea Area	Biosphere Academy is strengthening young people's sense of belonging	X	X	X	X		
	I am part of the Biosphere – promoting shared responsibility and ownership of the Biosphere Reserve	X	X	X	X	X	X

SWEDEN							
Kristianstad Vattenriket	Eelgrass planting – Recreating the Vitality of the Baltic Sea	X					
	Piggastan sand dunes	X		X	X		
	Shovels, flowers, and bees in Biosphere Classroom Sännarna	X		X	X		
	Innovative solutions to restore coastal meadows	X	X	X			
Vindelälven	Action plan for the white back woodpecker	X	X	X	X	X	X
	Route to Paris	X	X	X	X	X	
	How does nature benefit people of the Vindelälven-Juhtátahkka Biosphere Reserve?		X		X		X
	The SUPERB project	X	X	X	X	X	X
	Green planning as a way of overcoming environmental challenges		X	X		X	X
Voxnadalen	Improving habitat for fish and wildlife in small strams of the river Voxnan catchment	X		X	X		
Lake Vänern Archipelago and Mount Kinekulle	Analysis of infrastructure for biological diversity	X	X	X		X	
	Ecosystem services – an integrative instrument for sustainable living environments in practice?	X	X	X		X	
	Strengthened biodiversity along power lines streets at Kinnekulle	X	X	X		X	
	The Nature benefit network	X	X	X	X		
	GöteneBostäder – Biosphere Outdoor Environment	X	X	X	X	X	X
	The Semper Pollinator Path – Götene Biosphere Corridor	X	X	X	X	X	X
	The Value of Nature Project			X	X	X	

ICELAND					
Snæfellsnes Biosphere Candidate	Citizen Science Seal project	X	X	X	X
NORWAY					
Nordhordland	GBF – Naturavtalen	X			X
	The taste of Nordhordland UNESCO Biosphere		X		
	Exhibition: circular resources in Nordhordland		X	X	
	On the hunt for ecosystem services			X	
	Sustainability, biosphere, and libraries			X	
	Research in Nordhordland			X	
	Biosphere day			X	X

As the table shows, several of the activities are broad in scope and have content that is relevant to several of the focus points. This table provides a rough overview of how the activities are distributed across the 6 focal points that contribute to the Global Biodiversity Framework.

1. Conservation of Biodiversity	16
2. Sustainable use of resources	11
3. Research and education	16
4. Community engagement and participation	17
5. Policy support and implementation on a local level	5
6. International cooperation and networking	6



# NORDIC APPROACH

For the GBF to succeed in the Nordic countries, it is crucial to embrace innovative thinking and foster new forms of collaboration, particularly at the local level. The task is both large and complex, requiring cross-sectoral cooperation and the involvement of a wide range of stakeholders. This collaboration must occur both horizontally, across different sectors, and vertically, involving multiple levels of governance and engagement. We have here collected good practice from all over the Nordic countries.

→ DENMARK

→ FINLAND

→ SWEDEN

→ ICELAND

→ NORWAY



# DENMARK

## Møn UNESCO Biosphere

Biosphere Ambassador Programme

Supported by Nature

Leaving No Trace

LIFE Orchids





# Biosphere Ambassador Programme

**Name of the Biosphere Reserve:** Møn UNESCO Biosphere Reserve

**Main goal/purpose:** The purpose of this activity is to ensure local engagement and participation in the biosphere reserve, to communicate about the biosphere reserve and to involve locals in obtaining the Man & Biosphere goals.

**Target groups:** Local community – citizens, private sector, and local associations

**Stakeholders involved:** Local community – citizens, private sector, and local associations

**Project period:** 2017 – on-going

## Description of the project

Møn UNESCO Biosphere Reserve has an ambassador programme inviting local citizens, private businesses, and local associations to become ambassadors of the biosphere reserve.

The ambassadors are in many respects the backbone of our work as they communicate and share about the biosphere reserve and make efforts, activities and projects that support a sustainable way of living in balance with nature.

Møn UNESCO Biosphere Reserve regularly offers ambassador courses, where existing and new ambassadors can participate in an experience-oriented learning course preparing them to the role as ambassadors.



## Results and effects

The result is that we have 150+ local ambassadors – citizens, associations and companies that take part and feel connected to the biosphere reserve.

### **The ambassadors assist the biosphere reserve in following ways:**

- Contribute to the task of ensuring the local community's development in balance with nature.
- Advocate for the Møn UNESCO Biosphere Reserve and strengthen the story of the Møn Biosphere Reserve.
- Welcome and share local knowledge about Møn Biosphere.
- Contribute to projects, meeting places, activities, and communities, where you spread knowledge about how to live in harmony with nature.
- Business - increase the value of the product / service and develop new sustainable products and initiatives.

### **Focal points:**

#### **1. Conservation of Biodiversity**

#### **2. Sustainable use of resources**

#### **4. Community engagement and participation**

The overall focal point is ensuring 'Community engagement and Participation' in obtaining goals on biodiversity conservation.

Secondly the biosphere ambassadors also contribute concrete to 'biodiversity' conservation through participation in projects and activities (e.g., working with rewilding).

Thirdly, our overall integrated approach to sustainable development in the biosphere reserve promotes the 'holistic approach to conservation'.

Read more:

[Forside | Biosfære Vordingborg](#)

# Supported by Nature

**Name of the Biosphere Reserve:** Møn UNESCO Biosphere Reserve

**Main goal/purpose:** The EU Interreg project Supported by Nature aims to increase the understanding of Nature Based Solutions and how they contribute to improved environmental conditions and the promotion of biodiversity in the Baltic Sea.

**Target groups:** Planning departments, the public, universities and other educational institutions, local schools, and high schools

**Stakeholders involved:** Biosphere reserves and universities from six countries around the Baltic Sea, Aarhus University, Møn Rock Reef Association, Møn Sports Fisher Association, Møn Diver association, Klintholm Vandklubben Association, local schools, and high schools.

**Project period:** 11/23 – 10/26

## Description of the project

The project brings six countries around the Baltic Sea together for one mission – to increase the understanding of Nature Based Solutions for a more sustainable Baltic Sea.

The project is anchored in the network of UNESCO biosphere reserves called 'Biosphere for Baltic' which in 2023 received funding for the project Supported by Nature from the Interreg Baltic Sea Programme.

The project received close to 3.6 million euros in EU funding and is a collaborative project for the network. It will run for three years and has been selected as a core project by the monitoring committee for the Interreg Baltic Sea Region.

Within the Møn UNESCO Biosphere Reserve, the project focuses on working with coastal water habitats. The biggest activity in the new EU project is the establishment of an experimental rock reef in the biosphere area, which will also be one of the project's 17 learning sites in total.

A preliminary investigation will contribute to uncovering possible locations for the test rock reef as well as making project proposals for size and scope. The future rock reef will function as a place of learning with associated communication, which will help to inspire others to similar activities that can promote biodiversity in the Baltic Sea. Alongside the work with the stone reef, work is being done on coastal outreach with, for example, fish nurseries in a harbor or the like.

The project applies a multistakeholder approach and involves a broad spectrum of national and local stakeholders to enhance sustainability. Møn UNESCO Biosphere Reserve is collaborating closely with Aarhus University and local associations, e.g., Møn Sports Fishing Association, Møn Diver Association. The project has as a start also facilitated establishment of a local rock reef association, Møn Rock Reef Association, which will be a main partner through project implementation.



## Results and effects

By raising awareness on the conservation, restoration and sustainable use of the Baltic Sea and its resources an improved public knowledge will be build.

Learning site with a test rock reef established with information signs at the site that raise awareness in the public.

Improvement of biodiversity in harbor's, e.g., biohuts serving as fish nurseries.

A practical guide building knowledge about Nature Based Solutions will be developed and shared with target groups.

The long-term goal is that a better knowledge base will lead to more frequent and more adequate use of Nature Based Solutions in planning processes as well as in land and sea management.

## Focal points:

- 1. Conservation of Biodiversity
- 4. Community engagement and participation
- 6. International cooperation and networking

The projects centres on restoring biodiversity in waters through a multistakeholder approach engaging both local and national stakeholders. It is anchored in an international network of biosphere reserves around the Baltic Sea, who will exchange, document, and communicate best practices jointly.

Read more:

[Supported by Nature - Interreg Baltic Sea Region](#)

[Nordic UNESCO Biosphere Reserves contribution to Global Biodiversity Framework](#)



# Leaving No Trace

**Name of the Biosphere Reserve:** Møn UNESCO Biosphere Reserve

**Main goal/purpose:** The objective is to increase the awareness of **Leaving No Trace** for everyone who travels in nature and in the biosphere reserve and thus to contribute to a moral and way of thinking for responsible behaviour that preserves nature. The project also aims to deliver a concept/brand that conveys and concretizes this knowledge.

**Target groups:** Residents, tourists, landowners, trade, and tourism players.

**Stakeholders involved:** Local citizens, tourism actors, voluntary biosphere ambassadors

**Project period:** 2022 – on-going

## Description of the project

With climate change and higher temperatures in Southern Europe, as well as a possible designation as UNESCO World Heritage at Møns Klint, Møn Biosphere foresee a new form of and potential increased tourism. How many tourists can nature and our hotspots support, and are we good enough to guide tourists to the more robust areas in nature?

Throughout 2023, a project under Møn Biosfære has focused on 'Leaving No Trace' and investigated how both residents and guests can take care of Møn's nature through a responsible behaviour. This has led to a report, which was prepared by the working group behind Leaving No Trace, consisting of Biosphere Ambassadors and employees of the Biosphere Secretariat and Vordingborg Municipality.

The report has provided insight into and understanding of concrete challenges in people's traffic in nature on Møn, and it presents 10 areas of intervention and more than 60 concrete action initiatives that can contribute to increased awareness of how to experience nature by leaving no trace.

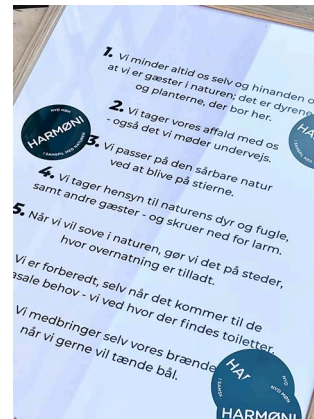
Tourism and nature conservation are not necessarily at odds with each other and the first step to implement initiatives of Leaving No Trace, has been through a campaign addressing both locals and guests.



When tourists arrived on Møn summer 2024, they have been met by a new campaign HARMØNI. The message is that guests on Møn must take good care of the island's nature and leave no trace of their visit.

'HARMØNI is a friendly nudging attempt to create awareness among both Møn residents and tourists about how we take care of the nature we all want to visit'. It presents a code of conduct and a manifest for people visiting Møn and our nature.

Møn UNESCO Biosphere and Visit Sydsjælland & Møn are helping to spread the campaign with the aim of speaking to and attracting tourists who are willing to take part in the nature protection of Møn. When the guests leave Møn, they must have learned how to take care of nature themselves. As UNESCO's biosphere reserve, we are a model area for sustainable development and want to create learning and information as an important element.



## Results and effects

- Creating awareness amongst all residents and guests on how to experience nature in a responsible way.
- Contributing to development of regulation and infrastructure that supports nature restoring in the biosphere reserve.
- Reaching people/changing behaviour through continually focusing on nudging communication.
- Building a local sustainable tourism profile to attract the right guests.

## Focal points:

1. Conservation of Biodiversity
2. Sustainable use of resources
3. Community engagement and participation

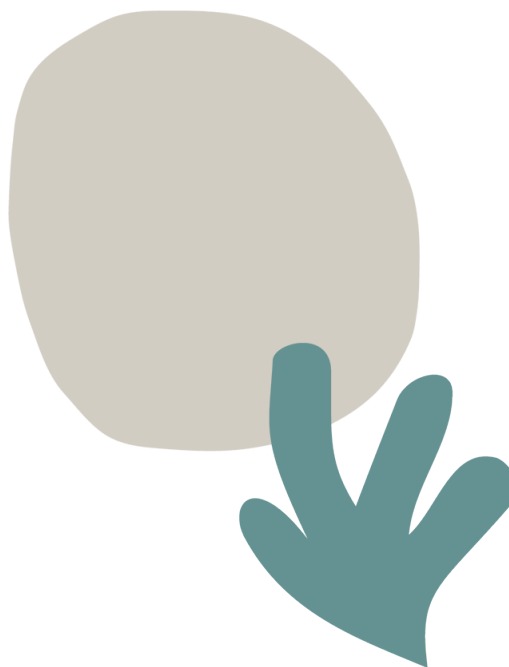
The project engages both local and guests in how they through their own behaviour can contribute to sustainable use of nature and restoring biodiversity.

Read more:

[Forside | Biosfære Vordingborg](#)

[Forside | HARMØN](#)

[HARMØNY | Sydsjælland & Møn](#)



# LIFE Orchids

**Name of the Biosphere Reserve:** Møn UNESCO Biosphere Reserve

**Main goal/purpose:** The purpose of LIFE Orchids is to develop and connect existing EU priority pastures at Østmøn. The aim is to secure the unique grasslands and endangered species such as orchids, butterflies, and wild pollinators.

**Target groups:** Landowners, the public (local and tourists).

**Stakeholders involved:** The project is a partnership project with Ravn Nature, the Danish Nature Agency Storstrøm, GeoCenter Møns Klint, ELO and EUROSITE and in close collaboration with Klintholm Estate, which participates in the project with 111 hectares.

The project is financed by the EU's LIFE Program, Aage V. Jensens Naturfond, 15. Juni Fonden, Den Danske Naturfond and Vordingborg Municipality.

**Project period:** 11/2023 – 10/2026

## Description of the project

The project will develop, improve, and connect 230 hectares of grassland, create new habitats, and increase the population of the nationally threatened butterfly, Greater Large Blue.

It will simultaneously increase and secure populations of 5 highly threatened orchids as well as improve and increase habitats for wild bees and other pollinators.

The arable land and plantation forest will be restructured into limestone grassland and light-open orchid and butterfly forests introducing large grazing paddocks with cattle, goats, and Exmoor horses.

On the dissemination side, the project will increase the knowledge of landowners and the public about nature restoration and the care of natural areas through various dissemination activities.



## Results and effects

The result of the project is improved habitats for larger great blue and orchids as well as several other species.

Landowners and the public have been targeted through continual dissemination activities, such as a high-profile public exhibition on Biodiversity at GeoCenter Møns Klint, talks and excursions for tourists and school classes.

### Focal points:

1. Conservation of Biodiversity
2. Sustainable use of resources
4. Community engagement and participation

Read more:

[LIFE Orchids og Sortplettet Blåfugl | Biosfære Vordingborg](#)





## FINLAND

### North Karelia

[Land of epic poetry: Koitajoki watershed restoration](#)

[Communal Wetlands of Issakka, Ilomantsi](#)

[Collaboration Group and Koitajoki-Koitere forum of Koitajoki river Watershed](#)

[Concrete actions for biodiversity in the villages of NKBR](#)

[SUPER: Sustainability Under Pressure: Environmental Resilience in natural and cultural heritage areas with intensive recreation](#)

### Archipelago Sea Area

[Biosphere Academy is strengthening young people's sense of belonging](#)

[I am part of the Biosphere - promoting shared responsibility and ownership of the Biosphere Reserve](#)

# Land of epic poetry: Koitajoki watershed restoration

**Name of the Biosphere Reserve:** North Karelia Biosphere Reserve (NKBR)

**Main goal/purpose:** The goal is a basin-wide traditional knowledge and science-based catchment restoration that will re-establish connectivity through creation of aquatic and forest corridors and restore up to 1000 hectares of boreal peatlands. Project also aims to stimulate a resurgence of traditional knowledge, oral histories, and local governance in villages along the river.

**Target groups:** Local communities of Ilomantsi, Ilomantsi municipality, landowners, and forestry companies

**Stakeholders involved:** Project is coordinated and implemented by Snowchange cooperative. Stakeholders include Visit Ilomantsi, North Karelia BR (Snowchange is part of the partnership network of the BR), The Gaia Foundation, Tornator Oyj, Metsähallitus Metsätalous Oy and Luontopalvelut, University of Eastern Finland, Ilomantsi municipality

**Project period:** Until the end of 2027

## Description of the project

The project aims to restore several key features of the Koitajoki watershed to ecological health. By the end of the project, created wetlands, ecological corridors and restored peatland marsh mires will protect waters downstream and enhance biodiversity, restoring carbon and water cycles. Webs of life will begin to re-establish what industrial land use has removed – the interconnected aquatic and terrestrial matrix of Koitajoki. Restored hydrological interconnectivity will benefit whitefish, trout, grayling, and land-locked Atlantic salmon, addressing issues that have affected the basin for over 70 years. Restoration and increased conservation around terrestrial 'core areas' will be established as a model for the restoration of similar areas in the boreal forest suffering from ecological fragmentation.

### **To achieve this, the project will:**

- Conduct ecological surveys to ensure restoration efforts are targeted.
- Restore peatland habitats, through re-wetting drained marshes.
- Restore forest ecosystems by increasing decaying timber and removing invasive species.
- Restore rivers, lakes, and streams through adding gravel to spawning grounds, placing timber, rocks, and stones in waterways, and dredging if necessary.
- Establish ecological corridors of boreal forest.
- Remove barriers to fish migration and produce the initial dialogues that could enable dam removal in the future.
- Hire local teams and operators to conduct the restoration activities, injecting funding into village economies.
- Engage with local communities to move them towards a new, sustainable, economic model.
- Pilot and develop River Guardian programme where locals conduct citizen science

## **Results and effects**

### **The project will:**

- Increase focus on nature-based activities, eco-tourism, and cultural heritage.
- Increase the number of women and young people engaged through River Guardian programme.
- Improve pH, organic and chemical loading conditions concerning water quality by blocking ditches and returning the functionality of key peatlands.
- Improve vegetation composition in mires under restoration by refilling ditches, which eventually saturates the area with water and promoting the presence of the plant species that are typical to healthy peatland.
- Advance candidacy for UNESCO World Heritage Status
- Identify forest patches suitable for protection and natural regeneration to improve the connectivity especially of the old-growth patches.
- Increase abundance of endangered fish in restored waterscapes by preventing organic matter from ending up in riverbeds, by creating spawning grounds, and removing barriers from migratory fish
- Increase abundance of birds by peatland restoration, by enhancing old-growth forest corridors and restoring and constructing small wetlands for water quality protection



## Focal points:

### 1. Conservation of Biodiversity

### 4. Community engagement and participation

#### The project...

- improves vegetation composition, abundance of endangered fish and birds by. After restoration forestry actions in the area are forbidden (1)
- engages especially women and youth through River Guardian programme and voluntary work, honours the traditional knowledge of the communities (4)

#### It also contributes to the remaining focal points by:

- Showcasing alternative sustainable ways of livelihoods by employing local contractors and people and showcasing alternative usage for ditched peatlands that have little of economic forestry value (2)
- Surveying the visitor motivations, monitoring changes in the restored peatlands (3)
- Implementing climate change mitigation action on a local level, creating ownership and engagement among the locals, and promoting local dialogue (5)
- Being funded by international Endangered Landscapes Programme that promotes the learned good practises and the project collaborates with the NKBR (6)

Read more:

[Koitajoki Watershed | Endangered Landscapes & Seascapes Programme](#)

[Pohjois-Karjalan biosfäärialue](#)



# Communal wetland of Issakka, Ilomantsi

**Name of the Biosphere Reserve:** North Karelia Biosphere Reserve (NKBR)

**Main goal/purpose:** The main goal is to improve water quality, create new habitats and increase sense of community in Mäkikylät villages by building a mosaic of connected wetlands.

**Target groups:** The community of Mäkikylät villages, other inhabitants of Ilomantsi and tourists

**Stakeholders involved:** The wetland project of Mäkikylät village association and the construction is done on the lands of private villager. Centre for Economic development, transport and the environment has funded and guided in the process. Vaara-Karjalan Leader association has funded the construction of communal structures. NKBR has taken part in the dissemination of the actions. Mäkikylät association is part of the partnership network of the BR.

**Project period:** Building of the wetlands have started in 2021 and newest wetland will be built 2024–2025.

## Description of the project

Issakka wetlands are a project of the local village association Mäkikylät ry. Mäkikylät ry consists of three neighboring villages: Issaka, Paavonvaara and Maukkula. The project consists of constructing several wetlands that are connected in the watershed of Ilomantsijärvi lake. In the surroundings recreational structures such as nature paths, communal garden, play areas for kids and place for campfire are also built for the whole community.

The project has created a collage of wetlands that improves water quality of the waters, creates new habitats for wildlife and creates communal place for the locals to use for recreation, environmental education and as site for events. It is an example for landowners on how their unproductive lands could be used for the improvement of biodiversity and water protection.

The wetlands are based on fallow fields that have been unused for years. The total area of the wetlands is about 1.25 hectares, and the forest area connected to them is protected. A lot of the work has mainly been conducted by voluntary workers, but the project has included, in addition to planning, various excavation works, excavating wetlands, transporting earth masses and landscaping work.



## Results and effects

The construction of wetlands reduces diffuse pollution from the catchment area to water bodies and improves the water quality of Ilomantsijärvi lake. In a functioning wetland, natural processes clean the water and the time the water stays on its way to the water body is prolonged. The solid settles to the bottom of the wetland and the dissolved substances are retained in the vegetation and sediment of the wetland. At the same time, wetlands offer important nesting, eating and resting areas especially for birds.

As attention has also been paid to the recreational opportunities offered by the wetlands project it offers now good opportunities for camping while increasing interest in the area. The benefits from the whole are manifold, and in addition to the natural values, the project has increased the sense of community in the area.

### Focal points:

#### 1. Conservation of Biodiversity

#### 4. Community engagement and participation

### The project...

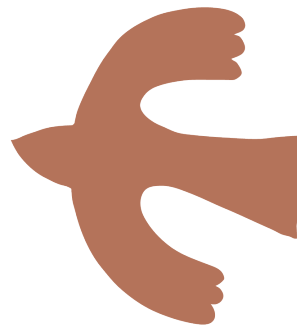
- improves water quality, creates new habitats for wetland species and supports the protected areas connected to the area (1)
- focussed on recreational values as part of the process from the start. Locals have been informed of the construction throughout the process and everyone has been welcome to take part in the planning and actions. (4)

**It also contributes to the remaining focal points by:**

- The project showcases the process of building of communal wetlands and gives an example of what kind of environmental actions village associations and landowners could do. The process has been assembled in a thesis work that also measured the water quality before the project giving a comparison value for further measurements. (3)
- The project has been a concrete measurement in the implementation of regional water management action plan aims to secure the good state of the waters. The action plan is based on the Water Frame Directive. (5)

Read more:

[KARELIA-AMMATTIKORKEAKOULUPohjois-Karjalan biosfäärialue](#)



# Collaboration group and Koitajoki-Koitere forum of Koitajoki river watershed

**Name of the Biosphere Reserve:** North Karelia Biosphere Reserve (NKBR)

**Main goal/purpose:** The Koitajoki-Koitere collaboration group aims to bring together actors and people that are interested in environmental issues and the use of natural resources in the Koitajoki catchment area. The collaboration group and the annual forum form a combination that promotes dialogue between citizens and different actors. The overall aim is at improving the environmental condition of the Koitajoki catchment area and generating new information.

**Target groups:** The municipality, villagers, local communities, tourism entrepreneurs, forestry companies, peat production companies, mining company, fishery areas, university, governmental organisations, research institutes, nature conservation association

**Stakeholders involved:** The municipality, tourism entrepreneurs, forestry companies, fishery areas, university, governmental organisations, research institutes, nature conservation association, NKBR acts as a secretary for the group

**Project period:** The collaboration and annual forum were established and piloted during Freshabit LIFE project (2016–2022), but the collaboration continues as "a voluntary action"

## Description of the project

The goal of the cooperation group is to promote the discussion and exchange of information between the different parties and cooperation to increase and promote concrete actions. Group meetings are a platform to present e.g., new (research) information about the area, planned and ongoing measures, project activities, planning matters, upcoming funding, etc., so that actors in the area know about each other's actions and can also gain synergy benefits in their operations through cooperation. The cooperation group itself is no active actor, but it promotes the activities and cooperation of the parties involved in it.

Collaboration group is open to everyone, and the group meets 1-4 times a year. The meetings of the cooperation group and the discussions held in them also prepare Koitajoki-Koitere forum. The purpose of themed meetings is to think through discussions viewpoints of interest to a wider audience and together look for good topics for the forum in a chosen theme.

The convenors of the meetings change and any actor with for example an on-going project can promote the actions of the group. The cooperation group itself chooses the convener of the meetings.

The Koitajoki-Koitere forums are open public events where the Koitajoki area and on-going project work can be disseminated. The aim of the forums is to find solutions to errors instead of focusing on failures. Forums are organized about once a year, and they give those who are interested in the themes the opportunity to participate and express their own opinions.

The Koitajoki-Koitere forum does not have established funding, thus a separate support is needed for the organization for example, from an ongoing project or some operator.



## Results and effects

The results from the collaboration and forum include:

- exchange of knowledge on e.g., research results, funding opportunities, on-going actions, good practises
- creation of new projects and synergies through collaborations
- a way for locals to voice their viewpoints to academia and governmental organisations.
- a channel for projects to reach out to locals

## **Focal points: 2 & 4**

### **2. Sustainable use of resources**

### **4. Community engagement and participation**

#### **The project...**

- promotes discussion on the use of land, biodiversity loss and sustainable use of natural resources and the sustainability of livelihoods (2 and to some extent 1)
- offers a platform for locals to get their voices heard (4)

#### **It also contributes to the remaining focal points by:**

- promoting dialogue between research organisations and locals (3)
- inviting the municipality and local politicians in the meetings and forums (5)
- the collaboration group is open to exchange good practises and learn from experts in international networks of the participants (6)

Read more:

[Pohjois-Karjalan biosfäärialue](#)

[Freshabit Life IP Koitajoki – Pohjois-Karjalan biosfäärialue](#)

# Concrete actions for biodiversity in the villages of NKBR

**Name of the Biosphere Reserve:** North Karelia Biosphere Reserve (NKBR)

**Main goal/purpose:** The goal of the projects is to create environmentally wise and sustainable village communities in the countryside. Carbon wisdom, sustainable development and concrete environmental actions are promoted as a strength and attraction factor for village communities and rural areas.

**Target groups:** Village associations, village and rural communities, cottage owners, entrepreneurs and actors working in the rural areas

**Stakeholders involved:** North Karelia Biosphere Reserve, Leader Associations, Rural Services (Maaseutupalvelut)

**Project period:** 2024–2026

## Description of the project

Villages or other rural communities are engaged in the planning and implementation of concrete actions for conserving species, biotopes, and cultural environments and to use gained knowledge on developing their community. Villages are also encouraged and helped in the preparation of new environmental projects and in applying for funding.

There are already many kinds of solutions and tools for rural environmental and climate challenges, they just need to be made better aware of and used by operators. Community-based, locally implemented measures to improve the state of the environment support the achievement of environmental and climate goals. What is done and learned together is also more easily transferred to individuals and households for their own use and thus spreads into everyday life and practices.

Organised workshop topics vary from making biochar to preventing invasive species from spreading, creating living environments for birds and insects to planting seedlings and building traditional wooden and stone fences. Actions organised by the villages include for example creating communal gardens, restoration of nature paths and removal of invasive species.



## Results and effects

- During the project or due to the environmental actions made, the state of the area's environment will concretely improve.
- Villages or other communities within the biosphere reserve will take part and at least one concrete action will be implemented with each participant.
- Projects aid communities in project planning specially to take environmental aspects into consideration thus aiding in getting further environmentally friendly projects in the villages.
- Theme events are organised to promote sustainable way of life.

Study visits to Archipelago Sea Biosphere (with 30 locals and representatives of actors will take part) and some other European Biosphere will be organized. The aim is to increase collaboration between different actors and biosphere reserves.

## Focal points:

### 1. Conservation of Biodiversity

### 4. Community engagement and participation

## The project...

- promotes and implements concrete actions in villages that increase and cherish biodiversity (1)
- engages locals to plan what kind of environmental actions they would like to implement in their environment. The concrete actions are implemented in collaboration with the locals themselves. (4)



**It also contributes to the remaining focal points by:**

- promoting sustainable ways of life and sharing good practises that people can implement in their everyday life (2)
- offering concrete workshops that educate people in the rural areas on what kind of actions can promote biodiversity, restore environment, and cherish local traditions (3)
- organising a study visit to a European biosphere reserve to ignite new cooperation and networking between biospheres (6)

Read more:

[Concrete Actions for Biodiversity \(CONABI\) -hanke – Pohjois-Karjalan biosfäärialue](#)

<https://kareliabiosphere.fi/kestavatkylat>

[Concrete actions for biodiversity](#)

[Pohjois-Karjalan biosfäärialue](#)



# SUPER: Sustainability Under Pressure: Environmental Resilience in areas with intensive recreation

**Name of the Biosphere Reserve:** North Karelia Biosphere Reserve (NKBR)

**Main goal/purpose:** The project brought together four UNESCO sites (Kizhi Museum, Vodlozersky and Kuganavolok village BR, Rokua Geopark and North Karelia BR) and aimed creating conditions to improve environmental resilience of the selected pilot territories. All the areas were protected, valuable natural and cultural heritage areas with high number of visitors. The project goal was to reduce environmental degradation and eutrophication by developing waste solutions and improving environmental monitoring in the target areas.

**Target groups:** Managers and coordinators of protected areas, national parks and culturally valuable sites, visitors of these sites, school children and people interested in volunteer work

**Stakeholders involved:** Kizhi State Open Air Museum, Karelian Research Centre, National Park Vodlozersky, University of Oulu, North Karelia Biosphere Reserve, Centre for Economic Development, Transport and the Environment for North Karelia and Metsähallitus Parks and Wildlife

**Project period:** 2018–2021

## Description of the project

The main goal of the project was to reduce adverse effects on the natural and cultural sites involved in the project by the following means:

- Research of the pilot areas to improve the environmental monitoring and nature management systems.
- Develop good practices for implementing waste management in protected areas and acquire innovative waste treatment solutions for pilot sites.
- Educational activities for locals and specialists on the proper waste management



## Results and effects

Within the project the following results were achieved:

- The DPSIR framework (Drivers, Pressures, State, Impacts, Responses) study for all the sites
- Concrete waste management solutions within the sites (e.g., new composting and waste stations, weather station, infrastructural improvements such as new boards with information on responsible hiking)
- Educational activities for school children and volunteer camps
- Study tours
- Benchmarking measures for handling potential visitor pressures in protected areas; a case of North Karelia biosphere reserve -report
- Visitor surveys
- Plans for managing the tourism pressure (e.g., North Karelia Biosphere Reserve: Nature Tourism Plan 2020–2025)

## Focal points:

### 3. Research and education

### 6. International cooperation and networking

#### The project...

- focused on finding ways and combine examples on how to lessen the harmful effects of visitor pressure through management actions and educational actions. Many valuable nature sites are also tourist attractions and thus means to promote sustainable management and behaviour from visitors on these sites is even more important (3)
- was a collaboration of four UNESCO sites in Finland and Russia where good practises were shared and new ideas were created together (6)

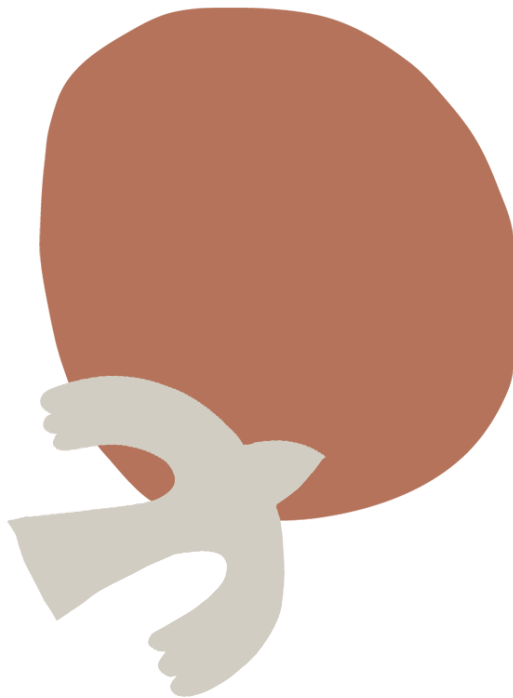
Read more:

<https://kareliacbc.fi/en/projects/supersustainability-under-pressure-environmental-resilience-natural-and-cultural-heritage>

[Benchmarking measures for handling potential visitor pressures in protected areas; a case of North Karelia biosphere reserve - Doria](#)

[ResearchGate](#)

[Pohjois-Karjalan biosfäärialue](#)



# Biosphere Academy is strengthening young people's sense of belonging

**Name of the Biosphere Reserve:** Archipelago Sea Area Biosphere Reserve

**Main goal/purpose:**

- strengthen young people's sense of local belonging and pride in their local environment.
- develop educational activities around nature, the environment, culture, and sustainability, which reach children and young people who live in, stay in, or visit the Archipelago Sea Biosphere Reserve
- provide children, young people, and educators with the knowledge and power to act to reduce concern for the climate and the environment and together build a common future on a sustainable basis.
- increase interest in natural sciences and studies that can be linked to sustainability issues and job opportunities in the archipelago

**Target groups:** Local children and youth, as well as all children and young people visiting the region

**Stakeholders involved:** All biosphere partners as municipalities, universities, regional authorities, local entrepreneurs, and NGOs

**Project period:** Continuous

## Description of the project

The Biosphere Academy is the educational program of the Archipelago Sea Area Biosphere Reserve. We want to contribute to a sustainable way of thinking among children and young people who live or are active in the Biosphere Reserve. We want to strengthen the young people's power of action for sustainability in their local environment and their participation in the Biosphere Reserve. We want to increase knowledge about the nature and culture of our unique archipelago, and thereby deepen the young people's relationship with nature and the local environment. The Archipelago Sea Area Biosphere Reserve

has long-term goals for the educational program that are strongly connected with strengthening the young people's sense of belonging and thereby their interest to return after studies to the region in one way or another to be a part of the local agenda for a sustainable future in the framework of the UNESCO MAB-program. The activities of the Biosphere Academy are coordinated by the Biosphere Office and implemented in schools and early childhood education in cooperation with central partners and stakeholders, but also arranged in the Kid's Lab of the Archipelago Center Korpoström.

The Biosphere Academy is the umbrella for all the educational activities of the Archipelago Sea Biosphere Reserve, like the Kid's Lab at the Archipelago Centre Korpoström, The Pike and his Friends aimed at children in kindergarten, the adventure route "The Island Expedition" raising awareness among visitors in guest harbors, Sustainability path in basic education – a tool for teachers to work with sustainability issues, and all kind of educative fun with our imaginary Archipelago researchers Sanna and Emil.



## Results and effects

The Biosphere Academy program is based on cooperation and with especially close connections to the municipalities and the national curriculum. This allows us to easily reach all the children who live permanently in the region. The children are involved in different activities from early childhood until they finish school. Young people who have been involved in biosphere activities both during their childhood and youth, feel a sense of belonging and act as ambassadors for the biosphere reserve and the work for a sustainable future. We also reach a few thousand children every summer with the popular Kids Lab at the Archipelago Korpoström.

## **Focal points:**

### **3. Research and education**

### **4. Community engagement and participation**

#### **The project...**

- promotes educational activities for a sustainable future, which will in the long run promote a sustainable use of nature resources and conservation of biodiversity (3, but also 1 & 2)
- promotes a strong sense of belonging which will also enhance community engagement and participation by young people both now and in the future (4)

Read more:

[Skärgårdshavets Biosfärområde – Saaristomeren biosfäärialue](#)



# I am part of the Biosphere - promoting shared responsibility and ownership

**Name of the Biosphere Reserve:** Archipelago Sea Area Biosphere Reserve

**Main goal/purpose:**

- continuously develop methods for engaging people in the work for a sustainable future and the UNESCO Biosphere
- strengthen the sense of belonging and the power of act of people.
- strengthen the sense of shared ownership.
- foster horizontal and vertical cooperation with a focus on involving the local society

**Target groups:** Permanent or part-time inhabitants, or any people who feel attached to the region, regional or local organisations or companies

**Stakeholders involved:** Universities, municipalities, and other Biosphere partners, including small enterprises and the Biosphere Ambassadors

**Project period:** Continuous

## Description of the project

The UNESCO Biosphere Reserve is part of an ambitious program for preserving high nature and cultural values through cooperation and people's engagement. However, the concept is sometimes difficult to manage for the stakeholders and challenging to understand for the people living in the region.

Therefore, some of the main challenges for the BR are how to engage people, how to share responsibility, and how to celebrate the successful outcome of the joint work.

The organization of the Archipelago Sea Area BR is built on cooperation. The BR office is a coordinating body, while the partner organizations are the ones conducting the actions. The board of the BR sets up the framework for the local agenda.

Everyone must be given a chance to participate in a way that they find convenient and effective. Ambassadors and Partners define their own role in the Biosphere Reserve and plan their own actions. The BR Office offers education and networking to inspire and enhance the level of knowledge.

During the last decade, we have focused on finding ways to engage and inspire local stakeholders and inhabitants to participate and share responsibility of the UNESCO Biosphere Reserve and a sound and sustainable development of the archipelago. These are our most important tools:

1. **The Biosphere Reserve Partners Program** inspires and engages organizations and companies in sustainable development, rather than evaluating them. Through the work of our partners, the aim of the Biosphere Reserve gets more tangible. The shared responsibility is giving the work with the BR more dimensions.
2. **The Biosphere Ambassadors Program** has a significant role in raising awareness. The ambassadors reach many stakeholders and are in contact with local inhabitants and visitors through their own social or professional networks. To become a biosphere ambassador, you attend the ambassador training program. You will be inspired to find your role in the Archipelago Sea Biosphere Reserve.



## Results and effects

The Biosphere Partner program, which includes today 17 partners, gives visibility to the acts of sustainability of the partners, and offers a forum for networking and sharing best practices. The BR has for example been the platform for initiating new regenerative tourism products, like «Experience the Biosphere».

Today there are about 60 Biosphere Ambassadors. Many activities have already been conducted by the valuable network of ambassadors. The biosphere concept gains a lot from being represented and opened by many different people in different environments and for several target groups.

The 30th Anniversary of the Archipelago Sea Biosphere Reserve was announced as a celebration of partnership and shared ownership. Several happenings were arranged, articles were written, dances were danced, speeches were held and even carpets were woven by ambassadors and partners to celebrate the BR in every corner of the BR.

Both the partners and ambassadors are a valuable addition to the BR. And for them, the UNESCO Biosphere Reserve provides them with a context to work towards a sustainable future.

## **Focal points:**

### **3. Research and education**

### **4. Community engagement and participation**

#### **The programmes...**

- promote education (3)
- promote participation (4)

#### **They also contribute to the remaining focal points by:**

- giving knowledge and tools for conservation of biodiversity and sustainable use of nature resources.

Read more:

[Skärgårdshavets Biosfärområde – Saaristomeren biosfärialue](#)





# SWEDEN

## Kristianstad Vattenriket

[Eelgrass planting – Recreating the Vitality of the Baltic Sea](#)

[Piggastan sand dunes](#)

[Shovels, flowers, and bees in Biosphere Classroom Sånarna](#)

[Innovative solutions to restore coastal meadows](#)

## Vindelälven

[Action plan for the white back woodpecker](#)

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[How does nature benefit people of the Vindelälven-Juhtatähkka Biosphere Reserve?](#)

[The SUPERB project](#)

[Green planning as a way of overcoming environmental challenges](#)

## Voxnadalen

[Improving habitat for fish and wildlife in small strams of the river Voxnan catchment](#)

## Lake Vänern Archipelago and Mount Kinekulle

[Analysis of infrastructure for biological diversity in the Lake Vänern Archipelago and Mount Kinnekulle UNESCO Biosphere Reserve](#)

[Ecosystem services – an integrative instrument for sustainable living environments in practice](#)

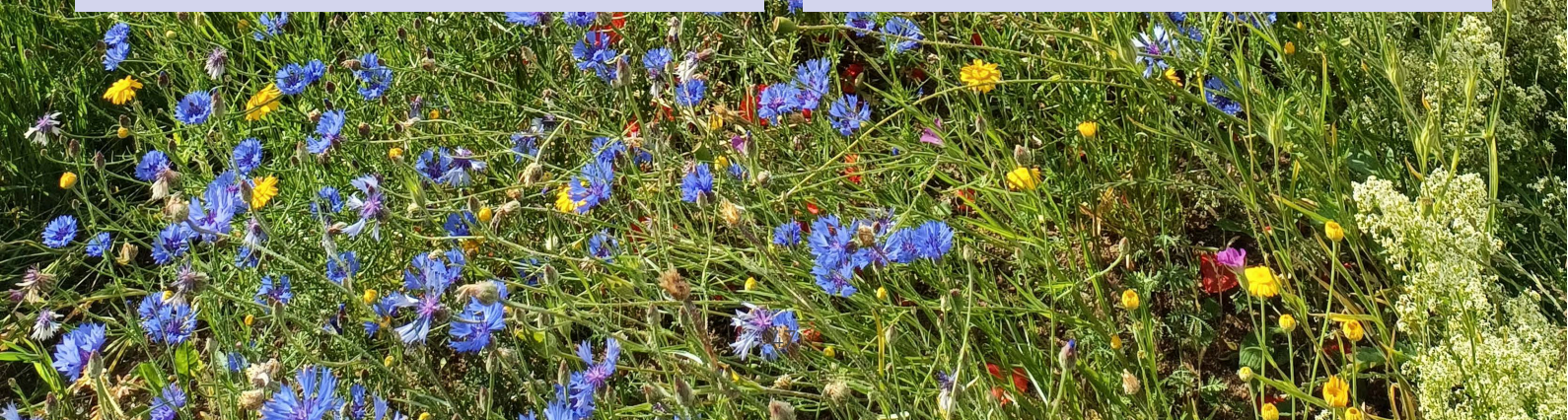
[Strengthened biodiversity along power lines streets at Kinnekulle](#)

[The Nature benefit network](#)

[GöteneBostäder – Biosphere Outdoor Environment](#)

[The Semper Pollinator Path – Götene Biosphere Corridor](#)

[The Value of Nature Project](#)



# Eelgrass planting – Recreating the Vitality of the Baltic Sea

**Name of the Biosphere Reserve:** Kristianstads Vattenrike Biosphere Reserve

**Main goal/purpose:** Restore 7500 square meter of eelgrass meadow

**Target groups:** Residents, tourists

**Stakeholders involved:** WWF, Kristianstads kommun, Kristianstads Vattenrike Biosphere Reserve

**Project period:** 2020–2024

## Description of the project

The Baltic Sea Project - Återskapa Östersjöns livskraft focused on restoring and increasing knowledge about the underwater ecosystems in three geographically selected areas: The High Coast World Heritage Site, the Stockholm Archipelago, and the Kristianstad Vattenrike Biosphere Reserve. These selected environments serve as spawning and nursery grounds for many marine species and as migration routes for fish to spawn there.

One part of the project has focused on marine conservation efforts in shallow coastal bays from northern to southern Sweden. In the Kristianstad Vattenrike Biosphere Reserve, this has been done by planting new eelgrass meadows in Hanöbukten (Hanöbay).

Eelgrass meadows are an important part of Hanöbuktens ecosystem as they serve as nurseries for many fish species. They provide shelter for both fish and small invertebrates. By transplanting plants from healthy eelgrass meadows to new areas or sites with low coverage, valuable underwater environments are created.

Eelgrass already exist in many locations in the Hanöbukten, and through the new planting carried out within the project, several areas have been connected into a larger ecological unit. The seagrass planting has thus contributed to strengthening the green infrastructure in the sea.

A total of 7,500 square meters, spread across three sites, have been planted within the project.





## Results and effects

This action helps strengthen the coastal ecosystems in the affected areas. The short-term effects consist of the planted areas directly contributing to improved conditions for biodiversity in Hanöbukten. The long-term effects also involve enhanced ecological conditions for the species living in Hanöbukten, as the connectivity between the eelgrass meadows is improved. In this way, the conditions are strengthened even in the eelgrass areas that previously existed but are now connected by the new plantings. The eelgrass plantings also provide various indirect environmental benefits—such as reducing erosion and absorbing carbon dioxide, thereby contributing to mitigating climate issues.

### Focal points:

#### 1. Conservation of Biodiversity

##### This is achieved through:

- Planted eelgrass meadows directly contribute to improved conditions for biodiversity in Hanö Bay. This is achieved both by increasing the total area of eelgrass meadows and by enhancing the connectivity between existing meadows.

The eelgrass plantings also provide various indirect environmental benefits—such as reducing erosion and absorbing carbon dioxide, thereby contributing to mitigating climate issues.

Read more:

[Återskapa Östersjöns livskraft – Biosfärområde Kristianstads Vattenrike](#)

[Återskapa Östersjöns livskraft - Världsnaturfonden WWF](#)

# Piggastan sand dunes

**Name of the Biosphere Reserve:** Kristianstads Vattenrike Biosphere Reserve

**Main goal/purpose:** Conservation of sandy calcareous grassland in the town of Åhus.

**Target groups:** Residents, tourists, people who work with nature conservation

**Stakeholders involved:** Länsstyrelsen Skåne, Kristianstads Vattenrike Biosphere Reserve

**Project period:** 2019 – on-going

## Description of the project

What started as a state funded nature restoration project in 2019 has developed into a testbed for conservation measures and an area to show off to other colleagues. The site hosts a large population of the endangered flowering plant Sand pink (*Dianthus arenaris subsp. arenarius*). This species only grows in Southern Sweden and the Baltic states. Sand pink requires very special conditions to thrive.

Among them is calcareous sand and plenty of sunlight. The conservation measures are being carefully documented to be able to evaluate their effect. The area is small but serves as an important steppingstone for species dispersal in a larger area. It is also valuable for the residents of Åhus for recreation and relaxation. Neighbours and locals have been involved throughout the restoration process.





## Results and effects

Sand pink has already spread to newly restored areas. Many neighbours have expressed that they feel the area has been improved compared to before the project started.

### Focal points:

#### 1. Conservation of Biodiversity

#### 3. Research and education

#### 4. Community engagement and participation

- The focus of the project has been to benefit biodiversity by restoring the area and therefore protecting the rare and endangered organism found there (1)
- The restored site also serves as a place to take groups and show how we work with nature conservation (3)
- This project is a good example of how to inform the public about nature conservation-projects and involving them in the decisions (4)

[Read more:](#)

[Piggastans sanddyner – Biosfärområde Kristianstads Vattenrike](#)

# Shovels, flowers, and bees in Biosphere Classroom Sännarna

**Name of the Biosphere Reserve:** Kristianstads Vattenrike Biosphere Reserve

**Main goal/purpose:** Create a Biosphere/Outdoor classroom at the Sännarna visitor site. The Biosphere classroom contains educational materials for exploring plants and insects, working with pollination and other ecosystem services, as well as practical field equipment for restoring the sandy soil by creating sandbars and planting plants to benefit the diversity of flowers.

**Target groups:** School classes and Scout groups, age 6 to 13. Elementary school teachers and student teachers.

**Stakeholders involved:** The project was run by naturum Vattenriket, which is a municipal nature centre, within the framework of the work in the Kristianstads Vattenrike Biosphere Reserve.

The consultation group for the Kristianstads Vattenrike Biosphere Reserve represents organisations, associations, officials, and politicians with interests in the area and can make recommendations and suggestions. The project will be agreed on an ongoing basis in the Consultation Group as well as in naturum's program council.

**Project period:** 2020–2023

## Description of the project

Through the Biosphere classroom project, we want to inspire to experience and explore life on the sandy lands. Through practical explorations with all your senses, we deepen our knowledge of important pollinators and the plants they depend on. We also meet other inhabitants of the sand, such as beetles, spiders, mushrooms, and rabbits. It is also about the tough challenge of living in dry and nutrient-poor sand, and about the special geology and climate of Sännarna.

The biosphere classroom highlights how the sandy lands' diversity of species and habitats is dependent on human presence. And how the human society benefit from these values at the same time. Pollination is an important ecosystem service. Sännarna offers many other benefits, such as outdoor life and peaceful experiences. This is the biospheric perspective. In Vattenriket, we always aim to benefiting both nature and man.

The sandy grazing and cultivation lands are very rich in species. But there are only fragments left of this unique many-thousand-year-old landscape on the Kristianstad plain. Herbs and bugs may need a little help. In collaboration with naturum Vattenriket, school classes can recreate important habitats with shovels and hoes. In the bare and sunlit sand, insects can warm themselves and build nests. New plants can sprout.

The project is not only knowledge-enhancing, but through the students' practical work habitats are also created for endangered plants and insects and the ecosystem services they contribute. At the same time, the students gain practical experience that creates a value base for future actions.

## Results and effects

The biosphere classroom consists of a physical box and a teacher's guide. The field material in the box and the exercises in the guide have been developed and evaluated during the work with [school classes](#).

During the project period, naturum Vattenriket has worked with 11 school classes and two biosphere camp groups at the classroom. In total, over 325 students, educators and leaders have explored and carried out practical nature conservation work at Sännarna together with Vattenriket's educators and ecologists.

Each visitor has created at least 0.5 m<sup>2</sup> of open sandbars. In total, more than the promised 150 m<sup>2</sup> of open sandbars have been created. In some of these, plants have been planted, while other patches have been left for natural regeneration where bees and other insects can build nests.

The Biosphere classroom is now available for teachers to book and to use on their own with their students.

## Focal points:

### 3. Research and education

#### This is done through:

- Fostering a better understanding of the dry, sandy ecosystems of Vattenriket and sustainable practices. The Biosphere classroom provide opportunities for children, youth, and teachers to study the impacts of human activities on biodiversity (3)

#### The project also contributes to focal points 1 and 4 by:

- Practical nature conservation works that conserves and restores biodiversity in the sandy areas of Vattenriket (1)
- Encouraging children and youth to participate in active biodiversity conservation and sustainable development (4)

Read more:

[Biosfärområde Kristianstads Vattenrike – Bra för natur och människa](#)

[Biosfärklassrum i Vattenriket – Biosfärområde Kristianstads Vattenrike](#)



# Innovative solutions to restore coastal meadows

**Name of the Biosphere Reserve:** Kristianstads Vattenrike Biosphere Reserve

**Main goal/purpose:** To restore coastal meadows and create better conditions for their long-term survival.

**Target groups:** Nature conservation managers, farmers

**Stakeholders involved:** Kristianstads Biosphere Reserve, County Administrative Board of Skåne, Life Restored

**Project period:** 2019 to present

## Description of the project

The wetland area along Helge river in Kristianstads Vattenrike have been designated to be a RAMSAR site and represent Sweden's largest area of inland coastal meadows. It is a cultural landscape where many of the plants and animals of the old agricultural landscape still exist.

The area is known for its rich birdlife, and the wet meadows serve as vital resting and nesting sites for many waders and ducks. The nature values of these meadows are dependent upon annual flooding and management strategies in the form of mowing or grazing. In the absence of effective management, the area is prone to overgrowth of reed, grey willow and alder.

The restoration process is complicated by the presence of high soil moisture and poor bearing capacity. Furthermore, the nesting season for birds must be considered, and all work must therefore be carried out in late summer.

In its role as a testing ground for innovative ideas that support sustainable development in nature conservation, the biosphere reserve has tested several new methods and machines.

For instance, a floating excavator was used to remove grey willow from the seasonally flooded grassland. By pulling the bushes up by their roots, the amount of uprooting is greatly reduced.

In more inaccessible locations, a skidsteer loader equipped with a mulching head was used to cut compact areas of willow and alder.

A small three-in-one machine on rubber tracks, which is capable of cutting, collecting and removing vegetation in a single pass, has been tested on abandoned hay meadows with positive results. Its low ground pressure and rubber tracks ensure minimal damage to flora and fauna in these sensitive areas.

## Results and effects

A total of 21.5 hectares of wet meadows have been restored and are now managed using a combination of mowing and grazing. On the restored areas, favourable conditions have been created for endangered species such as the Fen ragwort (*Jacobea paludosa*) and the Black-tailed Godwit (*Limosa limosa*)

Finding new and cost-effective ways to restore and manage grasslands is essential to managing these areas for the long term. The actions have been evaluated for efficiency, impact on flora and future work required, and we now have a better understanding of which machines to use in which areas, and their advantages and disadvantages.

This knowledge will be passed on to conservation managers and farmers. A demonstration day will take place in October this year.

### Focal points:

#### 1. Conservation of Biodiversity

#### 2. Sustainable use of resources

##### This is done through:

- Restoring areas and creating better conditions for species associated with coastal meadows, benefitting biodiversity (1)
- Managing the restored land through grazing and haymaking. The production of food from coastal meadows is an underutilised resource and crucial for maintaining biodiversity (2)

##### The project also contributes to the focal point 3:

- The restored meadows will serve as a demosite, offering an opportunity to observe the results of various methods and machines (3)

Read more:

[The wetland area along Helge å – Biosphere area Kristianstad's Vattenrike](#)

[Rödspov – Biosfärområde Kristianstads Vattenrike](#)

[Gullstånd – Biosphere area Kristianstads Vattenrike](#)

# Action plan for the white back woodpecker

**Name of the Biosphere Reserve:** Biosfärområde Vindelälven-Juhttátahkka

**Main goal/purpose:** Restoration of deciduous forests and creating a model for restoration of deciduous trees

**Target groups:** The public and stakeholders

**Stakeholders involved:** Municipality of Umeå, Sörfors sport association, Vattenfall BU Hydro Nordic, Church of Sweden and 5 private stakeholders

**Project period:** 2018–2026

## Description of the project

There is a lack of deciduous trees in the Swedish forest landscape due to human activities such as forestry and hydroelectric power. Many species are connected to broadleaf forest such as the white back woodpecker and there are many other endangered species. The river of Umeå is used for hydroelectricity power and natural fluctuations have been modified therefore the forests stands are mixed with high content of deciduous trees (at least 20 %). Natural unmodified rivers are rich in deciduous forests as spring floodings keeps the spruce away.

The municipality of Umeå has taken the initiative, as the largest stakeholder in the area, to restore the landscape along the Umeå river to benefit the endangered white back woodpecker. The project was initiated in 2017 when a large migration of young white back woodpeckers came to the city of Umeå over the Baltic Sea from Finland, where the species is more common.

The white back woodpecker is not only a specialist foraging in deciduous forest areas of good quality, but also a key species requiring a large home area of at least 100 ha. Therefore, the initiative is also engaging other stakeholders within the area, to create a large compound area of approximately 140 ha of deciduous forests.

The municipality has been responsible for applying for funds at the Swedish Forest Agency for all the participants in the project. After a long process of establishing the project and applying for funds the restoration finally started in January 2024. In year 2024 40 ha has been maintained from mainly thinning spruce. The project will be going on approximately until the end of 2026.



## Results and effects

By collaboration with other stakeholders, the benefits are extensive such as restorations costs will be lower, information about the key species can easily be shared and the learning process and understanding is enhanced. As the restoration is on a large scale the impact on the recreation is vast. Walking trails along the river of Umeå will be open, the restoration will prevent erosion and enhance activity of other species.

Furthermore, we expect enhanced activity of birds and bats which are monitored during the project, the project serves as a model and enhance knowledge about why and how to maintain deciduous and riparian forests among the public and stakeholders. Investigation of synergies between nature restoration and other human activities, try out new models for restoration, training of personnel for restoration work, finding a model of how to finance restoration projects.

### Focal points:

#### 1. Conservation of Biodiversity

#### 2. Sustainable use of resources

##### This is done through:

- Thinning spruce and restoring young broadleaf rich stands and increasing amount of broadleaf forest of good quality in the landscape and riparian zone of the river of Umeå (1)
- Practices in forestry by applying a type of continuous cover forestry in broadleaf rich forests (2)

##### The project also contributes to the focal point 3:

- Providing knowledge to local communities and visitors being situated in a very popular recreation area where recreation is enhanced by the thinning and other restoration actions taken (3)
- Involving local communities in a reference group and different stakeholders being part of the project (4)
- Implementing the municipal comprehension plan and contributing to sustainable city planning (5)
- Collaboration with Swedish University of Agricultural Science, SUPERB and Rewilding Sweden. Several excursions with scientists all around the world, sharing experiences and best practices in biodiversity conservation (6)

Read more:

[Vitryggig hackspett - Umeå kommun](#)

# Route to Paris

**Name of the Biosphere Reserve:** Biosfärområde Vindelälven-Juhttátahkka

**Main goal/purpose:** The overarching purpose of the interdisciplinary project ROUTE TO PARIS, is to explore and develop the forests' climate change mitigation potential. More specifically, the aim is to join sustainable forest land-use to the overall route towards a carbon-neutral society as envisioned in the Paris climate agreement.

**Target groups:** Right- and stakeholders related to the forest

**Stakeholders involved:** Forest owners, reindeer herders, nature conservation organisation, recreational interest organisations, in general the forest sector in its wide sense

**Project period:** 11/2021 – 10/2026

## Description of the project

Building on lessons from previous transitions, the project will analyse carbon flows in society under various forest policy scenarios and assess the consumption patterns of different wood products. By examining these dynamics, the project aims to provide a comprehensive understanding of how different forest management strategies impact carbon sequestration and emissions. This analysis will serve as a foundation for identifying pathways to overcome existing barriers in forest policy that hinder the transition to sustainable forestry practices aligned with carbon reduction goals.

A critical component of the project is its engagement with stakeholders and rights holders, including forest owners, policymakers, environmental organizations, and indigenous communities. Through inclusive dialogues and participatory workshops, while using the Biosphere Reserve as a living lab the project will gather diverse perspectives and foster a collaborative approach to forest management. This engagement will not only enhance the knowledge base but also build consensus on sustainable practices that balance ecological, social, and economic objectives.

Moreover, the project will collaborate closely with various actors to identify and develop innovative concepts that empower and incentivize forest owners across Sweden to adopt climate-smart forestry practices. This may include exploring new financial instruments, market-based incentives, and policy frameworks that promote sustainable land use while ensuring that forest owners are rewarded for contributing to climate mitigation efforts. By aligning economic incentives with environmental outcomes, the project seeks to create a supportive environment for forest owners to participate actively in climate action.

Ultimately, the project aims to bridge the gap between science, policy, and practice, providing actionable insights and tools that facilitate the transition to sustainable forestry practices. By fostering collaboration among key stakeholders and integrating diverse knowledge systems, the project will contribute to the development of a resilient and adaptive forest management framework that supports Sweden's climate goals and enhances the sustainable use of forest resources. The outcomes will inform national and regional policies, ensuring that forest management strategies are aligned with broader climate objectives and contribute to achieving long-term sustainability and carbon neutrality.



## Results and effects

The scientific value of ROUTE TO PARIS lies in advancing knowledge and tools for sustainable forest management in the context of climate change mitigation. This research addresses conflicts of interest and diverse goals within forestry by examining the dynamics of the full social-ecological system. It aims to provide the best available scientific knowledge to support informed, legitimate, and transparent decisions on trade-offs related to forest use, spanning various sectors and scales.

The project will contribute to policy discussions on sustainability transformations in Europe, particularly in achieving Sweden's Environmental Quality Objectives, several UN Sustainable Development Goals, the Paris Agreement, and the European Green Deal's climate neutrality goals. Through stakeholder dialogue in Sweden, ROUTE TO PARIS will identify knowledge gaps and uncertainties in policymaking and forest management, helping to address obstacles to climate-smart forestry and promote a broader societal value.

## **Focal points:**

### **5. International Cooperation and Networking**

#### **This is done through:**

- Right- and stakeholders related to the forest are the target group and are closely involved in the project.

The project further contributes to the focal points 1, 2, 3 & 4.

Read more:

[Biosfärområde Vindelälven-Juhttátahkka - Biosfärområde Vindelälven-Juhttátahkka](#)

# How does nature benefit people of the Vindelälven-Juhtátahkka Biosphere Reserve?

**Name of the Biosphere Reserve:** Biosfärområde Vindelälven-Juhtátahkka

**Main goal/purpose:** This project aims to better understand how people benefit from nature and the specific locations where they receive these benefits in the Vindelälven-Juhtátahkka Biosphere Reserve.

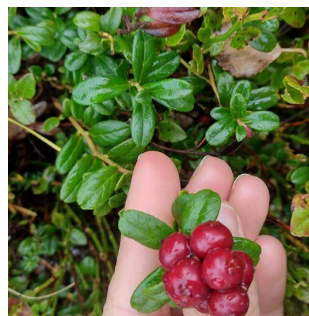
**Target groups:** People living and working in Vindelälven-Juhtátahkka

**Stakeholders involved:** SLU, local municipalities

**Project period:** 01/2023 – 12/2023

## Description of the project

Stretching from the mountainous Norwegian border in the west to the forested central region to the coastal lowlands in the east, the way in which people in the Vindelälven-Juhtátahkka Biosphere Reserve value nature is very diverse. Nature promotes timber and agricultural production, provides clean water and opportunities to harvest wild berries and mushrooms, supports fishing and reindeer husbandry, and offers opportunities for recreation, cultural traditions, and improved mental health by simply enjoying the tranquillity of the outdoors. This project distributed an ecosystem services survey that was administered across the Vindelälven-Juhtátahkka Biosphere Reserve. This involved organizing and delivering workshops at local libraries and community halls.



## Results and effects

This project used a transdisciplinary approach to implement participatory mapping of ecosystem services – regulating, provisioning and cultural – across the Vindelälven-Juhtátahkka Biosphere Reserve.

Based on hundreds of respondents, and thousands of mapped ecosystem services, the project identified hotspots of different valued services, including the value of cultural heritage, outdoor recreation, biodiversity, mental well-being, and agricultural/forestry values to diverse stakeholders.

This project is part of a broader international effort involving multiple biosphere reserves in Norway (Nordhordland Biosphere), Finland (North Karelia Biosphere Reserve) and Sweden (Kristianstads Vattenrike). By understanding how and where people, whether residents or visitors, benefit from nature, the project aimed to better preserve, develop, and support the Vindelälven-Juhtátahkka Biosphere Reserve both now and in the future.

### Focal points:

- 2. Sustainable use of resources**
- 4. Community engagement and participation**
- 6. International cooperation and networking**

Read more:

[Biosfärområde Vindelälven-Juhtátahkka - Biosfärområde Vindelälven-Juhtátahkka](#)

# The SUPERB project

**Name of the Biosphere Reserve:** Biosfärområde Vindelälven-Juhttátahkka

**Main goal/purpose:** To create an enabling environment for, and demonstration of, large-scale restoration of forests and forest landscapes across Europe.

**Target groups:** Pretty much everyone that are engaged and have anything to say about the management of forests in the biosphere reserve, Sweden, and Europe. From European and national policymakers to local forest owners, reindeer herding communities and the public.

**Stakeholders involved:** Internationally: a variety of organisations, both practitioners, researchers, forest organisations etc.

Nationally: National authorities, forest landowner associations, forest management organisations, WWF etc.

Regional/Locally: Regional authorities, municipalities, Reindeer herding communities, Regional outdoor life association, forest companies, regional cluster for forest technology, regional hunting association, Financing actors (bio- and carbon credit companies)

**Project period:** 12/2021 – 11/2025

## Description of the project

SUPERB builds on the vast but scattered practical knowledge and lessons learned from successful and non-successful forest restoration and adaptation activities and synthesise them for action. We connect with restoration experts, including from LIFE projects and practitioners with decades of experiences with alternative management approaches. This practical knowledge will be underpinned by a compilation of highly relevant scientific knowledge including economic, governance, forest management, and climate change adaptation aspects of restoration.



The SUPERB project has 12 large-scale demos in 12 countries, representing various challenges and stressors on European forests and a wide range of necessary restoration actions. The demo areas comprise entire socio-ecological systems, protecting and restoring forests while also considering people's needs for ecosystem services and benefits.

Vindelälven-Juhtatähkka Biosphere Reserve is one of the twelve demo areas, the by far largest and the only one representing the boreal and subalpine forests. Within the biosphere reserve, the project aims to meet multiple land-use demands and address sustainability challenges. The overall focus lies on increasing biodiversity in tree monoculture plantations and create climate-adapted multifunctional forests for the future while maintaining tree growth and carbon storage.

More specifically the goals of the demo area are to foster ecologically functioning forests and forest connectivity on a landscape scale, improving conditions for biodiversity and indigenous Sami community reindeer husbandry, promote integrated riparian forests and river restoration, establish natural forest edges, and restore open and semi-open land covers to promote cultural and biodiversity attributes in forest-dominated landscapes.

These goals are achieved by both implementing large scale restoration actions in two areas within the Biosphere reserve, in close collaboration with different local actors, and by, in different fora, addressing governance challenges linked to the multiple ownership of land, including public, private forest company and non-industrial private ownership in large- to small-scale gradients.

## Results and effects

The SUPERB project will demonstrate best practices for a variety of forest types and collect practical and scientific knowledge on successful forest restoration:

- Demonstrate and test together with local stakeholders' successful restoration approaches in 12 large-scale demonstrators ('demos') across Europe.
- Deliver evidence-based practical knowledge on sustainably and successfully managing, governing, and financing restoration by learning about barriers and enablers for restoration.
- Improve societal support for restoration and benefits from restoration.
- Launch an interactive online Marketplace where market agents (landowners, funders etc.) can post calls for or offers of sustainable restoration actions and find insights into sustainable financing that take cost-effectiveness, socio-economic benefits, involvement, and just access into account.

- Deliver a multi-language Forest Ecosystem Restoration Gateway that serves as the central knowledge platform for anyone interested or working in restoration.
- Create a large and powerful multi-stakeholder network and movement for the development, uptake, and upscaling of transformative forest restoration approaches and actions.

## **Focal points:**

### **6. International cooperation and networking**

#### **This is done through:**

- being an international project with the aim of creating a large and powerful multi-stakeholder network.

#### **The project also contributes to the remaining focal points by:**

- improving conditions for biodiversity and ecologically functional forest landscapes (1)
- aiming to meet multiple land-use demands in a sustainable way, including timber production, reindeer herding, recreational needs, hunting etc. (2)
- being partly a research project and by meeting students and participating in teaching, mainly at the Forest/Forestry program at Swedish university of Agriculture, Umeå. (3)
- engaging with different stakeholders, both by inviting a broad range of stakeholders to a yearly meeting and in daily activities and contacts with stakeholders within the project (4)
- meeting local politicians and by collaborating with local and regional authorities (5)

Read more:

[SUPERB: Upscaling Forest Restoration - SUPERB](#)

# Green planning as a way of overcoming environmental challenges

**Name of the Biosphere Reserve:** Biosfärområde Vindelälven-Juhttátahkka

**Main goal/purpose:** A conference enhancing the importance of green municipal planning in sustainable land-use. Promoting the need of healthy ecosystems as a way of working with the effects of climate change, biodiversity loss and declining public health. Collaboration between stakeholders and municipalities are a crucial part as nature does not conform to administrative borders. The biosphere reserve and its networks and local knowledge was an important part in the planning and execution of the conference.

**Target groups:** Municipalities and other stakeholders working with sustainable land- use.

**Stakeholders involved:** Swedish Environmental Protection Agency (SEPA), Lycksele municipality, The county administrative board of Västerbotten, The biosphere reserve Vindelälven-Juhttátahkka

**Project period:** Planning the conference: 08 – 11/2023, Conference: 12/2023

## Description of the project

The Swedish Environmental Protection Agency (SEPA) has developed a guide for municipal green planning. The conference was held in a total of 5 areas in Sweden, most of them connected to a biosphere reserve as they contribute with important networks and local knowledge.

The conference was a way of spreading knowledge of the guide but also general information about nature-based planning and mapping of green spaces. Another important part of the project was to establish local networks as a way of working together with green spaces and environmental challenges.

## Results and effects

The municipalities made important new connections to other municipalities, the county administrative board and other important stakeholders.

Afterwards, follow-up meetings were held to keep discussions active and to form new networks.

### Focal points:

#### 6. International cooperation and networking

The network provided by the MAB and the networks created in the process was one of the main goals.

**The activity also contributes to focal points 2, 3 & 5 by:**

- Providing information about sustainable land-use was and showing local examples (2 & 3)
- Discussing municipal policies and planning tools as well as mapping of green spaces (5)

Read more:

[Grönplanering](#)

# Improving habitat for fish and wildlife in small streams of the river Voxnan catchment

**Name of the Biosphere Reserve:** Voxnadalen

**Main goal/purpose:** Improve wildlife habitats i small streams modified by human activity during the early 20th century timber-floating era.

**Target groups:** Fish and wildlife

**Stakeholders involved:** Landowners, municipalities, and the biosphere reserve

**Project period:** Summer 2023/2024

## Description of the project

Many small streams of the river Voxnan catchment are modified by human activity. Until the 1960s waterways in the catchment were used to float timber from the forest to the downstream sawmills. Modifications to ease the floating of timber included removal of large stones and other obstacles as well as transforming the naturally meandering waterways into straight canals. The modifications had negative impacts on biodiversity in the streams, including loss of spawning habitat for fish.

In this project small streams are restored by manual power using a set of sorting tools (the Hartijoki-method). The Biosphere reserve has trained both supervisors and several young people (age 14-16) in the Hartijoki-method providing a meaningful summer job while teaching biodiversity.

## Results and effects

- Improved quality in 2 km freshwater stream habitat
- 50 m spawning ground for fish (trout) restored.
- 6 young people in the age of 14-16 have received education in the Hartijoki-method



### **Focal points:**

- 1. Conservation of Biodiversity**
- 3. Research and education**
- 4. Community engagement and participation**

### **This is done through:**

- Restoring wildlife habitat in small streams improving the conditions for fish and other biodiversity (1)
- Engaging and educating youth in restoration of wildlife habitats and conservation of biodiversity (3 & 4)

Read more:

[Biosfärområde Voxnadalen - Ovanåkers kommun](#)

# Analysis of infrastructure for biological diversity

**Name of the Biosphere Reserve:** Lake Vänern Archipelago and Mount Kinnekulle UNESCO Biosphere Reserve

**Main goal/purpose:** The purpose of the project is for the municipalities to have a cross-municipal knowledge base and planning tool for blue and green infrastructure.

**Target groups:** Lidköping-, Götene- and Mariestad municipalities

**Stakeholders involved:** Lake Vänern Archipelago and Mount Kinnekulle UNESCO Biosphere Reserve, University of Skövde, Lidköping-, Götene- and Mariestad municipalities

**Project period:** 2020–2022

## Description of the project

In the project "Analysis of infrastructure for biological diversity in the Lake Vänern Archipelago and Mount Kinnekulle UNESCO Biosphere Reserve", researchers at the University of Skövde have tested a newly developed digital tool for ecological landscape analysis, which estimates a biotope landscape's ability to maintain biodiversity. The tool can examine whether i) the landscape is sustainable from a biodiversity perspective, ii) how many and which patches are not sustainable in themselves and iii) how sensitive the landscape's biodiversity is to impacts on specific patches.

The tool was tested in collaboration with the three municipalities of Mariestad, Götene and Lidköping and resulted in a knowledge base for the municipalities for their work with improvement of green infrastructure.

Overall, landscape analyses were produced for five biotope landscapes, which were selected in dialogue with the three municipalities. The analyzed biotopes are grassland, older coniferous forest, broadleaf forest, wetlands, and bird island nesting areas. Land cover data from several different databases were combined to form input data for the structure of the biotope landscape.

The biotope landscape's long-term sustainability for biological diversity was calculated for a time perspective of 100 years. The analyzes were made both based on the individual municipal landscapes and for the entire biosphere area. An overall perspective across municipal boundaries can favor the possibility of improving the green infrastructure through cooperation across municipal boundaries.

## Results and effects

From the landscape analyses the municipalities can prioritize land use so that they maintain and develop a green infrastructure that strengthens the biodiversity. The tool developed at the University of Skövde is based on a mathematical algorithm building on ecological knowledge about how the structure of the landscape affects the survival of species.

### Focal points:

#### 1. Conservation of Biodiversity

#### 2. Sustainable use of resources

#### This is done through:

- The project result will contribute to strengthening ecosystems, species, and genetic diversity. The project is a good example of how BR can function as living laboratories for testing and implementing strategies to conserve and restore biodiversity. (1)
- Through this project our Biosphere reserve has developed a tool that will be used to strengthen the sustainability in land use, agriculture, forestry, and other human activities. From the landscape analyses the municipalities can prioritize land use so that they maintain and develop a green infrastructure that strengthens the biodiversity. Which will support how humans can live in harmony with nature while ensuring the sustainable use of resources. (2)

#### The project further contributes to the focal points 3 & 5:

- Through the project our Biosphere reserve has served as a platform for research and education to fostering a better understanding of ecosystems and sustainable practices.

Read more:

[Biosfärområde Vänerskärgården med Kinnekulle](#)



# Ecosystem services – an integrative instrument for sustainable living environments in practice?

**Name of the Biosphere Reserve:** Lake Vänern Archipelago and Mount Kinnekulle UNESCO Biosphere Reserve

**Main goal/purpose:** With focus on planning and management of sustainable living environments, this transdisciplinary research project aims to investigate if, how and when ecosystem services operate as an integrative instrument. To meet this objective, we will examine how the concept of ecosystem services has been transferred and transformed into practice from the international and EU policy through national, regional, and local management and decision levels. We will also examine the interface between the emergent ecosystem services approach and conventional conservation planning regarding managing the historic environment, including urban blue-green infrastructure and public places.

**Stakeholders involved:** The University of Gothenburg, Lake Vänern Archipelago and Mount Kinnekulle UNESCO Biosphere Reserve

**Project period:** 2019–2023

## Description of the project

Urban landscapes consist of a mosaic of buildings, greenery, water and other spaces and the interaction between living environments, manmade structures and humans is a challenge for sustainable transitions. An integrated view of the landscape puts high demands on cooperation across sectoral boundaries. The ecosystem service approach is an integrative instrument for sustainable landscape development which lately has, because of an EU directive, been introduced at local and regional planning levels. Limitations to the implementation in practice has been reported by previous research and thus in this transdisciplinary research project we will investigate if, how and when the ecosystem services approach operate as an integrative instrument when planning sustainable living environments. We will investigate how the concept of ecosystem services has been transferred into practice from the international

and EU policy directive using an institutional logics perspective. We will also investigate the interface between conventional conservation planning and the emerging ecosystem services approach through a critical heritage perspective.

The project will increase the knowledge of how ecosystem services as a new concept influences local authorities' work. We also want to show how new forms of collaboration can contribute to integration between nature and culture in the management of landscapes that promote social and environmental sustainability.

## Results and effects

The results are not published yet.

### Focal points:

#### 1. Conservation of Biodiversity

#### 3. Research and education

#### This is done through:

- The project will contribute to strengthening ecosystem services. Our BR has served as a living laboratory during the project to investigate if, how and when ecosystem services operate as an integrative instrument. (1)
- Within this project our biosphere reserve has served as platform for the research. The project has closely been connected to education at University of Gothenburg, involving the department of Conservation which is an interdisciplinary environment with staff from different disciplines ranging from chemistry to art history. (3)

#### The project also contributes to focal points 2 & 5:

- Through the project our biosphere reserve has demonstrated sustainable practices in land use, agriculture, forestry, and other human activities. (2)
- An integrated view of the landscape puts high demands on cooperation across sectoral boundaries. The ecosystem service approach is an integrative instrument for sustainable landscape development which lately has, because of an EU directive, been introduced at local and regional planning levels. Aligning local policies with national and global goals is not necessarily easy. Perspectives and rationale may defer significantly since it is in the local communities that the consequences of climate changes and loss of biodiversity becomes tangible and hence, pose a threat to culture, use of natural resources etc. (5)

[Read more:](#)

[Biosfärområde Vänerskärsgården med Kinnekulle](#)

# Strengthened biodiversity along power line streets at Kinnekulle

**Name of the Biosphere Reserve:** Lake Vänern Archipelago and Mount Kinnekulle UNESCO Biosphere Reserve

**Main goal/purpose:** The project aims to map the biotopes in power line streets on Kinnekulle in relation to the green infrastructure of the surrounding landscape's biotopes to analyze based on this how adapted land management within the power line streets can strengthen the conditions for biological diversity within the entire landscape.

**Target groups:** Employees at Kinnekulle Energy, the Municipality of Götene, other power companies

**Stakeholders involved:** Kinnekulle Energy, the Municipality of Götene, The University of Skövde, Lake Vänern Archipelago and Mount Kinnekulle UNESCO Biosphere Reserve

**Project period:** 2022–2024

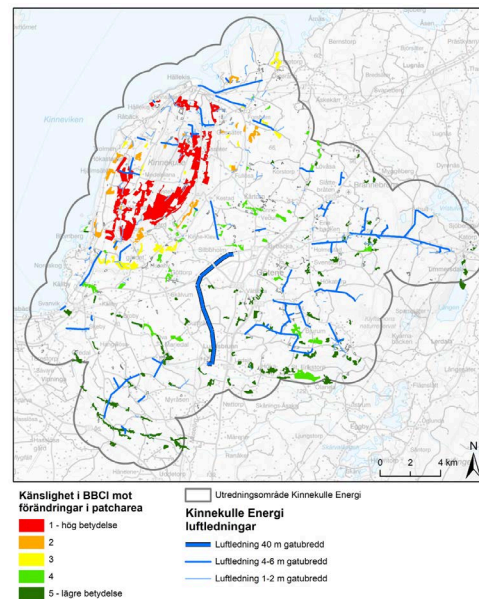
## Description of the project

The project aims to strengthen biological diversity within power line streets on Kinnekulle. The project aims to map the biotopes in power line streets on Kinnekulle in relation to the green infrastructure of the surrounding landscape's biotopes to analyze based on this how adapted land management within the power line streets can strengthen the conditions for biological diversity within the entire landscape. The mapping will form the basis for the development of management plans for management of power line streets with the aim of creating the best conditions for biological diversity in identified areas. The project will also develop the skills of the employees at Kinnekulle Energy in nature conservation measures and how their operations can contribute to the Agenda 2030 and the national environmental quality goals.

## Results and effects

Through cooperation and commitment, the project has identified natural values in a power line street and developed a management plan to promote biological diversity in the area. With the help of a biological diversity indicator developed by the researchers at the University of Skövde, the project has been able to analyze the landscape's ability to support biological diversity and develop measures to improve the situation.

Through the project, Kinnekulle Energy hope not only to be able to contribute to preserving and strengthening the biological diversity in the immediate area, but also to inspire other power companies and municipalities to make similar investments. Kinnekulle Energy see this as an important part of their responsibility as an actor in the energy industry and look forward to continuing to work for the sustainable development of the natural environments in the area of operation.



### Focal points:

2. Sustainable use of resources
3. Research and education

#### **This is done through:**

- This project is a good example on how biosphere reserves demonstrate sustainable practices in land use, agriculture, forestry, and other human activities. The project also showcase how humans can live in harmony with nature while ensuring the sustainable use of resources. (2)
- Within this project part of our biosphere reserve has served as platform for research and education, fostering a better understanding of ecosystems and sustainable practices. We have provided opportunities for studying the impacts of human activities on biodiversity and disseminating knowledge to local employees and companies as well as the local society. (3)

#### **The project further contributes to focal points 1 & 5**

- The project contributes to the biosphere reserve as a designated area that conserves ecosystems, species, and genetic diversity. The project has also shown how BR can serve as living laboratories for testing and implementing strategies to conserve and restore biodiversity. (1)
- Through cooperation and commitment, the project has identified natural values in a power line street and developed a management plan to promote biological diversity in the area. (5)

Read more:

[Biosfärområde Vänerskärsgården med Kinnekulle](#)

# The Nature benefit network

**Name of the Biosphere Reserve:** Lake Vänern Archipelago and Mount Kinnekulle UNESCO Biosphere Reserve

**Main goal/purpose:** The nature benefit network means that participating organizations have an active forum for dialogue.

- Exchange knowledge, experiences and add environmental orientation that benefits ecosystems and biological diversity in the biosphere reserve.
- Identify needs that strengthen the biosphere reserve's natural benefits.
- Develop joint projects and initiatives that benefit ecosystems and biological diversity in the biosphere reserve.

**Target groups:** Civil servants and non-profit persons from the stakeholders.

**Stakeholders involved:** Lake Vänern Archipelago and Mount Kinnekulle UNESCO Biosphere Reserve, The Municipalities of Lidköping, Götene and Mariestad, The County Administrative Board, Swedish society for nature and University of Skövde

**Project period:** 2018 – on-going

## Description of the project

The nature benefit network emerged in 2018 based on the need for joint efforts around ecosystems. Since then, it has developed into a more stable form of network with clear frameworks.

The combined knowledge and experience of the Nature Benefit Network, its contact areas, and opportunities to identify needs, together with its room for action, form a valuable basis for collaboration to develop ideas and implement value-creating efforts for strengthened ecosystems and strengthened biological diversity in the biosphere area.

## Results and effects

Since its inception, the network has generated and contributed to the completion of several projects in the biosphere reserve.

### Focal points:

#### 2. Sustainable use of resources

#### 3. Research and education

#### This is done through:

- The network participants exchange knowledge, experiences and add environmental orientation that benefits ecosystems and biological diversity in the biosphere reserve. Through common projects we have shown how humans can live in harmony with nature while ensuring the sustainable use of resources, aligning with the framework's objectives for sustainable development. (2)
- The network and its involved stakeholders are supporting the biosphere reserve as platform or hub for research and education, fostering a better understanding of ecosystems and sustainable practices as well as providing opportunities for studying the impacts of human activities on biodiversity and disseminating knowledge to local communities and visitors. (3)

#### The network also contributes to focal points 1 & 4:

- The projects initiated by the Nature benefit network have contributed to strengthening ecosystems, species, and genetic diversity. (1)
- The Nature benefit network includes participants from the local society through the Swedish society for nature. (4)

Read more:

[Biosfärområde Vänerskärgården med Kinnekulle](#)

# GöteneBostäder – Biosphere Outdoor Environment

**Name of the Biosphere Reserve:** Lake Vänern Archipelago and Mount Kinnekulle UNESCO Biosphere Reserve

**Target groups:** Tenants, citizens, and visitors

**Stakeholders involved:** Lake Vänern Archipelago and Mount Kinnekulle UNESCO Biosphere Reserve, GöteneBostäder, Skanska, The University of Skövde, Meeting Place Kinnekulle, Götene Municipality

**Project period:** 2021–2023

## Description of the project

GöteneBostäder which is a municipal housing company, wanted the design of the outdoor environment to reflect the values of the BR.

The collaboration has – in addition to the outdoor environment – also influenced the buildings as the developers have achieved extra sustainable values.

The outdoor environment contains a variety of biological diversity, ecosystem services and nature-based solutions, gathered on a small apartment building courtyard environment.

A web site shows the area's values in an educational way and an exhibition under the stars has been added to the location: Galleri Hemmavé. (The Gallery in the Quarter Back home).

## Results and effects

The apartment building courtyard environment now contains a variety of plants with high biodiversity, several ecosystem services, and nature-based solutions.

The tenants have also gotten an outdoor environment filled with social meeting places.



An outdoor exhibition displays art for both tenants, citizens of Götene and visitors. Art that shows sustainability in different ways.

Educational signs describe the BR and the different values added to the courtyard, and leads via QR codes to a website with an educational map and information about ecosystem services, the global goals as well as the BR.

## **Focal points:**

### **3. Research and education**

### **4. Community engagement and participation**

### **5. International Cooperation and Networking**

#### **This is done through:**

- The courtyard serves as a platform for education, fostering a better understanding of ecosystems and sustainable practices for as well pre-schools, schools, tenants, citizens, and visitors. (3)
- The BR and the project involve local communities, encouraging their active participation in biodiversity conservation and sustainable development. (4)
- The project has involved local communities by creating ownership and engagement, as a step for the UNESCO BR to assist in creating local acceptance of necessary changes and responses to the implementation of the targets of the GBF. (5)

#### **They also contribute to the remaining focal points by:**

- The project has contributed to strengthening ecosystems, species, and genetic diversity. (1)
- The BR demonstrate sustainable practices in land use, a recreation area for human activities. They showcase how humans can live in harmony with nature while ensuring the sustainable use of resources. (2)
- The BR has briefly shared information about this project in a panel discussion at the Euro-MAB conference in Germany, June 2024. (6)

[Read more:](#)

[Biosfärområde Vänerskärsgården med Kinnekulle](#)

[Hem - Hemmavé](#)

# The Semper Pollinator Path – Götene Biosphere Corridor

**Name of the Biosphere Reserve:** Lake Vänern Archipelago and Mount Kinnekulle UNESCO Biosphere Reserve

**Main goal/purpose:** The main goal is to strengthen the site's biological diversity as well as strengthening the knowledge about the importance of pollination, biological diversity, ecosystems, and ecosystem services.

**Target groups:** Children, young people, the public, Industrial personnel

**Stakeholders involved:** Lake Vänern Archipelago and Mount Kinnekulle UNESCO Biosphere Reserve, Semper, The Swedish Society for Nature Conservation and Götene Municipality

**Project period:** 2023–2024

## Description of the project

The project is about strengthening both the biological diversity on the site as well as strengthening the knowledge among the citizens about the importance of the biological diversity and functional ecosystems. This is done by working with a well visited old embankment, in one of the central villages of the BR. The site is situated in the middle of an industrial area.

During the project it has been supplemented with a variety of pollinator-friendly plants as well as birdhouses, insect nests and educational signs. There have also been several educational activities for children, young people, industrial personnel and for the public.

This BR is run as an association, with members. A lot of time and effort has been invested in developing collaboration with the business community. Semper has been a member for some years and the project originates from that collaboration.



## Results and effects

The project has resulted in a site of 750 metres that is much more appealing to bees, bumblebees, and people. During the project period, residents have been invited to participate in a series of activities to increase knowledge about the importance of preserving, developing, and supporting natural and cultural values.

This project has also resulted in more companies engaging in the BR work and in new / other projects for strengthened biological diversity.

### Focal points:

#### 3. Research and education

#### 4. Community engagement and participation

#### This is done through:

- This site forms a platform for education for preschools and schools, fostering a better understanding of ecosystems and sustainable practices, and provides opportunities for increased knowledge among citizens and visitors. (3)
- Citizens have participated in project activities; sowing meadowland and learning how to mow with a scythe. This grassroots involvement is one way of increasing engagement for biological diversity. (4)
- This project has created engagement by involving citizens in activities - a step in the direction of creating local acceptance of necessary changes and responses to the implementation of the targets of the GBF. (4 and to some extent 5)

**They also contribute to the remaining focal points by:**

- The site is a living laboratory for new cooperations, education and for restoring biodiversity. (1)
- The BR demonstrate sustainable practices in land use. The site showcases how humans can live in harmony with nature. (2)
- The BR has briefly shared information about this project in a panel discussion at the Euro-MAB conference in Germany, June 2024. (6)

Read more:

[Biosfärområde Vänerskärgården med Kinnekulle](#)



# The Value of Nature Project

**Name of the Biosphere Reserve:** Lake Vänern Archipelago and Mount Kinnekulle UNESCO Biosphere Reserve

**Main goal/purpose:** Gaining and sharing knowledge about the importance of functional ecosystems and ecosystem services. Strengthening the network within the BR.

**Target groups:** Politicians, municipal officers, and developers

**Stakeholders involved:** Lake Vänern Archipelago and Mount Kinnekulle UNESCO Biosphere Reserve, the Municipalities of Lidköping, Götene and Mariestad, The Swedish Society for Nature Conservation and the University of Gothenburg

**Project period:** 2021–2022

## Description of the project

The Value of Nature Project was initiated to spread knowledge about the importance of functional ecosystems and ecosystem services in the BR. The project also developed and strengthened co operations between the three municipalities in the BR. Politicians and municipal officers completed a training where ecosystem services, landscape ecology and green infrastructure were central parts. They also participated in a study trip in the BR where different sites, businesses and good examples were explored. A panel discussion gave different perspectives on how the BR can develop into an even more active model region within the focus subjects. A day for developers was also organized. Good examples were shared among them and from experts.

## Results and effects

Conclusions from the participants after the project was that meeting arenas like the ones within the project have been of great value. The project gave new knowledge, a common vocabulary and inspiration to the BR municipalities from other concrete and successful projects. The new network also resulted in a list of ideas for new projects and highlighted the value of nature in a time where the BR is facing many developments. A research collaborator from the University of Gothenburg followed the project.

### Focal points:

#### 3. Research and education

#### 4. Community engagement and participation

#### 5. International Cooperation and Networking

#### This is done through:

- The project served as a platform for research and education, fostering a better understanding of ecosystems and sustainable practices. The project provided opportunities for studying the impacts of human activities on biodiversity. (3)
- The BR involved politicians in the project, for participation in questions regarding biodiversity conservation and sustainable development. (4)
- By creating ownership and engagement, the UNESCO BR contributed to steps in a direction of local acceptance of necessary changes and responses to the implementation of the targets of the GBF. (5)

#### The project also touched focal points 1 & 2:

- The importance of conserving ecosystems, species, and genetic diversity were subjects that the participating politicians, municipalities officials and developers now know more about. (1)
- BR's as living laboratories for testing and implementing strategies to conserve and restore biodiversity and sustainable practices - and land use, agriculture, forestry, and other human activities were also subjects for knowledge and discussions.(2)

Read more:

[Biosfärområde Vänerskärsgården med Kinnekulle](#)





# ICELAND

## Snæfellsnes Biosphere Candidate

[Citizen Science Seal project](#)

# Citizen Science Seal project

**Name of the Biosphere Reserve:** Snæfellsnes Regional Park, Work in progress: Snæfellsnes Biosphere Reserve (2025)

**Main goal/purpose:**

- Learning process
- Biodiversity Conservation
- Grey seal is vulnerable in Iceland
- Harbour seal is endangered in Iceland
- Community Engagement and Participation
- Science, Research and Knowledge Sharing
- Collaboration and Networking

**Target groups:** Tourists, Tourist companies in Snæfellsnes, Landowners (with seals), schools in Snæfellsnes, staff at 5 inhabitants and visitor centres in Snæfellsnes

**Stakeholders involved:** Snæfellsnes Regional Park, Landowners in Ytri Tunga, Ferðamálasamtök Snæfellsness (tourist association of Snæfellsnes), Hótel Snæfellsnes, Gestastofa Snæfellsness, Snæfellsjökuls þjóðgarður, Sagnaseiður ([Local storytellers in Snæfellsnes](#) | [Sagnaseiður á Snæfellsnesi](#) | [Island](#)), Fjölbrautaskóli Snæfellsness, Grunnskóli Snæfellsbæjar

**Project period:** June – October 2023

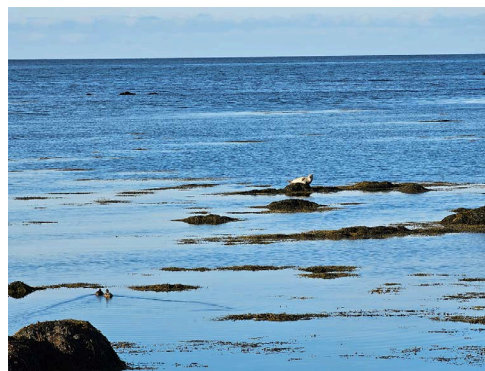
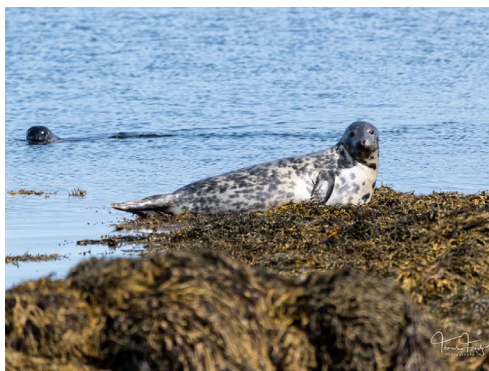
## Description of the project

Citizen Science experiment and learning process.

After finding the right people to participate in the "frame", guests (tourists) were invited to fill out time and weather data, participate in seal counting (according to fixed plan), write down results, use QR code and fill out survey. Leave data sheet in a box at the seal beach.

Scientist visited tourist companies, landowners and other stakeholders involved including our schools during the project time.





## Results and effects

A lot of lessons learned:

- How to do it
- Who needs to be involved
- Capacity sharing
- Engaging the stakeholders
- Local interest and awareness of seal conservation and regenerative tourism (how to look at wild animals in the "right" way)
- Education and networking
- Practical things like binoculars, low tide planning, time frame etc.

### Focal points:

1. Conservation of Biodiversity
3. Research and education
4. Community engagement and participation
6. International cooperation and networking

The project is primarily fulfilling focal points 3 but also 1, 4 and 6.

### This is done through:

- Fostering a better understanding of ecosystems and sustainable practices.
- Practical nature conservation work
- Encouraging children and youth to participate in active biodiversity conservation and sustainable development.

Read more:

[Home - Snæfellsnes](#) and [svaedisgardur.is](#)

A photograph of two women in a forest. One woman, with long brown hair and glasses, is wearing a blue jacket and is looking down at a book. The other woman, with blonde hair in a braid, is wearing a mustard-colored shirt and green pants, and is looking at the book. They are sitting on the forest floor, surrounded by trees and foliage.

## NORWAY

### Nordhordland

[GBF – Naturavtalen](#)

[The taste of Nordhordland UNESCO Biosphere](#)

[Exhibition: circular resources in Nordhordland](#)

[On the hunt for ecosystem services](#)

[Sustainability, biosphere, and libraries](#)

[Research in Nordhordland](#)

[Biosphere day](#)



# GBF – Naturavtalen

**Name of the Biosphere Reserve:** Nordhordland UNESCO Biosfære

**Main goal/purpose:**

- Mapping: By going into each of the 23 goals in the nature agreement, we will find out what we know and what knowledge and tools we need in the work to achieve the goals in the nature agreement.
- Competence: We wish to increase the competence of the municipalities on how they can work to achieve the goals in the nature agreement.
- Communication: The nature agreement must be well known both politically and administratively in the municipalities in Nordhordland.

**Target groups:** The administration in the municipality

**Stakeholders involved:** The administration in the municipality, Nordhordland UNESCO Biosphere and University of Bergen

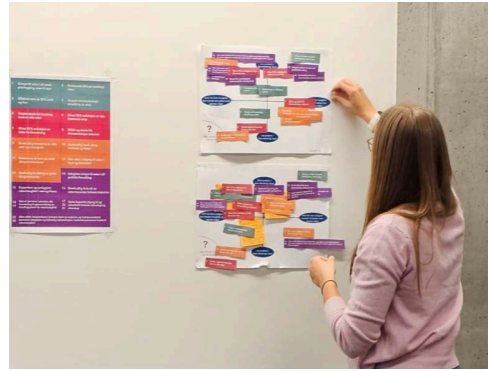
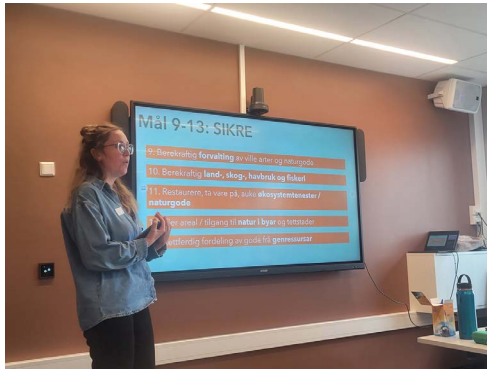
**Project period:** 2024

## Description of the project

We will examine how the Nordhordland UNESCO biosphere reserve can be a helpful tool to assist the municipalities in reaching the targets in the Nature Convention. Through the project, we will look for good processes and working methods that can have transfer value between the municipalities.

## Results and effects

In the project, we want to look at what the nature agreement means for the municipalities in Nordhordland, and how they can deliver on the nature agreement.



## Focal points:

### 1. Conservation of Biodiversity

### 5. International Cooperation and Networking

#### This is done through:

The GBF project will engage and develop how the municipality in Nordhordland can work actively with the nature agreement in their tasks and challenges. Something that complements objective 1 well: They serve as living laboratories for testing and implementing strategies to conserve and restore biodiversity, aligning with the goals of the Kunming-Montreal Framework.

Read more:

<https://nordhordlandbiosphere.no/nyhet/arbeid-med-naturavtalen-i-nordhordland>

# The taste of Nordhordland UNESCO Biosphere

**Name of the Biosphere Reserve:** Nordhordland UNESCO Biosfære

**Main goal/purpose:** The main aim of this project is business development based on sustainable resources in the region and thereby promote access to local food, development of agricultural industry, conservation of the landscape and safeguarding local food traditions and culture.

**Target groups:** Local food producers, tourism and hospitality businesses, farmers, and fishermen

**Stakeholders involved:** Local food producers, tourism and hospitality businesses, farmers, fishermen, Nordhordland UNESCO Biosphere, municipalities

**Project period:** 2018–2021, on-going

## Description of the project

Smak av Nordhordland UNESCO biosfære ("the taste of Nordhordland UNESCO Biosphere") is a network of local food producers whose production and raw materials are based on sustainable principles in line with the Biosphere idea.

Participants of the network can use the developed label on their products and benefit from publicity via the Biosphere channels as well as the webpage "Smak av Nordhordland". Via this network they can also participate in other projects from the Biosphere, such as Creative food day, which is an innovation day for food producers and hotels, where the point is to develop menus where local food is a large part of the menu.



## Results and effects

- Building a local network of food producers. This network promotes sustainable food production as well as development and innovation within this sector.
- Contributes to increased awareness and visibility of sustainable, local food production and traditions.
- Contributes to increased knowledge about the Biosphere Region

### Focal points:

#### 2. Sustainable use of resources

##### This is done through:

- Through the network and marketing of local food producers and their products, the sustainable practices within agriculture, land and sea use of the region are promoted

Read more:

[Smakenavnordhordland](#)

[Smak av Nordhordland UNESCO Biosfære - Nordhordland Biosfære](#)

# Exhibition: circular resources in Nordhordland

**Name of the Biosphere Reserve:** Nordhordland UNESCO Biosfære

**Main goal/purpose:** The main aim of this project is to create an exhibition about the UN sustainable development goals in a regional context and make this information easily available for all age groups.

**Target groups:** Local communities, schools

**Stakeholders involved:** Museum, researchers, designers & illustrators

**Project period:** 2022 – on-going

## Description of the project

The exhibition showcases how resources in Nordhordland can circulate and is divided in 4 themes: Life on land, Life in the ocean, agriculture, and industry. This is connected to the SDGs in a regional context. It was developed together with the centre for coastal heathlands. The content is based on research, numbers, issues, and narratives anchored in the Biosphere Region and is made available in different formats such as short movies, games and "touch and feel" elements. The exhibition further collects information, which will contribute to future research. In addition to the exhibition educational material was developed, so that teachers and pupils can work more in depth within specific topics in the surroundings of their schools. In 2024 and 2025 the exhibition travels to the 8 different municipalities of the Biosphere Region. In this context, there will be presentations with a focus on local sustainability issues as well as an introduction to the MAB programme. The local libraries are hosting the exhibition for a month each. The exhibition was developed and produced with local partners such as designers and illustrators, a printing company, and the regional business sector. A low resource footprint and the reuse of materials had a high priority during the production.





## Results and effects

- Increased knowledge about the region and the SDGs
- School children have an educational programme linked to the exhibition.
- Through events, we have increased engagement on various themes from the exhibition

### Focal points:

#### 3. Research and education

##### This is done through:

- sharing research findings in an understandable way and thereby contribute to an improved understanding of sustainability amongst visitors.
- offering educational material that further supports these aims.

##### The project also touches upon focal point 2 by:

- presenting an exhibition with a responsible use of materials.

Read more:

[Utstillinga Sirkulære Nordhordland - Nordhordland Biosfære](#)

# On the hunt for ecosystem services

**Name of the Biosphere Reserve:** Nordhordland UNESCO Biosfære

**Main goal/purpose:** The aim of the teaching materials is that pupils can learn what benefits/ecosystem services nature and ecosystems give us. This is done by theoretical and practical observation tasks.

**Target groups:** Teachers and pupils grades 8–10

**Stakeholders involved:** UNA Norway and Nordhordland UNESCO Biosphere

**Project period:** 2022–2023, On going

## Description of the project

This project is a collaboration between the UN Association of Norway and Nordhordland UNESCO Biosphere, which aims at developing teaching materials for the "ungdomsskole", which are grades 8-10. The pupils learn what a biosphere reserve is, about sustainable development and sustainable development goals, how important it is to take care of diverse species to preserve ecosystems and what ecosystem services are found in their surroundings. Through the programme, they will also get to know the local nature that surrounds their schools and homes more closely.

The teaching programme is divided into three parts, a theoretical part in the classroom, an observations exercise in the local nature and a final analysis and summary part in the classroom. This can be split into three 90 minutes parts or done during an entire school day.

The teaching materials include a good guidance for teachers and the necessary materials can easily be printed. Furthermore, teachers can get assistance by the UN-Association and the Biosphere Reserve.



## Results and effects

- A "ready to use" teaching-package was developed and can be used in local schools.
- Children and young people learn more about, how important it is to take care of diverse species to preserve ecosystems and what ecosystem services are found in their surroundings.

### Focal points:

#### 3. Research and education

##### This is done through:

- Using the developed teaching materials, pupils can get an increased understanding for the benefits we get from nature and the importance of preserving functioning ecosystems and their species.

Read more:

[Uteskole: På jakt etter naturgoder](#)

# Sustainability, biosphere, and libraries

**Name of the Biosphere Reserve:** Nordhordland UNESCO Biosfære

**Main goal/purpose:**

- Arouse commitment, interest, and knowledge among the inhabitants in terms of sustainability, nature, craft tradition, local food, cultural heritage, and wool production within the biosphere area.
- Visualize and strengthen the library as a knowledge player in the Nordhordland region.
- Establish a formal collaboration with Region Nordhordland on the Nordhordland UNESCO biosphere reserve project.

**Target groups:** Citizens

**Stakeholders involved:** The libraries in Nordhordland (8 different locations) and Nordhordland UNESCO Biosphere

**Project period:** 2023–2024. If we get more funds, this collaboration will continue.

## Description of the project

The library in Nordhordland will work together to plan, develop, and implement interactive events within the Nordhordland UNESCO biosphere reserve.



## Results and effects

- The purpose of the project is to create a series of events aimed at the public to highlight knowledge about biosphere reserves. During the project, we wish to promote conversation, debate, awaken new knowledge in the local community and focus on sustainability in a social, economic, and environmental perspective.
- By raising the biosphere, cooperation, and resilience in and outside the library space in the Nordhordland region, we want to arouse commitment among the citizens. We will invest in creating good meeting places across generations.

### Focal points:

#### 3. Research and education

##### This is done through:

- One of the aims of the events at the libraries is for citizens to be replenished with research and knowledge about nature, sustainability, culture, landscape etc.

[Read more:](#)

[Berekraft, biosfære og bibliotek - Nordhordland Biosfære](#)

# Research in Nordhordland

**Name of the Biosphere Reserve:** Nordhordland UNESCO Biosfære

**Main goal/purpose:** Facilitate and motivate research in the Biosphere region and communicate research results from the biosphere area out to municipalities, citizens, and business.

**Target groups:** Researchers, local community, local administration, businesses, and Nordhordland UNESCO Biosphere

**Stakeholders involved:** Researchers, local community, local administration, businesses, and Nordhordland UNESCO Biosphere

**Project period:** 2021 – on-going

## Description of the project

The big challenge is to shape a sustainable society. UNESCO's Man and biosphere program uses sustainability goals as the basis for the programme. Central to the UNESCO program is also that development should be knowledge driven. The sub-project "knowledge-driven computing" takes this challenge seriously and lays the foundation for cooperation, interaction and concrete projects between leading knowledge institutions and the Nordhordland UNESCO Biosphere Reserve. The research must come closer to the local communities in the region and the "daily life" of the inhabitants.

## Results and effects

In the project we hope that we will manage to:

- Develop cooperation with the research environment.
- Ensure that the research environment is involved in issues related to strengthening social and business development in the region.
- Develop good communication platforms and various arenas for dialogue between the research and knowledge environment, the municipalities, regional business, volunteers, and other social actors.



## Focal points:

### 3. Research and education

#### This is done through:

- Through this project, we have found a way in which we in Nordhordland can implement research in the biosphere area, and how we can become a hub for research and communication for research in Nordhordland.

Read more:

[Forsking i Nordhordland UNESCO Biosfære - Nordhordland Biosfære](#)

# Biosphere day

**Name of the Biosphere Reserve:** Nordhordland UNESCO Biosfære

**Main goal/purpose:**

- Sharing knowledge
- Discussing challenges from several sides

**Target groups:**

- Municipal employees
- Manager in companies
- Mayors
- Citizens
- Voluntary organisations
- Teachers
- Museum
- Young people
- Farmers
- Researchers
- Government employees

**Stakeholders involved:** We may have different stakeholders. But during Biosphere Day in 2024, the museum Lyngheisenteret was an important partner. In addition to the University of Bergen, the municipalities in Nordhordland, industry in the region, politicians, and volunteers.

**Project period:** 2023 – on-going

## Description of the project

For Nordhordland UNESCO Biosphere, a biosphere day is a day when we invite to "the round table", we address a social issue, perhaps a difficult social issue - and let the various parties "sit at the table" to have their say and tell how the case is from their point of view. The difficult question may not be resolved, but it gives insight, respect, and new lessons. It is important that a biosphere area has this function.





## Results and effects

We have organized Biosphere Day twice, and both times we have had many visitors, as many as 150 people. We have also managed to reach different groups in society. The effect of the day should be increased knowledge about the topic, and that you gain an understanding of several aspects of the matter being discussed. And not least that more people understand what function biosphere areas have.

### Focal points:

#### 4. Community engagement and participation

#### 5. International Cooperation and Networking

### This is done through:

- The theme the biosphere day in 2024 was "Green transition, energy needs, land pressure and nature in Nordhordland". This day was a good example of lifting the challenges we have around our nature, which is threatened by the development of electricity, which our industry needs to carry out the green shift. Through this day, we involve several types of people from different types of organisations, in addition to opening debate around the topic with various groups in society. Everyone can participate on this day and learn more about this challenge.

Read more:

[Energisk under årets Biosfæredag! - Nordhordland Biosfære](#)

# ABOUT MAB LAB

This publication presents findings from the Nordic Council of Ministers - Nordic Working Group for Biological Diversity funded project *MAB LAB: Man, and the Biosphere - Local Actions for the new global framework for Biodiversity – part II*.

The project is based on a fundamental ambition to foster and support local solutions to global challenges by increasing the number of UNESCO Biosphere Reserves in the Nordic region.

This aim of the project – MAB-LAB II - has been to elaborate on the work in the MAB-LAB I project that presented a "translation" of the GBF into a local context to create ownership, anchoring and action in local communities. Hence work has been done to increase interaction and readiness to work with the biodiversity targets at local, national, and Nordic level and to inspire on a global level.

The project was organized around the following activities:

1. Preparation of a collection of examples of local experiences with biodiversity work in Nordic biosphere areas in a short and manageable form. The work is carried out with the involvement of actors from the Biosphere Reserves, candidate areas or potential biosphere areas in all Nordic countries.
2. Conduct four digital network meetings for the Nordic biosphere reserves.
3. Preparation of an inspiration catalogue for the development of next practices in a short and manageable form involving actors from biosphere areas, candidate areas or potential biosphere areas in all Nordic countries.
4. Conducting a side event in connection with CBD COP16 in Cali, Colombia.

During the work on the project in 2024, a number of invitations were received to present the MAB-LAB work, and thus the opportunity to spread information about the Nordic approach in international forums. Specifically, this led to a presentation and discussion during EURO-MAB 2024 in Wittenberg, Germany and later during MAB-ICC in Agadir, Morocco. And finally, the side event at COP16 was carried out in close collaboration with the UNESCO Secretariat in Paris.

On the initiative of UNESCO in Paris, the COP16 presence was followed up in a series of webinars focusing on Latin America and the Caribbean, where the Nordic work was the primary source of inspiration for developing the work on local actions for biodiversity in Latin America and the Caribbean.

The overall objective of the MAB-LAB project is to contribute to catalyzing the readiness of the Nordic countries for the work of implementing the GBF.

This publication is about how Nordic UNESCO Biosphere Reserves can support the implantation of the Global Biodiversity Framework through local actions for biodiversity with a focus on good practice leading to next practice in the Nordic Biosphere Reserves.

This publication presents findings from the Nordic Council of Ministers - Nordic Working Group for Biological Diversity funded project *MAB LAB: Man, and the Biosphere - Local Actions for the new global framework for Biodiversity – part II*.

The project is based on a fundamental ambition to foster and support local solutions to global challenges by increasing the number of UNESCO biosphere reserves in the Nordic region.

This aim of the project – MAB-LAB II - has been to elaborate on the work in the MAB-LAB I project that presented a "translation" of the new global biodiversity framework (Kunming-Montreal Global Biodiversity Framework) into a local context to create ownership, anchoring and action in local communities. Hence work has been done to increase interaction and readiness to work with the biodiversity targets at local, national, and Nordic level and to inspire on a global level.

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The overall objective of the MAB-LAB project is to contribute to catalyzing the readiness of the Nordic countries for the work of implementing the new Global Biodiversity Framework.

This publication is showcasing how Nordic UNESCO Biosphere Reserves can support the implantation of the Global Biodiversity Framework through local actions for biodiversity in the Nordic Biosphere Reserves.

## Partners and execution

The MAB LAB project has been developed through a Nordic collaboration involving the following actors:

- Denmark: Møn UNESCO Biosphere Reserve (Katrine Dietrich)
- Sweden: Vattenriket, Biosphere Reserve (Carina Wettemark) National coordinator for the Swedish MAB-program (Johanna MacTaggart)
- Norway: Nordhordland Biosphere Reserve (Kari E. Natland), The Norwegian Biosphere Committee (Eva Hauge Fontaine).
- Finland: North Karelia Biosphere Reserve (Vilma Lehtovaara), Skärgårdshavets Biosphere reserve (Katja Bonnevier)
- Iceland: Snæfellsness Biosphere Reserve Candidate (Ragnhildur Sigurðardóttir)

The work was led by Katrine Dietrich (Møn UNESCO Biosphere reserve, DK) and samples was collected by Kari E. Natland and Bigna Lu Abderhalden (Nordhordland Biosphere Reserve, NO) and Ragnhildur Sigurðardóttir (Snæfellsness Biosphere reserve Candidate)

The report was prepared by Kari E. Natland and Bigna Lu Abderhalden (Nordhordland Biosphere Reserve, NO) and Ragnhildur Sigurðardóttir (Snæfellsness Biosphere Reserve Candidate) with help from Mads Randbøll Wolff, Sustainability 2030 and Nikolaj Sveistrup, URBAN AGENDA.

# ABOUT THIS PUBLICATION

## LOCAL ACTIONS FOR BIODIVERSITY

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## Nordic co-operation

Nordic co-operation is one of the world's most extensive forms of regional collaboration, involving Denmark, Finland, Iceland, Norway, Sweden, and the Faroe Islands, Greenland and Åland.

Nordic co-operation has firm traditions in politics, economics and culture and plays an important role in European and international forums. The Nordic community strives for a strong Nordic Region in a strong Europe.

Nordic co-operation promotes regional interests and values in a global world. The values shared by the Nordic countries help make the region one of the most innovative and competitive in the world.

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