

GOOD PRACTICES

Restoration Academy I Good Practices





Restoration Academy Empowering Youth Participation in Nature Restoration

GOOD PRACTICES

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Introduction

Restoration Academy aims to provide **youth organisations** and workers with tools to promote nature restoration as a means for youth-oriented educational and informal learning and volunteering activities, as well as to inspire young people on their journey to become active citizens and environmental leaders.

The Good Practices presented below constitute bright examples of **nature-based** and **nature restoration** activities that can spark inspiration among youth professionals in EU countries by measuring and assessing them according to specific criteria. Complementing the desk research conducted in all four participating countries and combined with the rest of the educational material (operations model, tool pack and demonstration videos), the Good Practice brochure can prove useful to young people and youth workers interested in or already implementing nature restoration and nature-based environmental activities to further enrich their ideas or practices and upgrade them.



FINLAND

Name of the Initiative / **Practice / Project:**

FNA's restoration camps

OVERVIEW

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ORGANISATION Luontoliitto ry / The Finnish Nature Association (FNA)



National



TARGET GROUP Youth 15-28 years old

Objectives

The camps have three main objectives:

- To restore endangered biotopes or biotopes hosting endangered species.
- To provide young people with a hands-on experience of conservation work in nature and a space to learn new skills.
- Provide opportunities for young people to participate in camp activities with other young people and create a sense of community.



Aims, goals, how it works, etc.:

The Finnish Nature Association (FNA) has been running restoration camps with young people for a few years. Restoration camps and restoration projects have been carried out to protect different biotopes and species. The restoration camps have included restoration of marshes, forests, stream waters and various open habitats such as meadows, dry meadows and sunlit environments.

Restoration camps can be run with young people of different ages and even children, depending on the theme. No prior knowledge or skills are required. However, depending on the context of the camp and restoration work, good camping and tool-handling skills may be necessary.

No machines are used as tools at the FNA camps, only hand tools.

Main objectives:

1. Restoration and nature conservation

The main objective of camps and restoration work is to protect nature and in particular the biotopes and species of each site. Biodiversity loss is a threat to the whole planet and threats the viable future of all its species. BD loss occurs at all three levels of diversity: genetic, species, and ecosystem. All three levels of biodiversity are separate but related.

cation for young people The FNA's restoration camps offer young people the opportunity to get involved in concrete conservation work and to be empowered through action. Climate change and BD loss are issues that can be difficult for young people to influence because things are too big and complicated is common among young people. However, restoration camps offer a concrete way to make a difference in the environment and positively impact global problems. This increases young people's motivation to get involved in organisations and environmentalism. It also increases young people's skills and understanding of the diversity and importance of biotopes and their interde-

3. Youth cooperation and the importance of camps - community spirit

In addition to concrete nature conservation and empowerment, an important goal of the FNA's camps is cooperation and networking between young people. The camps create genuine encounters and deep relationships between participants. The camps are an intensive and communal experience. Participants form strong bonds with each other, which fosters the belief that they are not alone in standing up for what is important to them.

pendencies.

Organising Camps

The FNA has organised professional camps for children and young people for decades. The content and structure of the camps have changed over time, but nature-based environmental education remains an important core element. This is also the case for restoration camps.

In order to organise camps, there must be a suitable campsite close to the restoration site and the necessary camp and restoration facilities. Facilities may be fixed or, in the case of restoration camps, often mobile.

The FNA cooperates with, for example, Metsähallitus, the national park management body. It has also worked with other organisations, private landowners and nature reserves.

Communication about the camps is important to ensure that information about the camps reaches young people interested in environmental protection. In most cases, restoration is also an unfamiliar activity for many young people, which is why communication in plain language must be considered.



2. Concrete nature conservation and environmental edu-



Effectiveness

and success

Effectiveness and success can be measured in terms of restoration activities or camps.

Efficiency and success will be measured primarily in terms of the number of areas of restored biotopes. The size of the area is not only an indicator of success; sometimes, even small areas can require long-term and slow restoration work.

Some restoration sites are already very difficult to reach because of their location. Camps are really the only sensible form of activity, rather than, for example, one-day volunteer work.

Young people have found the FNA's restoration camps very good, and many participants have committed long-term to the activities. Concrete action in nature and concrete conservation work are themes that have emerged from the young people themselves, and at the same time, they are themes that have been characteristic of the FNA's work for decades.

For young people, camps have been found to create deep relationships and a sense of community. In addition, restoration work carried out over several days and in groups gives the participants a strong sense of ownership of the site and makes the activity meaningful and impactful when large areas can be restored.

Success is also measured by collecting feedback from participants. In particular, success is influenced by young people's sense of empowerment and willingness to participate again.

Many who have participated in FNA restoration camps have re-engaged with FNA activities and have found other ways to influence environmental issues through FNA.

Our experience is that camps are an attractive activity for young people, but are by no means suitable for everyone. Most often, young people with first-hand camping experience, or at least an interest in learning, apply for camps. They also have a strong desire and need to do something concrete for nature.

Minimal arrangements:

A small camp where participants participate with their own equipment and manage meals independently. The association provides working equipment and instruction and possibly coordinates transport.

Large arrangements:

A larger camp where the association provides accommodation, food, transport, equipment and instruction.

Restoration equipment depends largely on the site and the restoration work. Equipment can be hired or borrowed, but if it is known that similar work will be done regularly in the future, it is also worth buying equipment.

Participatory perspective

Technical

feasibility

Participants are able to carry out planned nature management activities. Ideally, participants will also be able to participate in the preparation and planning of the management plan or at least have access to it in advance if they wish.

Participants will be involved in a range of camp activities in addition to restoration work. This increases the campers' sense of ownership of the camp and the community.

Replicability and adaptability are an important part of the content of restoration camps. Some restoration work requires long-term and regular voluntary work. For some habitats, it is sufficient to carry out the restoration once, but there may also be monitoring visits to check on the success of the restoration.

Replicability and adaptability

The basic design of restoration camps is simple to model and replicate, but the challenge is the design, which always requires case-specific expertise.

Especially when modelling the camp in other countries, there will certainly be more challenges in replicating it in terms of different restoration sites and regulatory arrangements, such as land ownership issues and permits.



The most important part of the technical implementation is the existence of camp facilities. Camps can be organised between two extremes:



Restoration camps are nature-based environmental education at its best. In addition to environmental and nature education, the camps usually combine a lot of learning about the characteristics and requirements of habitats and species. Why does a particular habitat need particular nutrients, light, humidity or soil conditions? How does this, in turn, affect the species, and why and how are particular species adapted to these conditions?

Holistic and interdisciplinary approach

Restoration often also takes into account geomorphology, i.e. the shape and structure of the land surface, and hydrology, i.e. the movement of water over land.

Aquatic restoration, on the other hand, is related to aquatic sciences.

The camps provide an opportunity to put various theories of environmental and experiential education into practice. In addition, a number of different educational disciplines are well suited as a starting point for restoration camps, such as adult education, vocational education, special education and activity pedagogy.

GENERAL ASSESSMENT (Pro-Cons)

Restoration camp is a good example of both restoration activities and nature-based environmental education.

Camp as a restoration activity:

- Concrete nature conservation
- You can get a lot done in a camp when you have a lot of people and time
- Camps are an attractive activity for young people
- Concrete and important work that is best done by hand
- Camps are not accessible to everyone.

Restoration camp as a method of nature-based environmental education:

- A holistic way of learning
- Activity empowers the participants
- New learning about restoration and positive human impact on nature through doing.
- Diverse learning about different ecosystems and site characteristics
- Increased interest, respect and desire to protect the specific environments
- The impact is immediate
- Concrete and important work that is best done by hand
- Permits
- Requires expert planning
- Obtaining and finding equipments
- Short-term participation is not possible

Name of the Initiative / Practice / Project:

Stream restoration activities

Description

Aims, goals, how it works, etc.:

All inland waters in which water flows are classified as stream waters. They include rivers, streams, canals, trickles and artificial channels.

Streams are important for biodiversity because they are part of other ecosystems and form their own unique ecosystems.

Dam and other hydraulic engineering, drainage, logging and eutrophication are among the factors that have led to the loss of stream species, especially migratory fish. Climate change and invasive species also threaten streams.

Stream restoration protects and restores the ecosystem's diversity.

There are many ways to restore streams, such as removing barriers, restoring rapids and, where necessary, translocation of species. In particular, the FNA's stream water group has restored rapids to allow the reproduction of endangered fish species that live in or have been translocated to these water bodies.

The rapids are restored by modifying the structure of the bed to make it more favourable to the species. This is usually done by creating redds for spawning in the rapids, placing rocks to create suitable flow and shelter for aquatic organisms, and allowing depth variation in the rapids.



OVERVIEW



ORGANISATION

Luontoliitto ry / The Finnish Nature Association (FNA)



LEVEL

National / Local



TARGET GROUP Children and youth 7-28 years old



The stream restoration aim is to restore the reproductive potential of migratory fish and other organisms living in streams by restoring the structure of stream beds. This is most often done by adding gravel to the bottom at the right grain size for spawning by endangered migratory fish.

Planning for stream restoration always requires expert work to identify the right locations and gravel types, and to secure permits.

However, if you participate in stream restoration projects several times, you quickly learn which sites could be restored, at least on an experimental basis. In any case, the restoration sites need to be monitored to see whether the spawning beds (redds) have remained in place and whether they have started supporting the water body's natural bottom species.

Stream restoration is a volunteer effort that volunteers of all ages can undertake. Stream restorations require some advance planning and a permit.

Research shows that properly constructed restoration structures that increase restored riverbeds' diversity and habitat quality last well over time. The coverage of aquatic mosses, which are important for the aquatic ecosystem, also recovers over time.

Through concrete examples and hands-on activities, participants, even children, will learn about the ecosystem, species and characteristics of the streams, often in their own local neighborhood.

QUALITY INDICATORS

Success can be measured in two ways: how much and how well stream restoration has been done, and whether young people have been attracted to participate in the restoration activities and if they have learned something new.

Overall, the stream restoration activities have successfully attracted young people to the activities.

Effectiveness and success

Three things in particular attract young people to the activity: 1) Interest in the habitat, usually because they are interested in

fishing or aquatic ecology

2) Ease, functionality and concrete nature of the activity

3) The location of the activity, often close to or even within a large city.

In ecological terms, the restoration of streams has been very successful, as the restoration sites have been well-mapped and planned.

Young people with a particular interest in streams have participated well. It has also been possible to organise the restoration activities with a relatively low threshold. Monitoring trips have also been popular and easy to organise.

Stream restoration projects differ, for example, from some camps, particularly regarding location. Many watercourses to be restored can be found in large cities and within easy reach.

ration activity.

people.

In particular, the technical requirements for the restoration of redds (spawning beds) in streams are relatively low.

Expert knowledge of the sites is needed, as well as permits for restoration, before work can begin. Large quantities of gravel of the right grain size are needed, together with the equipment, to move the gravel first by truck as close as possible to the restoration site and then, usually with wheelbarrows, shovels and buckets, to the water body itself.

Sometimes, sites can be in difficult locations where transporting gravel from a distance can prove challenging. On the other hand, sometimes the sites are very easily accessible in towns and cities, making it easy for participants to arrive spontaneously, with few prerequisites on the part of the participant.

Participatory perspective

Technical

feasibility

Participants are able to carry out planned activities that will have a direct impact on the status and biodiversity of the watercourses. Ideally, participants will also be able to contribute to the preparation of the management plan or at least have access to it in advance if they wish.

Participants can also be involved in preparatory work, for example, by providing equipment, organising transport and mobilising young people.

In addition, many smaller streams can only be restored by hand, not machinery. This is why voluntary work is also very important in stream resto-

For these reasons, stream restoration can be seen as a successful way of providing nature-based environmental education for kids and young



Stream restoration initiatives are relatively easy to replicate and adapt to different countries. While some sites require long-term and regular work, others require only a one-off restoration and can be followed up with monitoring visits to assess the success of the restoration.

Replicability and adaptability

While the basic structure of a restoration project is simple to model and replicate, the challenge is the design, which always requires case-specific expertise.

In particular, when modelling the activity in other countries, replication will certainly present more challenges in terms of different restoration sites and regulatory arrangements, such as landowner issues and permits.

Restoration activities are nature-based environmental education at its best. In addition to environmental and nature education, stream restorations usually combine a lot of learning about the characteristics and requirements of habitats and species. Why does a particular stream need particular environmental conditions or the structure of bed? How does this, in turn, affect the species and their reproductive potential?

Holistic and interdisciplinary approach

Restoration often also takes into account geomorphology, i.e. the flow rate, shape and structure of the stream.

Aquatic restoration is, of course, also related to aquatic sciences.

The restoration activities provide an opportunity to put various environmental and experiential education theories into practice.

At best, stream restoration can be done in just one go. Many actions literally restore a stream's bed structure to its state before human intervention. In this case, the chances of success are also high.

Durability

Research shows that properly constructed restoration structures, increasing the diversity and habitat quality of restored streams, are durable over time. Also, the coverage of aquatic mosses, important to the aquatic ecosystem, is relatively well restored over time.



Stream water restoration is a good example of both restoration activities and nature-based environmental education.

Stream waters as a restoration activity:

- Easy and fun activities for all ages
- Even short-term participation is possible
- Sites are usually easily accessible from cities, and in the cities
- 😌 The impact is immediate, and a monitoring trip can be organised even in the same year
- Concrete and important work that is best done by hand
- Permits
- Requires expert planning
- Obtaining and finding equipment and gravel

Streamwater restoration as a method of nature-based environmental education

- Usually easily accessible sites that engage and empower participants
- One way to the second secon
- Diverse learning about aquatic ecosystems and site characteristics
- C Increased interest, respect and desire to protect the local environment
- Unilateral action may not sustain interest for long







GREECE

Name of the Initiative / Practice / Project:

Forest Restoration, Parnitha, Greece

OVERVIEW



ORGANISATION

WWF Greece, the Forest Department and the Management, other stakeholders and local volunteers



LEVEL Local / National



LINK OF THE INITIATIVE contentarchive.wwf.gr/areas/forests/parnitha





Description

Aims, goals, how it works, etc.:

The restoration of the fir forest of the Parnitha National Park started after the devastating fire of 2007. The demand of a restoration plan came directly from the citizens through demonstrations because even though the Greek forest law obliges the Forest Department to survey an area after a fire and declare it an area for restoration, this does not always happen due to budget limitations and lack of political will.

This programme included both natural restorations, mainly through a ban on grazing, hunting and logging, and specific and targeted actions such as tree planting and erosion control works. It is also an example of citizen participation and involvement both through lobbying for action by the government and through their participation in the implementation of the relevant actions and projects. Finally, this initiative highlights the importance of science-based planning as well as for coordinated actions and contributions from all relevant bodies, such as the Forest Service, the Protected Area Management Body, forestry experts and other scientists, as well as trained volunteers.

In more details over the course of 10 years of restoration, the actions that were realised included 1.913 km of anti-corrosion works, 5.960 wood fences with the aim of flood protection. The aforementioned came as additional nature restoration actions to the central role and involvement of volunteers. In general, 2.500 volunteers were registered on the WWF platform online, 13 restoration activities/events were organised in collaboration with other stakeholders/institutions and 16.101 fir trees were planted.

QUALITY INDICATORS

The Parnitha forest restoration, initiated in 2008, involved WWF Greece, the Forest Department, and 2,500 volunteers. One of the outcomes of the initiative was a nursery which was established for future tree plantings. The project included 1,913 kilometers of anti-erosion measures to safeguard against land use changes and convey a commitment to preservation. Importantly, success was attributed to community engagement, legal mandates, and political support.

Effectiveness and success

Under the Management Authority of the National Forest Park of Parnitha, volunteers received training to actively participate in the reforestation. To create an ideal environment for Greek fir tree growth, the most important and unique type of tree in the forest, pine trees were initially planted for shade. Expert forestry companies contributed to the restoration, and a nursery preserved local genetic material.

Over 13 years, a combination of natural regeneration and active restoration efforts revitalized Mount Parnitha. Approximately 1,374 hectares underwent natural regeneration by limiting activities like grazing, hunting, and logging that hinder recovery. In actively restored areas, a substantial number of various tree species were planted, leading to the region's restoration and emphasizing the effectiveness of collaborative conservation and community-driven initiatives.

Brief introduction/Disclaimer: Although a debate around Nature Restoration has begun in Greece, it remains fairly limited and on a theoretical level. KMOP's research within the framework of the project led to some initiatives dating back to the beginning of the 2000s or some others that do not fit perfectly to the official definition of nature restoration. Therefore, readers should take into account that the options were limited.



The local community's swift mobilisation and organisation through social media exemplify the power of citizen engagement. Thousands of people protested pressuring politicians to take action, showcasing the vital role of community involvement in pushing for restoration efforts.

Participatory perspective

The participatory aspect extends to the collaboration with multiple stakeholders, including WWF Greece and the Forest Department. This collective effort, driven by a shared goal, highlights the importance of collaboration between organisations and communities in achieving successful restoration.

The project involves not only ecological aspects but also cultural and historical dimensions. Mount Parnitha is not just a forest; it holds cultural significance for the local population as a symbol of their identity and history. This cultural-historical element was factored into the restoration efforts, acknowledging the unique relationship between the territory and its people.

Holistic and interdisciplinary approach

The interdisciplinary approach is evident in the collaboration between stakeholders like WWF Greece, the Forest Department, and the Management Authority of the National Forest Park of Parnitha. These organisations bring together experts from different fields, including forestry, ecology, and community engagement, fostering a comprehensive approach to restoration.

Furthermore, the project's use of social media accounts, active at the time, for mobilisation and advocacy demonstrates its understanding of the importance of incorporating modern communication and technology into interdisciplinary efforts. It blends traditional and contemporary aspects, acknowledging the changing nature of community engagement.

Sustainability of initiative

The initiative has proven its longstanding effects since after the megafires of 2007 and until 2021, when the relevant sources have been published, 1,374 hectares were restored. Given that, nature restoration and especially tree growth, can last a long time, the persevering will and involvement of local stakeholders and the local community are of great importance. Another key indicator regarding the sustainability of the initiative is the nursery technique that was adopted, which was established for future tree planting. More precisely, seeds from the remaining fir trees, that survived the fire, were collected in order to develop a nursery of fir trees with local genetic material.



The Mount Parnitha restoration initiative exemplifies good practice for several reasons. Firstly, it swiftly responded to the ecological crisis by combining natural and technical restoration, emphasising the importance of preventing land use changes. It ensured that the restoration would provide continuous benefits to both the environment and local communities.

Secondly, the project showcased the power of community engagement. The local population organised protests through social media, demanding government action. This grassroots advocacy demonstrated the potential for citizens to influence restoration efforts.

Thirdly, the involvement of 2,500 trained volunteers and collaboration among multiple stakeholders, including WWF Greece, the Forest Department, and the Management Authority of the National Forest Park of Parnitha, showcased collective commitment and collaboration, enhancing the project's effectiveness.

Moreover, the incorporation of cultural and historical dimensions into the restoration plan ensured a well-rounded and balanced perspective. It acknowledged the deep cultural ties of the region to its people. Overall, the Mount Parnitha restoration initiative provides a model for comprehensive and effective restoration efforts, addressing ecological, cultural, and community needs.

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Name of the Initiative / Practice / Project:

The Forest Group

OVERVIEW



ORGANISATION The Forest Group





TARGET GROUP Kids, Families, Schools, Educators

Description

Aims, goals, how it works, etc.:

The initiative "Forest Group," founded by educator Rosa Triantafyllidi, aims to provide non-formal education that fosters a profound connection with nature and promotes environmental awareness. Since its inception in 2012, the initiative has conducted educational workshops in forest settings, with a further expansion to include schoolyards in 2020. The overarching goal is to integrate nature-based learning seamlessly into mainstream education, thereby fostering holistic development and environmental stewardship among participants. Core values, including small group dynamics, autonomy, and risk education, guide the initiative's approach. The initiative works by providing tailored educational programs that adapt to the needs and interests of each school, promoting experiential learning in both natural and schoolyard environments. Certified educators facilitate these programs, ensuring safety while encouraging participants to engage in transformative experiences. Through its innovative pedagogy and commitment to best practices in nature-based education, "Our Company of the Forest" serves as a model for integrating outdoor learning into educational systems worldwide, ultimately nurturing a generation of environmentally conscious and empowered individuals.

Technical feasibility

Since its inception in 2012, the initiative has conducted educational workshops in forest settings, with a further expansion to include schoolyards in 2020. The overarching goal is to integrate nature-based learning seamlessly into mainstream education, thereby fostering holistic development and environmental stewardship among participants. Core values, including small group dynamics, autonomy, and risk education, guide the initiative's approach. The "Forest Group" emphasises the fixed character of its meetings, which follow the stimuli of the natural environment and the seasons. These meetings aim to connect participants with nature, themselves, and the group, while developing environmental awareness through playful activities, movement, sensory activation, exploration, discovery, creative expression, cooperation, and contact with natural materials. Meetings occur year-round, regardless of weather conditions, with appropriate clothing, and are only postponed in cases of extreme weather. Certified educators facilitate these programmes, ensuring safety while encouraging participants to engage in transformative experiences.

The "Forest Group" demonstrates strong technical feasibility in its implementation across various age groups. The initiative's structured approach, divided into age-appropriate programmes such as Ant Nest, Beetles, Rabbits & Foxes, and Knickknacks, ensures that activities are tailored to the developmental stages of children from 2 to 13 years old. By drawing inspiration from Forest Schools and Waldorf-Steiner Pedagogy, the initiative adopts proven methodologies that have been successfully implemented worldwide. The emphasis on experiential learning and play-based activities enhances engagement and promotes effective learning outcomes. The initiative's utilisation of natural materials and outdoor environments aligns with its core values and objectives, facilitating hands-on exploration and sensory activation. Moreover, the collaboration with expert scientists and artists further enriches the learning experience, providing valuable insights into the natural world and fostering environmental awareness and personal expression among participants. Despite the varying age groups and program objectives, the initiative maintains a cohesive approach, ensuring consistency and effectiveness in achieving its goals. Overall, the "Forest Group" demonstrates technical feasibility through its well-structured programme, utilisation of proven methodologies, and collaborative partnerships, making it a viable and sustainable model for nature-based education.



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Effectiveness and success



Participatory perspective The "Forest Group" embodies a strong participatory perspective, engaging participants of all ages in co-creating meaningful learning experiences. The initiative's projects and workshops are designed collaboratively by experienced educators, ensuring alignment with the needs and capabilities of each age group. By involving participants in the design process, the initiative fosters a sense of ownership and investment in the learning journey, promoting active engagement and empowerment. The interdisciplinary nature of the projects, linked to the curriculum, further enhances participatory learning by providing holistic and relevant educational experiences. Additionally, the initiative's commitment to conducting activities "rain or shine" throughout the year underscores its dedication to inclusivity and accessibility, regardless of external conditions. The projects, whether conducted in natural spaces or schoolyards, prioritise experiential learning and sensory activation, inviting participants to explore, discover, and connect with the natural world firsthand. Furthermore, the initiative's emphasis on fostering environmental awareness and behaviour aligns with participatory principles by empowering participants to take proactive roles in environmental stewardship. Through collaborative workshops like "My School, Nature" and "A Classroom in the Garden," participants not only deepen their connection to nature but also cultivate initiatives to care for their surroundings. By involving Parents and Guardians Associations in the implementation process, the initiative expands its reach and strengthens community involvement, reinforcing the participatory ethos at both individual and collective levels. Overall, the "Forest Group" exemplifies a participatory perspective by prioritising collaboration, inclusivity, and empowerment, thereby fostering meaningful engagement and sustainable impact among participants.

Holistic and interdisciplinary approach

The "Forest Group" embodies a holistic and interdisciplinary approach to nature-based education, promoting comprehensive learning experiences that address the physical, mental, emotional, social, and environmental dimensions of participants' development. The initiative's educational projects and workshops are meticulously designed to cater to the diverse needs and capabilities of participants across different age groups, ensuring a well-rounded and inclusive learning environment. By integrating multiple disciplines, such as Experiential Learning, Waldorf-Steiner Pedagogy, Forest Pedagogy, and Montessori Education, the initiative provides participants with a rich and diverse educational experience that transcends traditional boundaries. The emphasis on experiential learning, sensory activation, observation, and exploration fosters deep engagement and meaningful connections with the natural world, enhancing participants' understanding and appreciation of their surroundings.

Sustainability of initiative

Moreover, the programmes' alignment with the curriculum ensures relevance and applicability to participants' academic and personal development goals, further reinforcing the interdisciplinary nature of the initiative. By conducting activities year-round, regardless of weather conditions, the initiative underscores its commitment to providing continuous and immersive learning experiences that nurture participants' holistic development. Through collaborative workshops like "My School, Nature" and "A Classroom in the Garden," participants are encouraged to explore their interests, develop skills, and cultivate environmental awareness in a supportive and enriching environment. Overall, "Our the "Forest Group" exemplifies a holistic and interdisciplinary approach to education, fostering comprehensive learning experiences that empower participants to thrive academically, socially, and environmentally."

The "Forest Group" exhibits a high degree of sustainability in terms of its longevity and continued impact over time. The initiative's robust organisational structure, which includes experienced educators, collaborative partnerships, and established pedagogical approaches, provides a solid foundation for its long-term sustainability. By designing projects and workshops that are adaptable to the evolving needs and capabilities of participants across different age groups, the initiative ensures relevance and continued engagement over time. Moreover, the year-round implementation of activities, regardless of weather conditions, demonstrates resilience and commitment to ongoing participation and learning. The initiative's inclusive approach, which involves Parents and Guardians Associations in the implementation process, further enhances its sustainability by fostering community ownership and support. Additionally, the collaborative workshops, such as "My School, Nature" and "A Classroom in the Garden," serve as platforms for continuous learning and skill development, ensuring sustained participation and impact. Overall, "Our Company of the Forest" is well-positioned for long-term sustainability, driven by its adaptability, community involvement, and commitment to ongoing learning and engagement.





GENERAL ASSESSMENT (Pro-Cons)

The "Forest Group" stands out as a commendable initiative due to its multifaceted strengths. Its holistic and interdisciplinary approach to nature-based education ensures comprehensive learning experiences that cater to the diverse needs of participants across different age groups. By fostering a deep connection to the natural world and promoting environmental awareness, the initiative empowers individuals to become active stewards of their surroundings. Furthermore, its sustainability is evidenced by its robust organisational structure, adaptability to changing needs, and ongoing community engagement. Through collaborative workshops and year-round activities, the initiative cultivates a supportive and enriching learning environment that nurtures participants' holistic development. Overall, it exemplifies excellence in nature-based education, offering transformative experiences that inspire lifelong learning, environmental stewardship, and community engagement.

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THE NETHERLANDS

Name of the Initiative / **Practice / Project:**

Tiny Forests, IVN Educatie











OVERVIEW

ORGANISATION

IVN Educatie

LEVEL Local / International

TARGET GROUP

Primary school children and the local community



Description

Aims, goals, how it works, etc.:

IVN Educatie is an NGO specialised in outdoor nature education for children and adults. One of their flagship programmes is the Tiny Forest initiative. They are working with local municipalities, schools and local residence to plant forests the size of tennis courts (200-250m2). The first one of these mini forest areas was planted in Zandaam, NL in 2015 (IVNEducatie, n.d.). Since then, the project has been replicated almost 200 times in schools and local neighbourhoods (IVNEducatie, n.d.).

According to the IVN, the aim of the mini forests is to get people to experience nature and to have a positive effect on health and well-being. They also serve an important role for urban environments, combating heat stress, water storage, air pollution and CO2 storage (M. Sanders, 2018).

Tiny Forest was first introduced as an idea by Indian engineer Shubhendu Sharma (CEO Afforestt), who was inspired by the work of Dr. Akira Miyawaki, a Japanese tree expert. Dr. Miyawaki developed a method to restore natural, native forests in the 1970s (IVNEducatie, n.d.). He established over 1,700 forests, 96.7% of which developed into resilient ecosystems within a decade (IVNEducatie, n.d.). Through the Tiny Forest initiative, Shubhendu Sharma wanted to bring Miyawaki's approach to an urban setting. Thus, the Tiny Forest is registered as a trademark to make sure that all the local initiatives categorised under this title follow a specific protocol that ensures quality and standards.

The project works through different phases (M. Bruns, 2019). First, the site is selected and prepared. IVN Educatie collaborates with local authorities, community organisations, and landowners to identify suitable sites for creating tiny forests. Sites are then selected based on factors such as available space, soil quality, sunlight exposure, and accessibility.

Once a site is selected, they work with experts to design a diverse forest ecosystem that includes native tree species, shrubs, and understory plants. Community members and school children are invited to participate in tree-planting events, where they learn about native flora and fauna while actively contributing to forest creation.

Once the forest is planted, the organisation runs educational workshops, field trips, and interpretive signage aimed at providing participants with knowledge about forest ecology, biodiversity, and sustainable living practices. These activities are tailored to different age groups and educational levels. Furthermore, IVN Educatie seeks to engage people through organising volunteer opportunities, citizen science projects, and social events. Community members are encouraged to become stewards of the forest by participating in ongoing maintenance tasks such as watering, weeding, and monitoring.

Finally, the organisation conducts regular monitoring and evaluation to assess the ecological, social, and educational impacts of the tiny forests. Data collected through monitoring help inform future management decisions and demonstrate the effectiveness of the program to stakeholders.

QUALITY INDICATORS

To measure the effectiveness and success of the Tiny Forest project, indicators include environmental impact, community engagement, educational outcomes, and long-term sustainability.

In terms of environmental impact, the project helps to improve the local ecology and reduce GHG emissions. One paper found that a Tiny Forest stores an average of 127.5 kilograms of CO2 per year (Bleichrodt, 2022). The researchers expect this average will rise to 250 kilograms of CO2 per year as the mini forests age (Bleichrodt, 2022). Furthermore, Wageningen Environmental Research (WENR) measured the biodiversity of Het Gouwse Bos and Het Groene Woud each month with the help of citizen volunteers. This research showed that in both Tiny Forest locations, the biodiversity (expressed in a number of species groups and a number of individuals) was higher than in nearby reference forests (F. Ottburg, 2018).

Effectiveness and success

Technical

feasibility

When it comes to engagement and education, the project successfully involves young people in active restoration and offers a long-term outdoor space for them to learn. Indicators for youth education engagement can be seen in the 200 locations that have now been implemented in the Netherlands, with many of these being built directly with students from surrounding schools (IVNEducatie, n.d.). Furthermore, between 2018-2022, over 17,000 schoolchildren followed the Tiny Forest Ranger programme (Bleichrodt, 2022).

As this project is still in its early stages, long-term sustainability is harder to measure. However, the long-term viability and sustainability of the tiny forest ecosystem should be assessed through factors such as tree growth rates, habitat connectivity, resilience to disturbances, and maintenance practices over time.

A technical feasibility assessment is something that is part of the initial planning phase before the Tiny Forest site is selected. According to the project's approach, it is important that the forest is composed of native plant species. This means that species are likely to be found naturally occurring in the nearby area and that wild seeds are easier to find and plant. A field survey will look at the type of soil, the local plants, and whether there is any risk of development in the area.

One of the strengths of this project is the simple and minimal approach, which makes it much more technically feasible. This is especially needed when proposing these areas in more urban settings where land is highly demanded. That being said, it was noted by the researchers at WUR that more studies should look at the feasibility and impact of a mini forest in a stonier environment (F. Ottburg, 2018).





The Tiny Forest programme is participatory both in the initial creation and implementation as well as in the later engagement and monitoring.

The program actively involves community members in the planning and design of the tiny forests. This involvement can include consultation meetings, workshops, and collaborative decision-making processes. It also integrates different knowledge systems, including traditional ecological knowledge, understanding local biodiversity, and considering community preferences and needs.

An example of a participatory approach in the monitoring can be seen in the research carried out by Wageningen University & Research (WUR), which used citizen science and a network of hundreds of volunteers to analyse the biodiversity, heat stress, CO2 storage and water storage in eleven Tiny Forest locations (F. Ottburg, 2018).

Volunteer participation can be seen in other aspects of the program, such as planting trees, maintaining the forest, and organising community events. The project also demonstrates a long-term commitment to engagement and collaboration with the community through regular community meetings and sustained involvement in forest maintenance and monitoring.

Finally, the program engages a diverse range of stakeholders, including residents, local businesses, schools, and local municipalities. This ensures that multiple perspectives are considered and that there is broad support for the initiative within the community.

Replicability and adaptability

Participatory

perspective

Since the planting of the first one in 2015, Tiny Forests have rapidly spread across the Netherlands to almost 200 sites (IVNEducatie, n.d.). Furthermore, since then, this initiative has also been replicated internationally in seven other countries. This demonstrates that the project has the potential to be scaled up even further in other locations and countries in the future.

Holistic and interdisciplinary approach

This project has a holistic approach in the way that it connects human and non-human systems. One of the core aims of the project is for urban areas to have more ecological connectivity. This is something that puts the project aside from other nature restoration initiatives.

Furthermore, due to the emphasis on urban settings, there is a need for the project planning to include many different stakeholders. Engaging with different sectors increases the interdisciplinary nature of the project.

Sustainability of initiative

As mentioned previously, the project is less than 10 years old, which means that it is difficult to analyse the long-term sustainability. However, it is vital that IVN Educatie ensures ecological management, ongoing community engagement, and land rights and secures ongoing funding to make sure that all the sites are maintained in the long run.

GENERAL ASSESSMENT (Pro-Cons)

The Tiny Forest initiative of IVNEducatie is a simple yet elegant solution to biodiversity loss and human nature connection. It also serves an important role in urban environments, combating heat stress, water storage, air pollution and CO2 storage. This project engages local municipalities, schools and local residence to plant forests the size of tennis courts (200-250m2), with a particular focus on urban regions.

Since the first mini forest area was planted in Zandaam (NL) in 2015, the project has been replicated almost 200 times in schools and local neighbourhoods across the country (IVNEducatie, n.d.). This demonstrates a replicable and successful model, which has gathered a lot of media and donor support.

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Name of the Initiative / Practice / Project:

King's Garden

OVERVIEW



28

ORGANISATION

Kening, an alliance for a living landscape







TARGET GROUP Local citizens and farmers of Friesland

Description

Aims, goals, how it works, etc.:

Established in 2012, King's Garden is a citizen-led "mobile restoration initiative", uniting farmers, residents, conservationists, policymakers, artists, and creatives (Ecosystem Restoration Communities, n.d.). King's Garden operates under the umbrella of Kening, an alliance dedicated to nurturing living landscapes. Kening collaborates closely with other organisations Natuerkoöperaasje Baarderadiel, ANV Greidhoeke, and Landschapsbeheer Friesland (Ecosystem Restoration Communities, n.d.).

Their collective mission is to revive both biodiversity and culture in the landscape. Concentrating sixty percent of their efforts in the centre of Friesland, located in the northern reaches of the Netherlands, they target predominantly meadowlands dotted with villages atop man-made mounds known as "terps" (Ecosystem Restoration Communities, n.d.). The King's Garden is part of a larger global movement of local restoration activities called "Ecosystem Restoration Camps" and is the first Dutch citizen-led autonomous camp in this network (Ecosystem Restoration Communities, n.d.).

The King's Garden's overarching objective is to reclaim at least 1,000 hectares of herb-rich meadowland, water management systems, cultivate fruit trees in farmyards, and undertake the ecological revival of roadsides and various other habitats in dire need of restoration (Ecosystem Restoration Communities, n.d.).

Inspired and galvanized by the Godwit bird, hailed as the King of the Meadows, King's Garden derives its name from this emblematic bird species. The Netherlands boasts the largest population of Godwits, yet this bird teeters on the brink of extinction, underscoring the critical importance of healthy ecosystems for its survival – as well as that of countless others. King's Garden is a citizen-led initiative of local communities uniting in land restoration that fosters a mutual understanding between farmers and non-farmers alike. By creating connections between people and places, the initiative aims to ignite a collective passion for the region's biodiversity.

While their journey has only just begun, King's Garden's camp has already overseen the restoration of six fruit orchards, complemented by an additional six by their partners. Eight kilometres of ecologically managed roadsides now link these sites, weaving together pockets of renewed life (Ecosystem Restoration Communities, n.d.).



QUALITY INDICATORS

Effectiveness and success

The effectiveness of this project is related to its ability to galvanise volunteers on a local scale and engage different stakeholders in the area over a shared narrative and an iconic species.

Furthermore, these mobile restoration camps are not only about land and water revival, but they also feed into other projects. For example, Kening is working with a larger consortium on a Living Lab initiative creating more nature-inclusive agriculture (Kening fan 'e Greide, n.d.).

Due to the mobile approach of restoring different land areas, the technical feasibility depends on the specific site biotope.

One approach of the collective is to start by looking into the history of ancestral practices of meadow management. For example, one restoration technique is to cut the meadow grass with an ancient instrument called the scythe (Ecosystem Restoration Communities, n.d.). This is a traditional tool that people used to manage the grass. It allows for more control in the cutting and promotes a more diverse habitat due to delays in cutting (Ecosystem Restoration Communities, n.d.).

Another technique they used to restore the land is to include longer periods of fallow to support birds in the nesting season. Furthermore, because the germination of native plants helps insects adapt more easily, they collected hay with seeds and spread these wild seeds in key areas (Ecosystem Restoration Communities, n.d.).

Kening is an umbrella organisation that represents a variety of people and organisations. This connection to the grassroots level of society means that they are particularly suited to engaging the public and volunteers in their activities.

The project also works with a range of partner organisations, including: Bond van Friese Vogelbeschermingswachten, Natuur en Milieufederatie Friesland, de Rijksuniversiteit Groningen, Landschapsbeheer Friesland, Natuurmonumenten, Provincie Friesland, Oxfam Novib, BWH ontwerpers en Wereldnatuurfonds (Wikipedia, n.d.).

Technical feasibility

Participatory

perspective



The project demonstrates an adaptive approach, not just in the mobility of the restoration camps but also in the creative engagement, using art and theatre to communicate about the project.

Replicability and adaptability

However, due to the loose and unestablished nature of the project and a lack of available data on monitoring, evaluation and reporting, it is unclear whether this project could be replicated elsewhere in the Netherlands.

Holistic and interdisciplinary approach

The project is unique in the way that it combines ecology and art. This can be seen in the video essay and performance recorded on the meadow landscape after the restoration camp titled "The Soil Speaks" (Kening).

Sustainability of initiative

Due to a lack of data on monitoring and evaluating the restoration activities, it is difficult to predict the initiative's sustainability. However, the project's strong participatory and decentralised approach indicates a sense of community and local responsibility. This could help with ensuring the longevity of the project.

GENERAL ASSESSMENT (Pro-Cons)

Inspired by a small critically endangered bird - the Godwit - the King's Garden is a grassroots initiative that has been working on small-scale nature restoration camps in the Friesian region of the Netherlands. It exemplifies a good example of local scale restoration, integrating practical ecological restoration with community engagement and cultural revitalization. By mobilising diverse stakeholders, including farmers, residents, and conservationists, the initiative fosters a shared narrative and collective action towards the Friesian landscape.

In terms of impact, this citizen-led initiative has made good progress on a local scale, restoring six fruit orchards - complemented by an additional six by their partners - and connecting these sites with eight kilometres of ecologically managed roadsides (Ecosystem Restoration Communities, n.d.). Yet, it is unclear whether this model can be replicated in different locations around the Netherlands and further scaled up.

Additionally, the project's focus on historical land management practices contributes to ecological regeneration and preserves cultural heritage. Its collaboration with various partners and utilising creative methods like art and theatre for communication demonstrate adaptability and inclusivity. Thus, despite uncertainties on monitoring, evaluation and upscaling, the project an example of a successful local-scale restoration initiative with a strong participatory and grassroots approach.



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SLOVAKIA

Name of the Initiative / **Practice / Project:**

BROZ

OVERVIEW



ORGANISATION

Bratislavské regionálne ochranárske združenie (https://broz.sk/)

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50	

(ň)

TARGET GROUP

LEVEL

National

Volunteers of all age groups (over 18 years of age). More information about current activities for volunteers are updated in a separate section of their website: https://broz.sk/dobrovolnictvo/

Description

Aims, goals, how it works, etc.:

Since its establishment in 1997, BROZ has been implementing practical conservation measures in the Natura 2000 areas for over 25 years. As a leading non-governmental organisation in the field of protection and restoration of rare habitats, it primarily carries out its activities in the Danube region.

Objectives

The camps have three main objectives:

- Restoring water to the landscape revitalisation of wetlands, river branches, floodplain forests, meadows, and pastures.
- ing, or pollarding of willows.
- Restoration of the original species composition in forest stands.
- Ichthyological survey conducted within the LIFE DLLD project in the isolated branches of the Danube on the Sihoť Island.
- Humane deworming of farm animals.

QUALITY INDICATORS

- Kobyla, and salt marshes in southern Slovakia

Effectiveness and success

- al species of bats.
- change
- Summer camps on Vel'kolélsky Island 2023





Supporting traditional, nature-friendly farming practices such as livestock grazing, reed mow-

Re-creation of Danube islands (in Devín, Veľký Lél, Medveďov)

• Revitalisation of rare meadows in the Small Carpathians and on Devínska

• Restoration of a portion of floodplain forests in the Danube Floodplains

• Protection of urban wildlife species - the common earthworm and sever-

• An innovative project aimed at preparing housing estates for climate



The organisation employs a team of professional conservationists who address environmental issues that concern them. At the same time, the organisation is expertly led by a council of experts from various countries. For example, Mag. Georg Frank is the Secretary-General of the DANUBEP-ARKS association network of protected areas in Austria. Furthermore, Prof. RNDr. Vladimír Kováč, CSc., is a specialist in aquatic ecology and biology at AQ-BIOS, Ltd. (formerly a professor at Comenius University, Faculty of Natural Sciences in Bratislava). RNDr. Daniel Dítě, PhD., is an experienced research leader at the Institute of Botany of the Slovak Academy of Sciences. Martin Škorpík is an experienced professional currently serving as the head of the Department of Special Nature Conservation and Strategic Planning, management of the Podyjí National Park in the Czech Republic. Nat Page is the president of the non-profit organization Fundatia ADEPT based in Saschiz, Romania.

- Workshops for stakeholders in collaboration with the Telekom Foundation at the Pontis Foundation
- Sharing experience in the management of rare habitats in Hortobágy National Park
- Collaboration squirrels
- Collaboration with Mossy Earth video from the capture of ground squirrels
 - Participation in the European Researchers' Night event and presentation of the LIFE Living Rivers project aimed at improving the ecological status of our rivers
 - The international LIFE WILDisland project bringing together 15 partners from eight countries from Bulgaria to Germany

This organisation is distinctive for having made a strategic decision in 2005 that in order to guarantee sustainable nature conservation, it must have lands on long-term lease, under management, or in ownership. Today, BROZ owns approximately 1,000 hectares of land in protected areas, and another 1,600 hectares are under long-term lease, predominantly for 30 years.

Replicability and adaptability

Thanks to the purchase and leasing of lands, they have managed to stop the deforestation of original and natural forests in selected locations, plant native species of floodplain forests instead of monocultures of non-native species, prevent the draining of protected areas and the expansion of arable land at the expense of nature, grass over arable land to create meadows and pastures, restore wetlands and flood surrounding lands, remove stone embankments, and thus restore the natural banks of the Danube.



Holistic and

approach

interdisciplinary

On "their" lands, they can carry out conservation activities quickly, efficiently, and without unnecessary compromises. This also significantly saves time and considerable resources, whether on personnel expenses, complex permitting processes, or the actual implementation of revitalisations, compared to activities on foreign lands. This uncompromising approach in project implementation has been a key factor.

The sustainability of regular management (mowing, grazing, pollarding of willows, etc.) after the projects are completed is ensured through their own commercial company.

The work is carried out with their own equipment and also subcontracted. For land management, they strive to draw agricultural subsidies from the Agricultural Payment Agency, including payments for agri-environmental, ecology, ... (Slovak farmers can annually apply for direct financial support, which is regulated by the legislation of the EU and the Slovak Republic).

Adopting a holistic and interdisciplinary approach, the organization actively involves professionals from various fields in a wide array of projects, ensuring a comprehensive strategy towards environmental conservation and sustainability. Through participation in LIFE projects, they've embarked on initiatives like the protection and reintroduction of steppe bird species to Slovakia's plains and the adoption of established butterfly conservation methods across Central and Eastern Europe. Projects such as Living Rivers, which focuses on implementing the Slovak Water Plan in specific basins, and WILDisland, aimed at preserving the wilderness of Danube Islands, underscore the commitment to water and habitat conservation. Efforts to safeguard the European ground squirrel, along with initiatives for the Dynamic Danube Lifelines and protection of certain Natura 2000 insect species in the Western Carpathians' cross-border region (CZ-SK), highlight the cross-disciplinary nature of their work.

Furthermore, the organization extends its protective measures to endemic species and habitats in dry grasslands at the juncture of the Pannonian and Alpine bioregions, alongside restoring Danube floodplain habitats. Bird species such as the sand martin, kingfisher, and European bee-eater, along with the European pond turtle in southern Slovakia, are also focal points of their conservation efforts. Notably, bird protection in the SPA Ostrovné Lúky demonstrates a targeted approach to avian conservation.

In addition to LIFE projects, engagement in EEA projects like Wetlands for Life and Prosperity, and initiatives such as DEAR - Game on!, which raises awareness about climate change, further emphasize the intersectoral methodology. These efforts, among many others, stand as a testament to the organization's commitment to an integrated and collaborative approach in addressing environmental challenges.



Technical

feasibility



BROZ has demonstrated a strong commitment to long-term environmental impact, with initiatives that have been rooted in the Slovak landscape since its inception in 1997. The organization's approach to land management, involving the ownership and long-term lease of land, ensures the durability of its conservation efforts. This strategic land management allows for the continuous application of restoration and conservation practices, ensuring that habitats are not only restored but maintained over time. The successful revitalization of wetlands, floodplain forests, and rare meadows across the Danube region and beyond exemplifies BROZ's enduring dedication to ecological stability. By securing land for conservation, BROZ has created a sustainable model for nature restoration, demonstrating the initiative's long-lasting and recurring positive impact on Slovakia's natural landscapes.

The project is unique in the way that it combines ecology and art. This can be seen in the video essay and performance recorded on the meadow landscape after the restoration camp titled "The Soil Speaks" (Kening).

GENERAL ASSESSMENT (Pro-Cons)

The BROZ organisation, since its inception in 1997, has been a leading example of effective conservation practice, focusing on the sustainable protection and restoration of natural habitats within Slovakia. Their strategic decision in 2005 to secure lands on long-term leases or through ownership has allowed them to implement conservation measures directly and efficiently without the constraints often encountered on non-owned lands. BROZ's ownership of approximately 1,000 hectares and management of an additional 1,600 hectares in protected areas enables them to undertake significant ecological interventions, such as halting deforestation, restoring original tree species, revitalising wetlands, and maintaining biodiversity through traditional agricultural practices.

Their work extends beyond land management to include innovative projects to adapt urban settlements to climate change, protect urban wildlife, and engage in various conservation projects across Europe, highlighting their intersectoral and international approach to environmental challenges. The organisation's ability to carry out rapid, effective, and uncompromised conservation actions on their lands sets a benchmark for conservation efforts worldwide, showcasing the importance of direct land management in achieving long-term ecological goals and the restoration of natural habitats.

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Name of the Initiative / Practice / Project:

BirdLife

Description

Aims, goals, how it works, etc.:

The Slovak Ornithological Society/BirdLife Slovakia is a non-governmental civic association dedicated to the protection and research of nature, especially wild birds and their habitats. It represents Slovakia in international organisations like BirdLife International, Euring, and the Association of European Rarities Committees (Vtaky. (n.d.). Home. Retrieved from http://www. vtaky.sk/stranka/32-O-nas.html). The society focuses on species and habitat conservation, ornithological research, environmental policy, education, publishing, and organising seminars and conferences. It publishes professional and popular science magazines and involves members of various ages and professions united by a passion for nature and birds, encouraging active participation in bird conservation activities.

The primary goal is protecting and researching nature, focusing mainly on wild birds and their habitats. It engages in species and habitat conservation, scientific research, monitoring, agricultural activities, and other management measures, alongside environmental policy, education, and publishing efforts to fulfil its mission.

Durability





ORGANISATION

Slovenská ornitologická spoločnosť / BirdLife Slovensko (<u>http://www.vtaky.sk/</u>)



LEVEL

National



TARGET GROUP

Volunteers of all age groups (over 18 years of age)



37

Bird Island on the Danube: Two decades of volunteer efforts have rejuvenated the island, making it a haven for laughing gulls and river terns and creating the largest colony of black-headed gulls in Central Europe.

Great Bustard Habitat Creation: Initiatives have led to the development of approximately 100 ha of new habitats for the Great Bustard, aiming to increase their population.

Bird Island on SÍňava Lake: Volunteer work and collaboration with conserva-Effectiveness tion authorities have managed invasive species, preserving the island as a viand success tal nesting area for terns.

> Ornithological Camps: These camps, usually spanning 2-3 days, allow participants to delve into the region's distinctive lowland landscapes, observe unique bird species, and partake in educational programmes.

> "Safe Bus Stops" Initiative: Coordinated by SOS/BirdLife Slovakia, this initiative aims to protect birds in urban settings by applying anti-collision stickers to glass bus shelters, enhancing their visibility to birds and reducing collisions.

Technical feasibility In the Slovak Ornithological Society/BirdLife Slovakia, ornithologists and other experts focus on various areas of ornithological research and professional activities. This includes the Faunistic Commission, which evaluates reports of rare bird species, and nationwide bird monitoring conducted by ornithologists and volunteers. They also engage in bird banding to study migration and population changes, utilising a central database for tracking. These experts also contribute to public and volunteer activities, leveraging their specialised knowledge to engage and educate the community on ornithology and conservation efforts.

The Slovak Ornithological Society/BirdLife Slovakia engages in various activities, including publishing a quarterly magazine for enthusiasts, conducting bird monitoring where participants can upload sightings to an online database, and sticker application on glass surfaces to prevent bird collisions. The organisation also facilitates birdhouse installations and organises larger volunteer events known as camps, such as the Spring Ornithological Camp in Senné and other seasonal camps focused on bird conservation and habitat management.

Participatory perspective

> Spring Ornithological Camp in Senné: Held in early May 2023, this camp marked the return of volunteer activities after a two-year break, focusing on bird monitoring and providing valuable data on various species.

Ipel' Ornithological Camp: An annual early summer event that brings together experienced and novice ornithologists for extensive bird mapping and habitat studies, contributing to the understanding of local avifauna.

Ipel' Working Ornithological Camp: Aimed at habitat management during the dry July season, volunteers assist in conservation efforts in specific protected areas, enhancing conditions for birdlife.

Summer Ornithological Camp in Senné: A late July event attracting over 40 volunteers to assist in various tasks, including monitoring and infrastructure improvement, fostering a strong community spirit among participants.

Ornithological Camp at Orava Dam: Combines leisure with conservation work at the end of August, involving maintenance of artificial bird islands and nesting box installations, contributing to the protection of rare bird species in the region.

The initiatives and projects of SOS/BirdLife Slovakia showcase a strong potential for replication and adaptation in various global contexts. This is greatly supported by its affiliation with BirdLife International, an organisation with a rich 100-year history in bird conservation. The collaborative network within BirdLife International enables the exchange of successful conservation strategies, making it feasible to implement these activities across different regions, tailored to their specific environmental and ecological needs.

Holistic and interdisciplinary approach

Durability

Replicability

and adaptability

laborative approach to bird and habitat conservation. Since its establishment on February 2, 1993, BirdLife Slovakia has been at the forefront of avian conservation, ensuring the durability of its efforts through ongoing research, habitat restoration, and community engagement. The organization's long-standing projects, such as the restoration of Bird Island and the creation of new habitats for the Great Bustard, are testaments to its commitment to enduring conservation outcomes. These initiatives not only provide immediate sanctuary for various bird species but also contribute to the long-term health and diversity of ecosystems. BirdLife Slovakia's approach, deeply embedded in scientific research and community participation, ensures that its conservation impact extends far beyond the life span of individual projects, fostering a lasting legacy of bird protection and habitat preservation in Slovakia and across its borders.



SOS/BirdLife Slovakia employs a cross-sectoral approach in its conservation efforts, partnering with state conservation authorities, local governments, and various other stakeholders. Their current projects cover a wide range of initiatives, including the Ornithological Academy, Bird Hour, the AVESCEN-TRUM environmental classroom in Bird Paradise, water projects for wetlands, protection and restoration of steppe bird species, wetland restoration, integrated river ecosystem management, urban bird conservation, cross-border ecotourism development, and initiatives to revive dead river arms, among others. These projects demonstrate the organisation's comprehensive and col-



GENERAL ASSESSMENT (Pro-Cons)

The initiatives and projects led by SOS/BirdLife Slovakia, as described in the document, represent exemplary models of conservation practices due to their comprehensive approach, focusing on habitat and species protection, scientific research, and community engagement. Their affiliation with BirdLife International enhances their potential for replication and adaptability across different contexts, benefiting from a global exchange of strategies and knowledge. These efforts are supported by a cross-sectoral collaboration with various stakeholders, ensuring a holistic approach to conservation. The success of these initiatives, such as the restoration of Bird Island and the Great Bustard Habitat Creation, underscores their effectiveness and the potential for broader application.

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EU LEVEL

Name of the Initiative / Practice / Project:

The Living Bog

OVERVIEW



ORGANISATION Department of Tourism, Culture, Arts, Gaeltacht, Sport and Media



LEVEL European



TARGET GROUP

Local communities and government agencies along with other stakeholders.





Description

Aims, goals, how it works, etc.:

The EU-funded project to restore Ireland's raised bogs is a comprehensive initiative aimed at revitalising one of Ireland's most valuable natural habitats. These raised bogs, rich in biodiversity and essential for carbon storage, have been significantly degraded over the years due to peat extraction and other human activities. Through a collaborative effort between the European Union and Irish authorities, this project seeks to reverse the damage and restore these vital ecosystems to their former glory.

Key components of the project include habitat restoration, peatland rehabilitation, and the implementation of sustainable land management practices. By restoring raised bogs, the project aims to enhance biodiversity, improve water quality, and mitigate climate change by preserving carbon sinks. Moreover, the project engages local communities and stakeholders, raising awareness about the importance of peatland conservation and fostering a sense of stewardship over these precious natural resources.



The project addresses the critical decline of raised bogs, emphasising their ecological importance as one of the world's oldest living ecosystems dating back almost 10,000 years. Through active restoration measures such as drain blocking and barrier dam construction, the project aims to improve the conservation status of raised bogs and preserve Ireland's natural heritage.

Effectiveness and success

One key factor contributing to the effectiveness of the initiative is its strong community engagement. Local communities, government agencies, NGOs, and other stakeholders actively participate in restoration efforts, volunteering their time and collaborating with project organisers. Furthermore, the project receives funding from both the European Union's LIFE Programme and the Irish government's Department of Culture, Heritage, and the Gaeltacht, highlighting significant support for restoration activities. The allocation of resources underscores the importance placed on preserving raised bogs and their associated habitats The initiative's success is further evidenced by its recognition at national and international levels. Nominated for the European Commission's Natura 2000 Awards, the project has garnered acclaim for its achievements in peatland restoration and community engagement. Such recognition reflects the project's impact in raising awareness about the importance of peatland conservation and mobilising support from various stakeholders.

Technical feasibility

The project's restoration activities, including drain blocking and peat dam installation, demonstrate technical feasibility and effectiveness in restoring eco-hydrological functions. By recreating active raised bog habitats and improving bog ecosystems across seven counties in the Midlands, the project aims to address decades of degradation and habitat loss. Ongoing restoration efforts, coupled with community engagement and stakeholder collaboration, highlight the project's technical feasibility and potential for long-term success in conserving Ireland's raised bogs.

The project's participatory approach is evident in its community engagement activities, which include volunteer opportunities, educational programmes, and stakeholder consultations. By actively involving local communities in restoration efforts, the project builds ownership, fosters stewardship, and promotes a sense of shared responsibility for conserving Ireland's natural heritage.

Participatory perspective

Furthermore, the project's partnership with government agencies, NGOs, and other stakeholders ensures a holistic and inclusive approach to restoration, integrating diverse perspectives and expertise. Through collaborative decision-making and knowledge exchange, the project leverages collective insights and resources to address complex environmental challenges and achieve meaningful conservation outcomes.

Replicability and adaptability

The adaptability and replicability of the initiative are evident through its multisite approach, addressing restoration needs across diverse landscapes such as Clara Bog, Ferbane, and Carrownagappul Bog. Each site presents unique challenges and opportunities, showcasing the project's ability to adapt strategies to local conditions while maintaining overarching conservation goals. Furthermore, the project's rich repository of resources, including detailed reports, monitoring data, and outreach materials, enhances replicability by providing comprehensive guidance for future restoration endeavors. Accessible documents such as hydrology results, vegetation monitoring reports, and promotional brochures enable stakeholders to replicate successful strategies and adapt them to similar contexts elsewhere. This wealth of information fosters knowledge exchange, facilitates capacity building, and promotes best practices in peatland restoration, ensuring the project's long-term impact reaches beyond its current sites to benefit other ecosystems worldwide.

Holistic and interdisciplinary approach

The initiative embraces a holistic and interdisciplinary approach to peatland restoration, recognising the complex interplay of ecological, social, and economic factors. By restoring raised bogs across diverse landscapes like Clara Bog and Ferbane among many others listed on the project website, the project addresses the multifaceted challenges of habitat degradation and climate change while promoting biodiversity conservation and carbon sequestration. This approach integrates scientific research, community engagement, and stakeholder collaboration, leveraging expertise from various fields to inform restoration strategies and decision-making processes.

GENERAL ASSESSMENT (Pro-Cons)

The Living Bog project, a collaboration between the EU LIFE Programme and the Department of Housing, Heritage and Local Government's National Parks and Wildlife Service, demonstrates several strengths in nature restoration. Managed by a dedicated five-person Project Team in Mullingar, with oversight from a broader Project Steering Group representing various stakeholders, the project embodies a holistic and interdisciplinary approach to peatland restoration. Leveraging expert advice from the Stakeholder Advisory Group and Technical Advisory Group, the initiative integrates scientific research, community engagement, and stakeholder collaboration to inform restoration strategies and enhance long-term resilience. Additionally, the project benefits from the extensive experience of the National Parks and Wildlife Service in managing nature conservation projects and implementing EU LIFE projects, including previous bog restoration initiatives. Despite logistical challenges and the need for sustained stakeholder engagement, the project's strong governance structure and strategic partnerships position it well to maximise its positive impact on biodiversity conservation and ecosystem restoration in Ireland.

REFERENCES

Living Bog. (n.d.). Retrieved from www.raisedbogs.ie/ National Parks and Wildlife Service. (n.d.). About Us. Department of Housing, Local Government and Heritage. Retrieved from www.gov.ie/en/organisation/department-of-housing-local-government-and-heritage/?referrer=http://www.chg.gov.ie/app/uploads/2017/08/national-parks-and-wildlife-service-strategic-plan-2015-2020.pdf





ments.

Name of the Initiative / Practice / Project:

MERLIN

OVERVIEW



ORGANISATION

Collaborative project involving 46 partners from across Europe funded by the European Commission.



LEVEL European



TARGET GROUP

Restoration practitioners, policymakers, researchers, businesses, and local communities across Europe

Description

Aims, goals, how it works, etc.:

The Mainstreaming Ecological Restoration of freshwater-related ecosystems in a Landscape context: INnovation, upscaling and transformation (MERLIN) project aims to revolutionise European freshwater ecosystems through Nature-based Solutions (NbS) and restoration. It demonstrates best-practice restoration through 17 flagship projects, investing over €10 million to upscale successful initiatives into beacons of innovation. By identifying priority landscapes and engaging stakeholders, including local communities and key economic sectors like agriculture and hydropower, MERLIN fosters win-win solutions for ecological, social, and economic sustainability. Its holistic approach positions it as a pioneering initiative in mainstreaming transformative restoration across Europe.

Effectiveness

and success

2. Knowledge Sharing: Through webinars, case studies, and an online academy, MERLIN facilitates the exchange of knowledge and best practices, empowering stakeholders to implement successful restoration projects.

3. Collaborative Partnerships: With 46 partners from various sectors and countries, MERLIN fosters collaboration and synergies, maximizing the impact of restoration efforts.

4. Policy Influence: By engaging with policymakers and conducting research on policy opportunities, MERLIN aims to influence EU regulations and funding frameworks, driving systemic change for freshwater restoration.

Technical feasibility

The technical feasibility of the MERLIN initiative is underscored by its robust framework and innovative methodologies. Leveraging a comprehensive approach, MERLIN integrates cutting-edge restoration techniques and Nature-based Solutions (NbS) tailored to diverse freshwater environments across Europe. Through meticulous case studies and research, MERLIN assesses the viability and scalability of restoration measures, ensuring practical applicability in varied contexts. Furthermore, the initiative employs effective monitoring and evaluation frameworks to track the progress and effectiveness of restoration actions, enabling adaptive management strategies. Collaborative partnerships with technical experts and stakeholders facilitate knowledge exchange and capacity-building initiatives, enhancing the technical proficiency of restoration practitioners. By addressing technical challenges and harnessing emerging technologies, MERLIN demonstrates the technical feasibility of restoring freshwater ecosystems at scale, paving the way for sustainable management practices and ecosystem resilience in the face of environmental threats.





The MERLIN initiative appears to be highly effective and poised for success based on several key factors:

1. Innovative Solutions: The project emphasises the mainstreaming of Nature-based Solutions (NbS), offering innovative approaches to tackle biodiversity loss and climate change impacts in Europe's freshwater environ-



Participatory perspective

Replicability

and adaptability

From a participatory perspective, the MERLIN initiative prioritises engagement with diverse stakeholders, including the public, throughout its activities. Through community consultations, stakeholder workshops, and public outreach events, MERLIN fosters inclusive decision-making processes, ensuring that local knowledge and preferences are integrated into restoration plans. Moreover, the initiative encourages citizen science initiatives, empowering the public to contribute valuable data and insights to monitoring and assessment efforts. Additionally, MERLIN's online platforms, such as webinars and forums, provide avenues for broader public engagement and knowledge-sharing, promoting transparency and accountability in restoration activities. By involving the public in project design, implementation, and evaluation, MERLIN enhances social acceptance and ownership of restoration initiatives, ultimately fostering a sense of stewardship and collective responsibility for Europe's freshwater ecosystems. However, given that there are 46 partners involved, it is hard to measure the involvement of the general public in the project activities.

MERLIN demonstrates a strong emphasis on both replicability and adaptability in its approach to freshwater ecosystem restoration. By documenting and disseminating best practices, lessons learned, and innovative solutions through its online platforms and knowledge-sharing activities, MERLIN facilitates the replication of successful restoration interventions across different geographic locations and socio-economic contexts. Moreover, the initiative prioritises flexibility and adaptive management strategies, recognising the dynamic nature of ecosystems and the evolving challenges posed by climate change and human activities. Through iterative monitoring and evaluation processes, MERLIN continuously assesses the effectiveness of restoration measures and adapts strategies accordingly, ensuring that interventions remain relevant and responsive to changing environmental conditions and stakeholder needs.

Holistic and interdisciplinary approach

ERLIN adopts a holistic and interdisciplinary approach to freshwater ecosystem restoration, recognising the interconnectedness of ecological, social, economic, and policy dimensions. By engaging a diverse range of stakeholders, including scientists, policymakers, businesses, and local communities, MERLIN ensures that restoration efforts are informed by multiple perspectives and expertise. This interdisciplinary collaboration allows for the integration of scientific knowledge with local insights and traditional practices, enhancing the relevance and effectiveness of restoration interventions. Moreover, MERLIN's holistic approach considers the broader landscape context, taking into account factors such as land use, hydrology, and climate change impacts, to develop comprehensive restoration strategies that address the root causes of ecosystem degradation. By fostering collaboration across disciplines and sectors, MERLIN promotes innovative solutions and fosters synergies that maximise the resilience and long-term sustainability of freshwater ecosystems.

GENERAL ASSESSMENT (Pro-Cons)

The MERLIN initiative demonstrates significant promise in advancing freshwater ecosystem restoration across Europe. Its strengths lie in its comprehensive and innovative approach, fostering collaboration among diverse stakeholders and promoting the mainstreaming of Nature-based Solutions (NbS). Through knowledge sharing and collaborative partnerships, MERLIN enhances the effectiveness and scalability of restoration efforts, while also influencing EU policies for systemic change. However, challenges remain, including the technical feasibility of implementing large-scale restoration measures and ensuring meaningful public participation. Moreover, the replicability and adaptability of MERLIN's strategies to different contexts may vary, requiring careful consideration of local conditions and capacities. Despite these challenges, MERLIN's holistic and interdisciplinary approach positions it as a catalyst for transformative change, offering valuable insights and solutions to address the pressing challenges of biodiversity loss and climate change in Europe's freshwater environments.

REFERENCES

MERLIN. (n.d.). Mainstreaming Ecological Restoration of freshwater-related ecosystems in a Landscape context: INnovation, upscaling and transformation. Retrieved from https://project-merlin.eu/





Conclusion

In closing, the Good Practices presented by the Restoration Academy offer valuable insights and examples for youth organisations and workers across the EU. These practices demonstrate the effectiveness of nature-based activities in promoting education, fostering volunteerism, and inspiring environmental leadership among young people.

By incorporating these practices into youth work, we can further enhance collective efforts in nature restoration and environmental education. Let us continue to collaborate and innovate, leveraging the power of nature to empower the next generation of environmental stewards and active citizens.

Together, we can make a lasting impact on our planet and create a more sustainable future for generations to come.

Restoration Academy Empowering Youth Participation in Nature Restoration



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