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THE EU INTERREG PROGRAMME IN SUPPORT OF NATURA 2000 AND BIODIVERSITY (2000-2020)

NATURA 2000

Interreg Europe

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Environment

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THE EU INTERREG PROGRAMME IN SUPPORT OF NATURA 2000 AND BIODIVERSITY (2000–2020)

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Executive Summary

The EU Habitats and Birds Directives are at the heart of the EU's biodiversity policy. They set the standard for nature conservation across all countries of the EU, enabling Member States to work together, towards the same objective, to protect our most threatened and vulnerable species and habitats, irrespective of political or administrative borders. Such transnational cooperation is essential for stemming the loss of biodiversity in Europe as wildlife is governed by the forces of nature and does not recognise national boundaries. Thanks to the two EU nature Directives, an EU wide network of conservation areas – called the **Natura 2000 network** – has been established. The network currently contains over 27,500 sites which together cover around 18% of the EU territory on land as well as a significant proportion of the surrounding seas., making this the largest coordinated network of protected areas anywhere in the world.

The European Territorial Cooperation goal, better known as **Interreg**, is a key component of the EU Cohesion Policy. In place since 1990, Interreg provides a framework for the implementation of joint actions and policy exchanges between national, regional and local actors from different Member States. Under the current Interreg V programme (2014-2020) funding can be targeted at the protection and restoration of biodiversity and soil, and the promotion of ecosystem services, including through Natura 2000, and green infrastructure. Around €581 million is foreseen for this, of which **€163 million is specifically for the protection, restoration and sustainable use of Natura 2000 sites**. According to the EU Keep Database at least 190 projects involving Natura 2000 sites have been funded since 2000 representing a total investment of almost €280 million to which the EU provides funding of €200 million.

This report explores how the Interreg Programme has contributed to the management and protection of Natura 2000 sites, species and habitats over the last 20 years. It looks at the type of projects and actions that have been funded and goes on to showcase eighteen individual projects to illustrate the range and diversity of different actions, locations, conservation objectives and socio-economic contexts in which Interreg projects have operated so far. The report clearly illustrates that EU Cohesion policy investments, and in particular **Interreg, is a potentially major source of EU Funds for supporting Natura 2000 implementation and management**. It also helps link Natura 2000 management with wider socio economic issues by promoting cross border and cross sectoral exchange of experiences and practices.

It will be important to further promote the use of Interreg for Natura 2000 and ensure that the many good practices it generates are better communicated outside the Interreg community to a wider audience, and to the conservation and rural development communities in particular.

1. The Natura 2000 network

1.1 The Natura 2000 Network

The Habitats and Birds Directives are at the heart of the EU's biodiversity policy. They set the standard for nature conservation across all countries of the EU, enabling Member States to work together, towards the same objective and within the same legislative framework, to protect our most threatened and vulnerable species and habitats, irrespective of political or administrative borders.

Such transnational cooperation is essential for stemming the loss of biodiversity in Europe. **Wildlife is governed by the forces of nature and does not recognise national boundaries**. If one country attempts to protect a particular species and another does not, the efforts made by the first will be necessarily compromised.

The two EU nature Directives require every Member State to designate core areas to protect and conserve species and habitat types of European importance that are present in their country. Together, these sites make up the Natura 2000 network[1] –Over 27,500 Natura 2000 sites have been designated to date, covering some 18% of the EU territory, making this **the largest coordinated network of protected areas anywhere in the world**.

Because of its sheer size, Natura 2000 not only conserves Europe's rarest wildlife, but also offers a safe haven for countless other animals, plants and healthy ecosystems. As such, it provides society with a wealth of valuable ecosystem services, such as fresh water, carbon storage, protection against floods, etc..

According to recent Commission studies[2], **the benefits that flow from Natura 2000 are estimated to be in the order of €200 to 300 billion/year**. This compares favourably to the estimated cost of managing and protecting the network. The latter is estimated at around €5.8 billion/year – a fraction of its potential worth to society.

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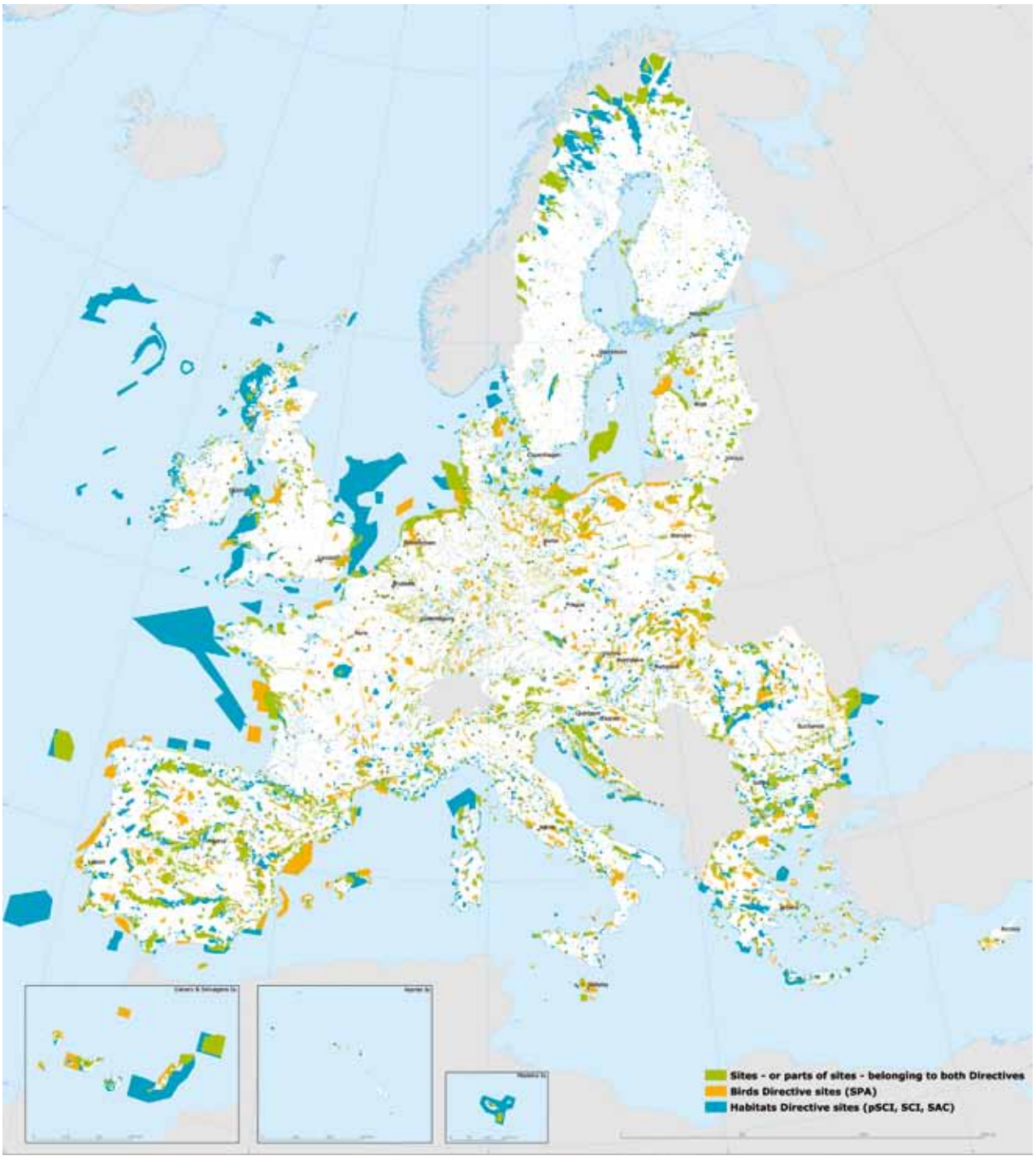
1 https://natura2000.eea.europa.eu
2 https://ec.europa.eu/environment/nature/natura2000/financing/index_en.htm

Figure 1. The European Natura 2000 network – status as of March 2019.



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1.2 Managing sites – people and nature in partnership

The creation of the Natura 2000 Network is in itself a major achievement for nature conservation in Europe. But it is just the start; once sites have been designated under Natura 2000, Member States must also take all necessary measures to maintain or restore these sites to an optimal conservation condition.

In this respect, it is important to note that the Habitats Directive requires more than simply protecting the sites and preventing species and habitats from deteriorating further. Its objective is far more ambitious; it aims to bring them back up to a favourable conservation status across their natural range within the EU. To achieve this, the Directive introduces a modern, flexible and inclusive approach to site conservation that **puts people at the heart of the process**. It recognises that humans are an integral part of nature and that the two work best in partnership.

Forging partnerships and bringing people together also make practical sense. After all, the vast majority of sites in Natura 2000 are already under some form of active land use. Many are valuable for nature precisely because of the way they have been managed up to now and it will be important to ensure that these socio-economic activities are maintained well into the future.

In this way, the Habitats Directive supports the principle of sustainable development and integrated management. Its aim is not to exclude socio-economic activities from Natura 2000 sites, but rather to ensure that they are undertaken in a way that safeguards and supports the valuable species and habitats present and maintains the overall health of natural ecosystems.

For the Natura 2000 network to become fully operational and coherent it is vital that Member States cooperate with one another in the management and protection of the Natura 2000 sites within the network. This will help them to address common challenges and find shared management solutions for the longterm survival of the species and habitats present.

Many Natura 2000 sites, for instance, extend over country borders. It makes no difference to the species or habitats present if part of the site is in one country and the other is in another country. The site has to be managed as a coherent whole. This is only really possible if the two countries involved work together and set shared conservation objectives for the site.

The Natura 2000 Biogeographical process

The European Union has nine terrestrial biogeographical regions and five marine regions each with its own characteristic blend of vegetation, climate, topography and geology. They include the Atlantic, Continental, Alpine, Mediterranean, Boreal, Pannonian, Macaronesian, Steppic and Black Sea Regions. Using biogeographical regions to select sites for the Natura 2000 network and assess the conservation status of species and habitats under the Habitats Directive is very useful from a scientific point of view since it allows the species and habitats to be examined under very similar natural conditions.

In 2011, the European Commission launched **the Natura 2000 Biogeographical Process**[3], a multi-stakeholders' co-operation initiative aimed at enhancing the implementation, management, monitoring, financing and reporting of the Natura 2000 network at the biogeographical level. The key objectives are to collect up-to-date information on threats and conservation needs, exchange experiences, case studies and best practices, as well as identify common objectives, priorities and management actions for the sites, species and habitats of EU importance.

3 http://ec.europa.eu/environment/nature/natura2000/biogeog_regions/

1.3 Strengthening implementation – the Nature Action Plan 2017

In 2014, the Commission launched a comprehensive evaluation of the Nature Directives. Called the "Fitness Check" the exercise was finalised in December 2016 after two years of extensive evidence gathering and consultations with authorities, stakeholders and the general public across the EU[4].

The Fitness Check concluded that, within the framework of the broader EU biodiversity policy, the Nature Directives are indeed fit for purpose and remain as relevant and important as ever, but achieving their objectives and realising their full potential will depend upon substantially improving their implementation.

Key factors behind the shortcomings in implementation include limited resources, weak enforcement, poor integration of nature objectives into other policy areas, insufficient knowledge and access to data, as well as poor communication and stakeholder involvement.

In response to these findings, the Commission launched a new Action Plan in April 2017 to rapidly improve the practical implementation of the Habitats and Birds Directives and accelerate progress towards the EU 2020 goal of halting and reversing the loss of biodiversity and ecosystem services.

The new Action Plan for Nature, People and the Economy[5] covers four priority areas that have been identified as being essential for a better implementation of the Directives. One of the priority areas focuses on **strengthening investments in Natura 2000 and improving synergies with EU funding instruments**.

4 https://ec.europa.eu/environment/nature/legislation/fitness_check/index_en.htm
5 http://ec.europa.eu/environment/nature/legislation/fitness_check/action_plan/index_en.htm

Priority C of the Nature Action Plan – strengthening investments in Natura 2000 and improving synergies with EU funding instruments

- Strengthen investments in nature:
  - Help Member States to improve their multi-annual financial planning for Natura 2000 through the update of their Prioritised Action Frameworks (PAFs).
  - Propose a 10% increase in the LIFE budget dedicated to projects supporting the conservation of nature and biodiversity, while keeping the overall budgetary envelope of the LIFE programme unchanged.
  - Stimulate private sector investment in nature projects.
- Promote synergies with funding from the Common Agricultural Policy, including effective use of Natura 2000 payments and agri-environment-climate measures, the development of result-based schemes, support to farmers through Farming Advisory Services, and innovation and knowledge transfer through the European Innovation Partnership for Agricultural Productivity and Sustainability.
- Increase awareness of Cohesion Policy Funding opportunities and improve synergies. Improve synergies with the Common Fisheries Policy and the Integrated Maritime Policy, including more effective use of the financing opportunities available.
- Provide guidance to support the deployment of green infrastructure for better connectivity of Natura 2000 areas; support Nature-Based Solutions projects through EU research and innovation policy and Horizon 2020 funds.

1.4 EU funding for Natura 2000

As an EU-wide network, Natura 2000 is based on the principle of solidarity between Member States. It represents an important shared resource capable of providing multiple benefits to society and to Europe's economy. But it is also a shared responsibility requiring sufficient financial investments to become fully operational.

While the main responsibility for financing Natura 2000 lies with Member States, Article 8 of the Habitats Directive recognises the need for EU-level support and explicitly links the delivery of the necessary conservation measures to the provision of EU co-financing. Because of this, it was decided early on that the management and investment requirements of Natura 2000 should be integrated into different EU funding streams.

This integration approach was chosen for several reasons:

- it ensures that the management of Natura 2000 sites is part of the wider land management policies of the EU;
- it allows Member States to set priorities and develop policies and measures which reflect their national and regional specificities;
- it avoids duplication and overlap of different EU funding instruments and the administrative complications associated with such duplication.

The Commission has encouraged Member States to prepare Prioritised Action Frameworks[6] (PAFs) to help with this integration process. PAFs are strategic multi-annual planning tools, aimed at identifying Natura 2000 conservation priorities and management measures as well as their related costs and potential financing sources, matching the former with the latter.

PAFs are useful for identifying funding opportunities under all relevant EU funds including the Common Agriculture Policy, Regional and Cohesion Funds, Horizon Europe, the European Marine and Fisheries Fund and LIFE. They also help to ensure a better use of these opportunities during the preparation of the various Operational Programmes.

This report explores how the Interreg Programme under Cohesion Funds has contribtuted so far to the conservation and management of Natura 2000 sites, illustrating this with a series of case studies from across the EU. The report concludes with a series of case study examples. It also offers recommendations for increasing the use of the programme for nature and biodiversity

6 https://ec.europa.eu/environment/nature/natura2000/financing/index_en.htm

2. EU Cohesion Policy supporting Natura 2000 and biodiversity

2.1 The EU Cohesion Policy

The EU Cohesion Policy is the EU's main investment policy, aimed at reducing disparities and promoting economic, social and territorial cohesion in Europe. It also contributes to broader EU goals, such as biodiversity conservation, where this is linked to the overall territorial cohesion objective.

The funds earmarked for biodiversity, nature protection and green infrastructure has increased steadily over the years. Under the 2014–2020 programming period, €3.7 billion has been allocated to this objective under the EU Cohesion fund[7]. Of this €3.7 billion, 970 million is foreseen for the protection, restoration and sustainable use of Natura 2000 sites. The EU LIFE programme, by comparison has a budget of €1.2 billion available for funding for nature and biodiversity during the same period.

The amount reaching Natura 2000 sites is probably significantly higher if the full range of investments indirectly linked to biodiversity is also considered. Natura 2000 sites could, for instance, benefit from investments in waste water treatment; adaptation to climate change, prevention and management of climate risks (eg nature based solutions); development and promotion of tourism potential of natural areas or natural heritage in general. The Commission estimates this could reach as much as 10 billion euro once the allocations to other related interventions are taken into consideration[8].

© Wild Wonders of Europe/Widstrand/naturepl.com

7 European Commission's Directorate-General for Regional and Urban Policy, Smart and Sustainable Growth https://cohesiondata.ec.europa.eu/stories/s/Cohesion-policy-protecting-nature-and-biodiversity/gznm-sv2i/

8 https://cohesiondata.ec.europa.eu/stories/s/tdxi-ibcn

Figure 2. 2014-2020 Biodiversity tracking cohesion policy funds by intervention fields (filters per year/fund/MS) https://cohesiondata.ec.europa.eu/stories/s/tdxi-ibcn

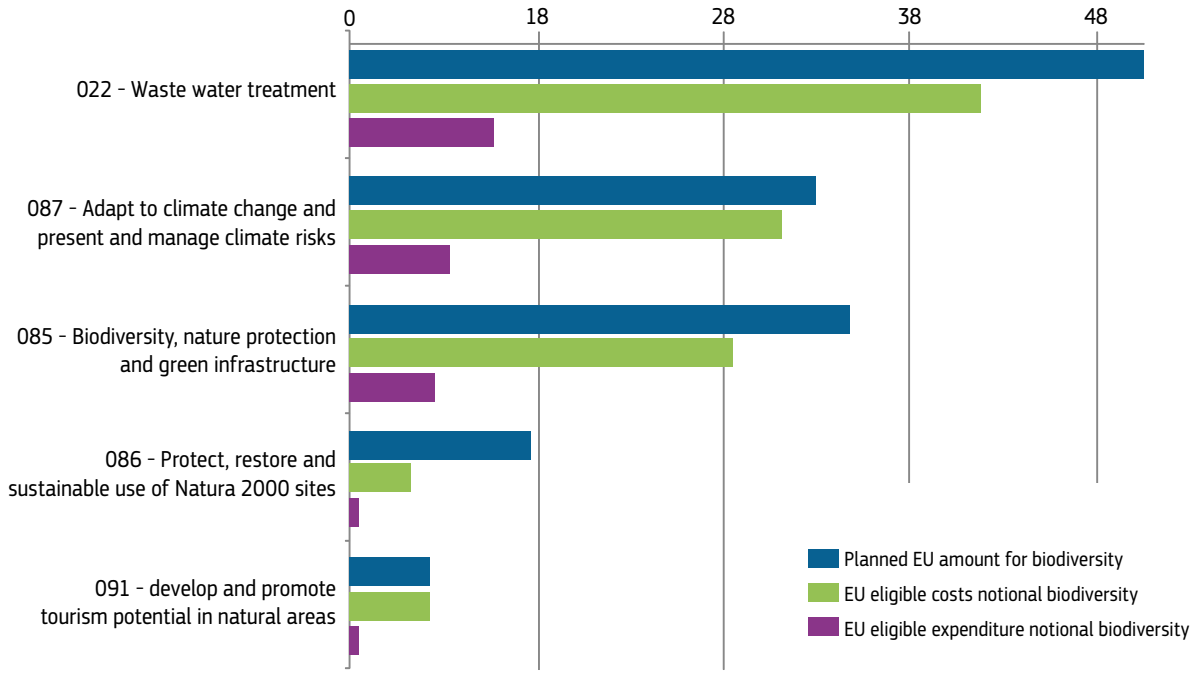
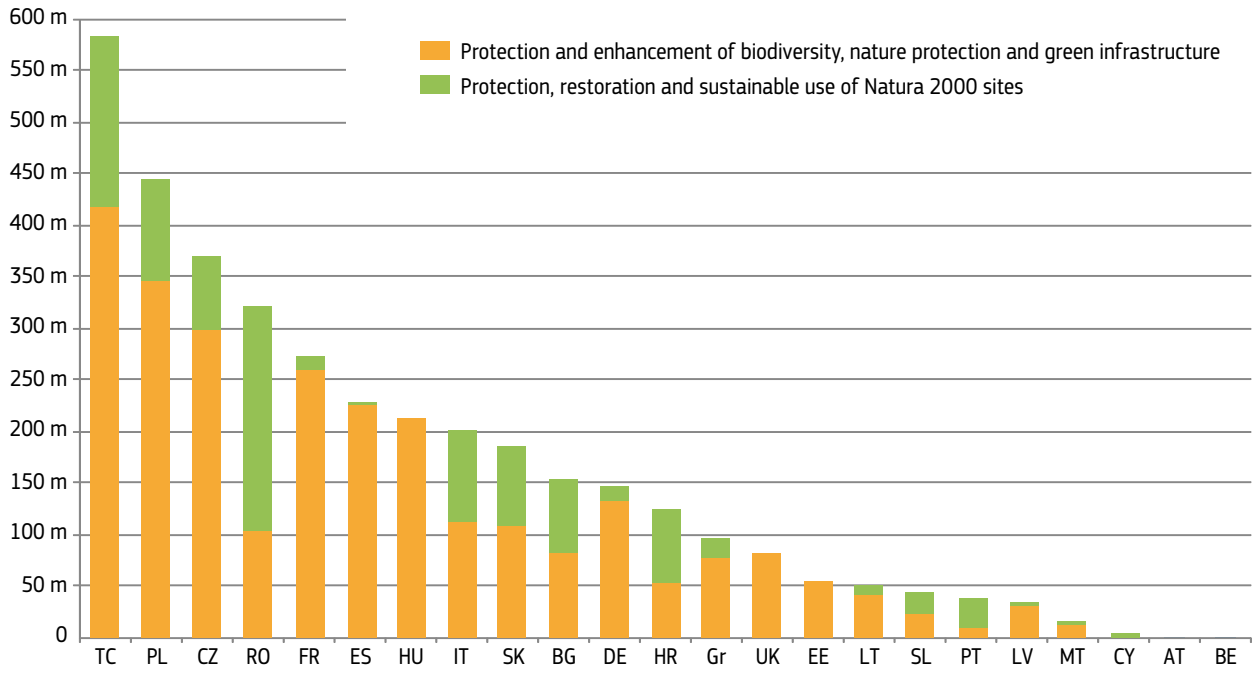


Figure 3. EU Cohesion Policy investments (including Interreg) planned for biodiversity and Natura 2000 for the 2014-2020 period (Source https://cohesiondata.ec.europa.eu/2014-2020/2014-2020-Cohesion-policy-investments-planned-for-/mhbz-5j4j TC = Territorial Cooperation which are all the Interreg programmes

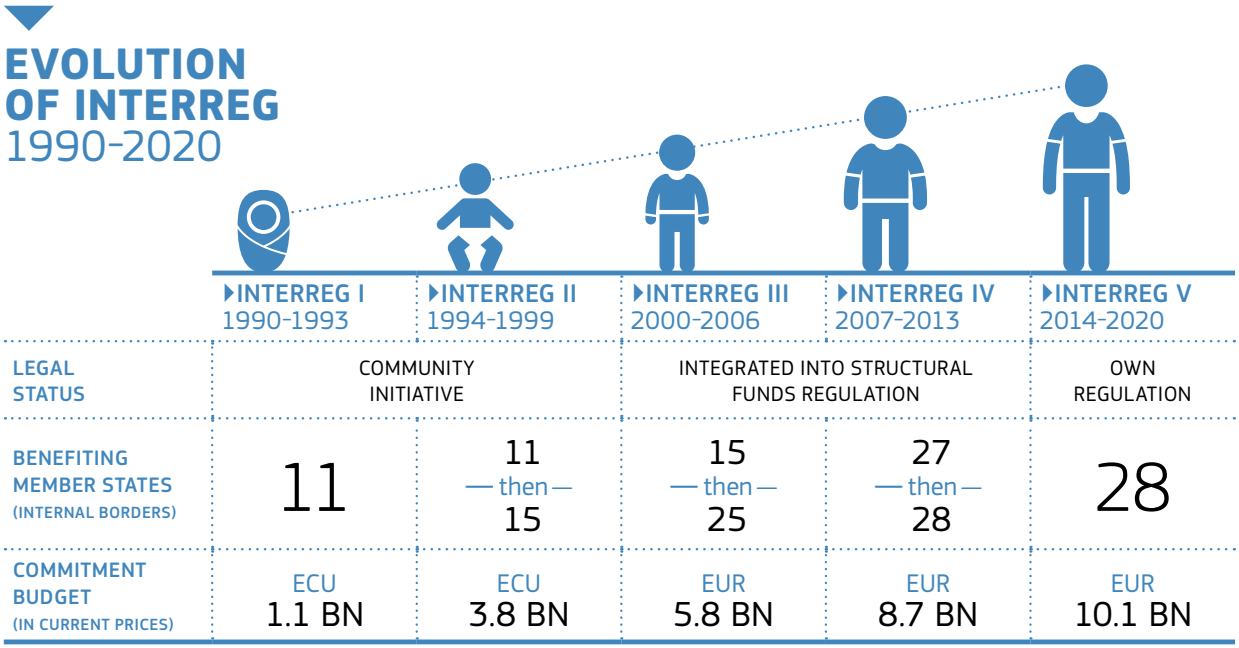


2.2 European Territorial Cooperation: Interreg

The European Territorial Cooperation goal, better known as **Interreg, is a key component of the EU Cohesion Policy**. In place since 1990, Interreg provides a framework for the implementation of joint actions and policy exchanges between national, regional and local actors from different Member States. The overarching objective is to promote a harmonious economic, social and territorial development of the Union as a whole.

Built around three strands of cooperation: cross-border (Interreg A), transnational (Interreg B) and interregional (Interreg C), Interreg has grown in size over the years, almost doubling in budget since 2000. Under the last three programming periods it has funded close to 25,000 projects. During this time, the funding of environmental protection activities with a transnational dimension has also grown significantly.

Figure 4. Evolution of Interreg 1990–2020.

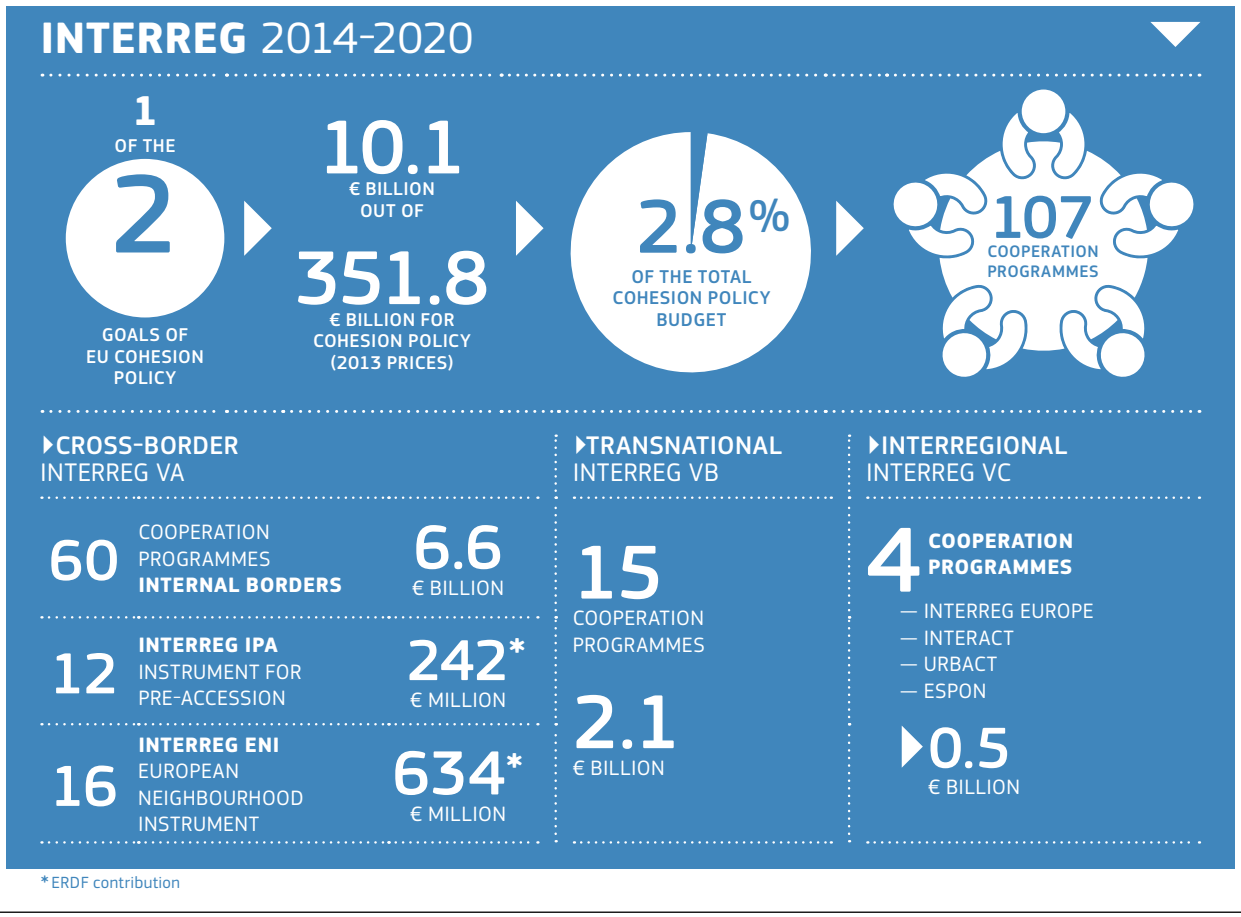


The current **Interreg V** (2014–2020) focuses on 11 investment priorities laid down in the ERDF Regulation. They are designed to contribute to the delivery of the Europe 2020 strategy for smart, sustainable and inclusive growth. The total budget available for this is €10.1 Billion.

Investment Priority N°6 is dedicated entirely to preserving and protecting the environment and promoting resource efficiency. It focuses in particular on the following areas:

- 6a –Investing in the waste sector to meet the requirements of the Union's environmental acquis and to address needs, identified by the Member States, for investment that goes beyond those requirements;
- 6b –Investing in the water sector to meet the requirements of the Union's environmental acquis and to address needs, identified by the Member States, for investment that goes beyond those requirements;
- **6c –Conserving, protecting, promoting and developing natural and cultural heritage;**
- **6d–Protecting and restoring biodiversity and soil and promoting ecosystem services, including through Natura 2000, and green infrastructure;**

Figure 5. Interreg 2014–2020.



- 6e–Taking action to improve the urban environment, to revitalise cities, regenerate and decontaminate brownfield sites (including conversion areas), reduce air pollution and promote noise-reduction measures;
- 6f–Promoting innovative technologies to improve environmental protection and resource efficiency in the waste sector, water sector and with regard to soil, or to reduce air pollution;
- 6g –Supporting industrial transition towards a resource-efficient economy, promoting green growth, eco-innovation and environmental performance management in the public and private sectors

Of the total amount available under the Interreg V, around €581 million of EU investment is foreseen for nature and biodiversity[9]. Of this, €163 million of EU funding is specifically for the protection, restoration and sustainable use of Natura 2000 sites. At the end of 2018 already €458 million of EU co-funding has been allocated to specific projects, which is slightly above the cohesion policy average.

9 data produced from EU Cohesion Database https://cohesiondata.ec.europa.eu/2014-2020/2014-2020-Cohesion-policy-investments-planned-for-/mhbz-5j4j

2.3 Type of Interreg Projects funded for Natura 2000

The Interreg Keep EU database[10] provides aggregated information on projects funded under each of the three strands of Interreg namely cross-border, transnational and interregional cooperation programmes. The database covers the periods 2000–2006, 2007–2013 and 2014–2020.

The EU Keep Database also has a comprehensive search function that allows the user to search according to type of project, programme, beneficiary, country, investment priority etc.. and according to key words. It does not however cover all projects[11]. The analysis presented below is therefore only indicative as it is based on the results of the Keep Database.

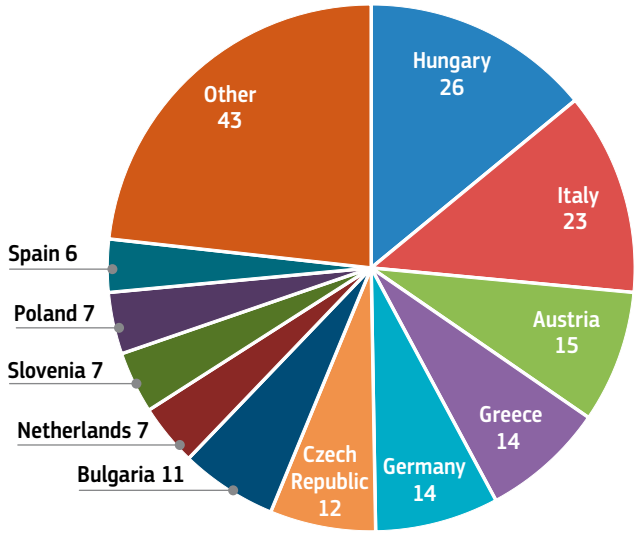
The Keep Database was consulted using the word 'Natura 2000'. The result indicates that so far **at least 190 projects involving Natura 2000 sites have been funded since 2000. The total investment amounts to almost €280 million to which the EU provides funding of €200 million**.

The majority of the Interreg 'Natura 2000" projects are cross border projects but there have also been an important number of transnational projects.

Table 1. Number of Natura 2000 projects under Interreg since 2000.

Type of Interreg project	N° of Natura 2000 projects
Cross-border	130
Transnational	40
Interregional	8
IPA and ENPI/ENI	12
TOTAL	**190**

Figure 6. Number of Natura 2000 Interreg projects by lead country.

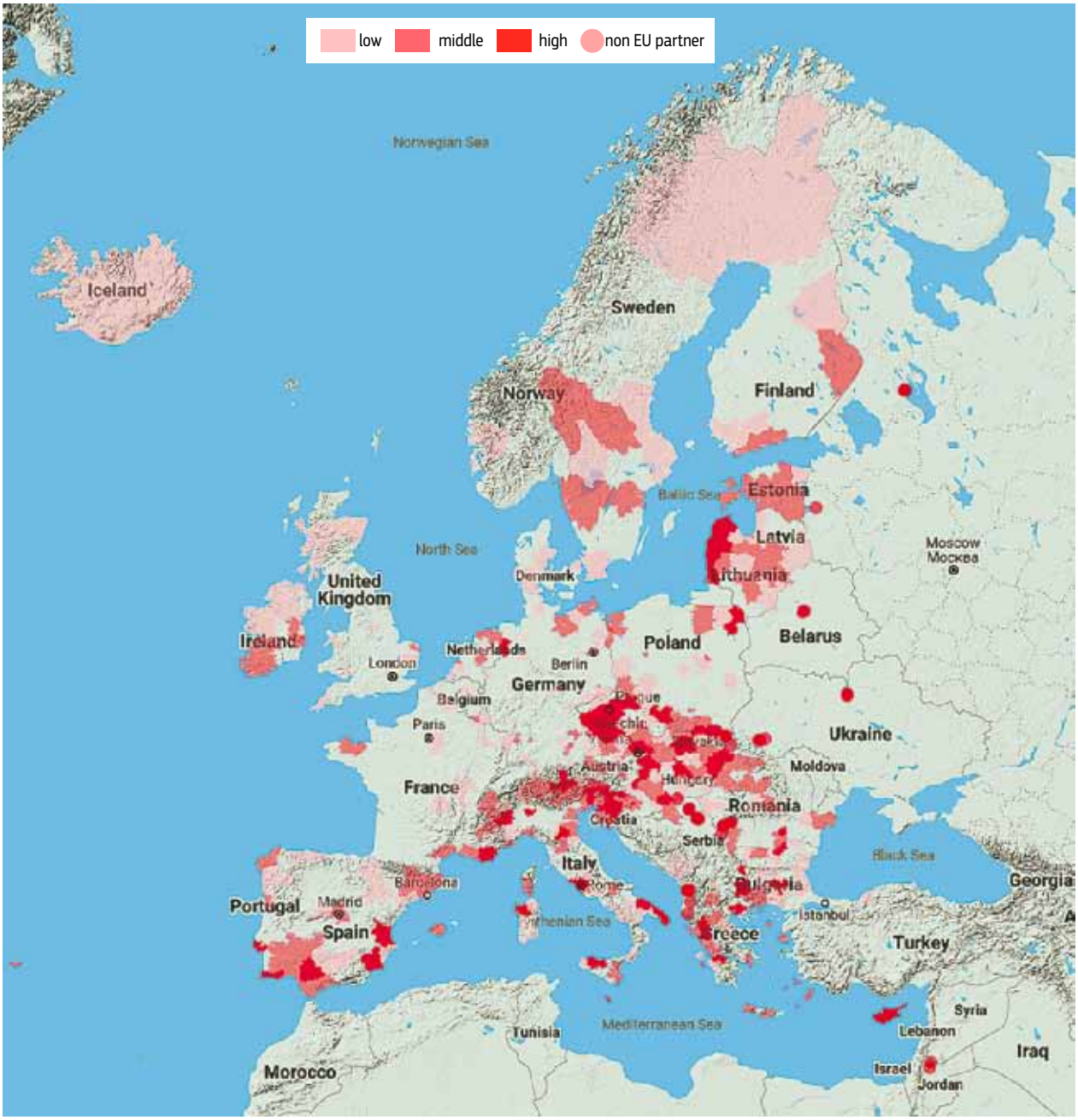


The following map illustrates the areas of project concentration. There are some clear clusters of projects around Central Europe (Hungary, Austria, Czech Republic, Slovenia, Slovakia, ca 65 projects), Italy (23 projects), Greece (14 projects), Germany (14 projects) and Bulgaria (11 projects).

10 https://www.keep.eu/

11 For Interreg III, it includes 73% of the ca 10,000 projects, for Interreg IV it covers 94% of the 10,432 projects, for Interreg V it covers 73% of the 5,600 projects funded so far https://www.keep.eu/representativeness

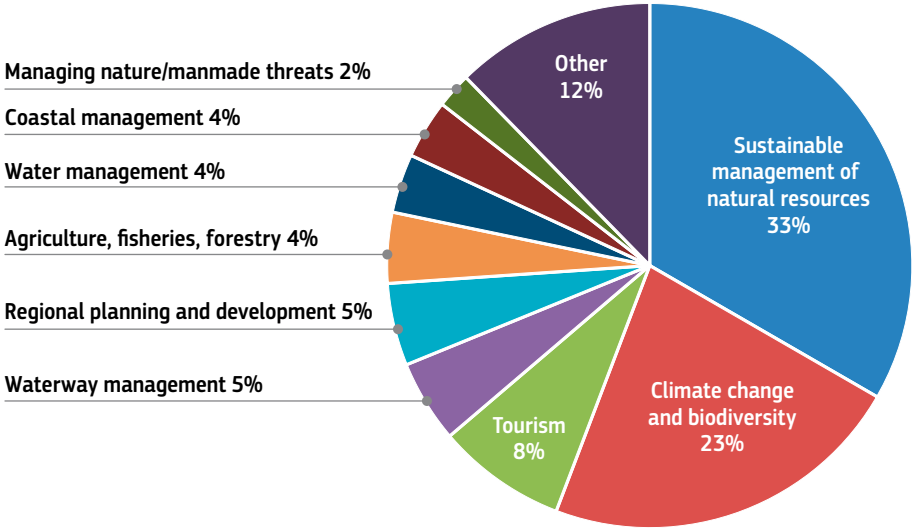
Figure 7. Heat map of Natura 2000 projects under Interreg since 2000. The shades of red on the map show the different concentration of partners versus the average ('middle') for the search parameters.



These so called "Natura 2000" projects were also analysed according to the thematic catergory under which they fall[12] . This revealed that the Natura 2000 projects fall under a wide range of categories. The most frequent category is *'sustainable management of natural resources' followed by 'climate change and biodiversity', 'managing natural and man-made threats', 'tourism', 'regional planning and development', 'cultural heritage and arts', 'agriculture, fisheries and forestry', and 'waterways, lakes and rivers'*.

12 In total, 42 different thematic keywords were agreed when the Keep database was set up. Each project whose data is published in keep.eu is classified according to this closed system either with one, two or three thematics. For the purposes of this analysis only the first thematic category was used. This system of project classification applies indistinctively to projects of any programming period, from 2000 to the present days. It is independent from the intervention logic that applies to 2014–2020 only, and fundamentally different in nature: Regarding the latter, thematic objectives (TOs) and investment priorities (IPs) are embodied in the project data itself before its uploading to Keep.

Figure 8: chart showing the number of projects according to the first thematic category by which they are classified in the EU Keep data base.



This goes to confirm that projects involving Natura 2000 sites are not just about conserving biodiversity but also about its integration into wider socio-economic development objectives at the local or regional level.

A new common indicator to monitor protected habitats targeted by ERDF

Since the start of the financial programming period for 2014–2020, the Commission has also introduced a common indicator to monitor the surface area of habitats listed in Annex I of the Habitats Directive that is targeted under the European Regional Development Fund[13]. An online search function is available to explore the targets and actual implementation rates for each of the different Interreg programmes[14].

2.4 Type of actions funded under Natura 2000 Interreg projects

Whilst it is not possible to extract aggregated information on the targeted habitat types, species or project actions and their locations from either the Keep.eu database or the EU Cohesion policy's common indicators, the projects can be clustered according to main types of actions and objectives (see table below).

From the examples given below, it is clear that Interreg has funded a whole range of activities that are directly relevant to Natura 2000 and that there is no 'one size fits' all rule.

13 https://cohesiondata.ec.europa.eu/stories/s/Cohesion-policy-protecting-nature-and-biodiversity/gznm-sv2i/
14 https://cohesiondata.ec.europa.eu/2014-2020/2014-2020-Habitat-protected-Hectares/wz7t-e865

- Some projects focus on the conservation or restoration of a particular species or habitat and/or on individual Natura 2000 sites or suite of sites (eg Cigra, Malschemuschel, Grenzenlos Moor Carnivora Dinarica.).

- Other projects adopt a more strategic approach, working across a whole mountain range (eg Alps, Carphathians) or river basin (Rhine, Danube) and are usually multidisciplinary, involving a wide range of different socio-economic sectors, (eg ZAZNET which took this partnership one step further and set up a formal European Grouping for Territorial Development in order to manage a huge crossborder Biosphere reserve between Spain and Portugal).

- Many projects also link up Natura 2000 site management and local sustainable tourism development initiatives in order to help promote economic development in keeping with the Natura 2000/protected area objectives. In addition, many of the Interreg projects examined place particular emphasis on integrating their actions and objectives with those of other on-going initiatives in the region and/or in the same area of interest. These might be national initiatives, LIFE projects or other EU funded projects

- One other aspect that all the projects have in common is that dialogue and cooperation lies at the core of all their activities and is a sine qua non for their ultimate success and sustainability. This can involve various forms of communication: establishing a dialogue between conservation experts or nature authorities in different countries to 'get to know each other' and establishing common approaches and exchange of information and experiences. But it also very often involves reaching out to, and actively engaging, other stakeholders and interest groups from within the area to make them aware of the conservation issues at stake and gain their interest and support.

- A number of projects are also increasingly led by the stakeholders. The PARTIDGE project, for instance, is run by a consortium of research institutes, conservation NGOs, agricultural and hunting bodies and is based on a bottom up approach implemented by more than 100 local farmers, hunters, volunteers etc to showcase best practice for improving biodiversity and high quality habitats in arable land.

- Finally, several of the projects studied produced outputs that continued to be used after the end of the project. Many also lead to the development of further initiatives and projects that built on the work achieved under Interreg, illustrating their useful role as catalysts of change.

Chapter 4 presents eighteen Interreg funded 'Natura 2000' projects to illustrate the range and diversity of different actions, locations, conservation objectives and socio-economic contexts in which Interreg projects have operated so far.

Table 2. Summary of the main activities implemented by the Natura 2000 Interreg projects analysed for this report.

Main Activities Types	Project actions	Interreg projects examples (*case study in chapter 4)
Species conservation and monitoring	• Establishing common species monitoring methodologies • Drawing up joint or coordinated species action plans and strategies • Stakeholder dialogue and engagement • Exchange of knowledge • Improving connectivity and population status (e.g. fauna passages, reintroduction)	NETCET* CIGRA* 3Lynx* Malschemuschel* Batsconserve Carnivora Dinarica D154 ground squirrel IBERLINX
Natura 2000 site management and restoration	• Exchanging knowledge and experiences • Establishing common management, assessment and monitoring objectives and activities • Implementing habitat management and restoration action (e.g. IAS eradication, or wetlands rewetting) • Stakeholder dialogue	Grenzenlos Moor*, SK-HU for Forests* Vogelwarte Madarvarta* ZAZNET* 3E-MORAVA Nature LIKE, OPEN LANDSCAPE LAKES FOR FUTURE
Natura 2000 network coherence and connectivity	• Restoring ecological corridors, (e.g. by removing barriers from river habitats) • Assessment and monitoring of barriers • Definition of restoration methodologies and concepts for habitat corridors based on habitat and species dynamics • Stakeholder dialogue and exchange of experiences	The Green & Blue Rhine Alliance* ECONNET*, DANUBEPARKS* BE NATUR ConnectGREEN BIOREGEO Carpathians ALPbionet
Natura 2000 sustainable development	• Economic valuation of Natura 2000 • Promotion of Sustainable Tourism and Cultural Heritage • Promotion of local products • Action plan for nature-based coordination territorial development	NATURA PEOPLE* CEETO* SALTWORKS* PARTRIDGE* ZAZNET* SOS PRADERAS GOTONature AlpNATUR LENA EcoKARST
Exchanging knowledge and engaging stakeholders from other sectors	• Mediation conflict with stakeholders (e.g. different economic and conservation interests) • Awareness raising • Stakeholders training and capacity building • Improve cooperation among regional, local administrations and site management	IMPACT* BIG* LINKPAS 4GreenInn FAUNAPYR
Marine Monitoring, planning and management	• Integrated management of marine sites • Coordinated monitoring • Conflict identification and stakeholder engagement in marine areas • Creation of information and decision support tools (Webgis)	NETCET* GIREPAM MAIA MarPAMM MIMAR AMARe PHAROS4MPAS PANACEA

3. Conclusions and recommendations

This brief analysis of the use of the Interreg programmes for Natura 2000 clearly illustrates that EU Cohesion Policy investments, and in particular Interreg, have the potential to be a key **EU instrument for supporting Natura 2000 implementation and management**. They also help to link Natura 2000 management to wider socio economic issues through cross border and cross sectoral exchange of experiences and practices.

3.1 Summary conclusions

Several conclusions can be drawn from the present analysis:

- **Interreg is improving the effectiveness of EU nature legislation by establishing and encouraging common approaches to Natura 2000 sites**, with a focus on management, planning and restoration through cooperation and exchanges between regions. It has helped set up a framework in which local and regional authorities from across the EU can **share experiences and examples of good practice in relation to the challenges they face in Natura 2000 implementation**.

- Interreg has played a major role **in establishing many integrated cross-border management plans** for Natura 2000 sites;

- Many of the more recent Interreg projects supporting investments in Natura 2000 **follow the Prioritised Action Frameworks (PAFs)**. This interlinkage is important as the PAFs help establish priorities for conservation at the national and regional level;

- Interreg has been key in **promoting the coherence and connectivity of the Natura 2000 Network and encouraging species conservation across frontiers;**

- Interreg has also made an important contribution to **supporting marine Natura 2000** site surveys, designation, monitoring and planning. (e.g. MAIA – Marine Protected Areas in the Atlantic Arc, or PHAROS4MPAs in the Mediterranean);

- **The EU Cohesion Policy, and in particular Interreg, illustrates the complementarity between EU territorial policies and Natura 2000 requirements**. For instance, many Interreg projects have implemented innovative local sustainable development models based on sustainable tourism or agriculture using as its core its Natura 2000 values. These Interreg projects have in turn helped to create jobs and promote economic diversification in Natura 2000 sites;

3.2 Recommendations

1. It would be useful to investigate further and in more detail the impact of the current Interreg programmes on the implementation of Natura 2000 management measures and their coherence with the PAFs in particular. This could involve for instance a more systematic analysis and inventorying of the 190 projects identified to assess the main types of habitats/ species and actions funded as well as their potential link to the biogeographical process (the present project focussed on illustrated good examples to inspire others to apply).

2. It would also be useful to analyse further the results of newly established common indicator on the surface area of habitats listed in Annex I of the Habitats Directive targeted by ERDF measures to see to what extent this is impacting on the habitats conservation status. For the future it is recommended that projects under EU Cohesion Policy programmes, including Interreg, provide more detailed information on the species, habitat types, and Natura 2000 sites targeted by their actions to be able to better assess their impacts.

3. It will be important to further promote the potential value of Interreg projects in supporting the management and sustainable use of Natura 2000 sties and in improving the conservation status of protected species and habitat types across borders and within the same biogeographical regions. At the moment it would appear that the Interreg projects and the many good practices they generate are poorly known or communicated outside the Interreg community. It is strongly recommended therefore to boost the awareness of Interreg to a wider audience, and to the conservation and rural development communities in particular. The Interreg networking programmes such as Interact[15] and ESPON could also be explored further in this respect.

15 Interact supports Interreg programmes' managing authorities, audit authorities and administrators in order to improve the managements of these programmes. The Interact team offers training, tools and encourages networking within the territorial cooperation community and beyond.

4. Case studies: INTERREG projects for Natura 2000

4.1 Summary of case studies

Table 3. Summary of case studies.

Project title	Programme and Countries involved	Habitat/species targeted	Type of actions	EU funding
Species conservation				
NETCET – Network for conservation of Cetaceans and Sea Turtles in the Adriatic	2007–2013 Adriatic IPA Italy, Croatia, Albania, Slovenia Montenegro 13 Partners	Cetaceans – Sea Turtles	• Developed common strategies for both species • Coordinated monitoring and aerial survey work • Established scientific network and Adriatic emergency task force • Built three rehabilitation centres • Awareness-raising for fishermen, leisure boat owners and school children	2,322,660€
CIGRA – preserving the population of Common Terns in Sava and Draft basin	2014–2020 Interreg VA Croatia-Slovenia 6 partners	Common Terns – targets only remaining breeding sites of species here; Also Little Tern River and riverine habitats in Natura 2000 sites	• Improvement of nesting sites for Common Terns along the two rivers running between the two countries involving construction of artificial islands for nesting and improving existing sites (fencing, measures to slow down overgrowth, scrub removal etc.) • Joint monitoring of dynamics of tern populations following restoration • Transboundary action plan for terns • Educational and public awareness	478,981€
Malschemuschel – Freshwater Pearl Mussels in Malse Catchment area	2014–2020 Interreg VA Austria – Czech Republic	Freshwater Pearl Mussel – in Malse river (part Natura 2000)	• Captive breeding and release • Fish management • Detailed habitat surveys e.g. re: stability and permeability of the river bed • Stakeholder dialogue (e.g. anglers) and involvement through 22 educational workshops on fish management • Synchronisation of species and habitat • management, monitoring and legal aspects	1,414,253€
3Lynx – population based monitoring, management and stakeholder involvement for European Lynx	2014–2020 Interreg VB – Central Europe Czech Republic-Slovenia, Austria, Germany, Italy, Croatia 11 Partners	Eurasian Lynx (Bohemia, Bavaria, Austria population) + Dinaric population	• Sharing and transfer of monitoring expertise and establishment of joint lynx monitoring database • Development of transnational conservation strategies for BBA and Dinaric populations • Meetings with foresters, hunters and landowners; and training sessions for them and vets, journalists, teachers, school children	1,910,296€

Table 3 cont'd, Summary of case studies.

Project title	Programme and Countries involved	Habitat/species targeted	Type of actions	EU funding
Natura 2000 site conservation				
Grenzenlos Moor	2014–2020 Germany – Netherlands (cross-border) 11 partners	Relics of a huge raised bog on border	• Development of a buffer zone around the Bargerveen site • Construction of a sheepfold in the site • Improvement of the drainage system in the German municipality of Twist • Research into the possibilities for increased paludiculture[20] in the park • Improvement of the availability of visitor information through decentralisation of facilities to a number of entrances to the park or 'bog gates' (DE: 'Moorpforten') • Development of a more uniform cross-border network of recreational trails • Improvement of accessibility to the Bargerveen from the municipalities in and around the park	3,290,000€
Vogelwarte-Madarvarta I-II Cross-border cooperation Lake Ferto-Hansag (HU) and Neusiedler See – Seewinkel (AU	2007-2014 Austria– Hungary 2014-2020 INtereg VA Austria – Hungary 2-3 Partners	Large wetland and associated habitats across border in 2 Natura 2000 sites also two national parks Prime importance for migratory birds	• Cross-border cooperation to establish joint monitoring and management protocols • Joint research for surveys and habitat mapping, studies on target species and habitats, research on hydrobiological issues • small scale habitat restoration activities in areas affected by human activities • Restoration ornithological research stations • New and renovated bird watch towers and related infrastructure • Publications for tourism and amateur birdwatchers – enhanced awareness-raising	+/- 2,500,000€
BIOSFERA_ TRANS-FRONTERIZA; ZAZNET_ MESETA_ IBERICA; PAISAJE_IBERICO	2007-2013 Intereg Crossborder 2014-2020 Interreg VA Spain – Portugal 1 European Grouping of Territorial Cooperation	Meseta Iberica – huge transfrontier biosphere reserve containing 22 SACs and 10 SPAs Mountainous area, best pop. for Iberian wolf	• Creation of the Iberian Plateau Biosphere Reserve in 2015 and adoption of action plan to promote sustainable initiatives in the area • Strengthening of cooperation between authorities responsible for Natura 2000 through creation of ZASNET a European Grouping • Creation of a quality brand for the territory as a Biosphere Certification destination • Identification, classification and mapping of landscapes and defining ways to encourage the maintenance of traditional practices, ecotourism, and local market structures, strengthening the involvement of local population in activities • Tools for the assessment, montioring and management of natural resources, including a Natural Resource Action plan, cartography, awareness-raising elements and various studies on nature, water and forest • Interpretation centres etc.	+/- 2,700,000€

Table 3 cont'd, Summary of case studies.

Project title	Programme and Countries involved	Habitat/species targeted	Type of actions	EU funding
Natura 2000 site connectivity				
The Green and Blue Rhine Alliance	2014–2020 Germany – Netherlands (cross border) 10 Partners	River and floodplains mostly in Natura 2000 sites (12 FFH types) otter, migratory fish, birds, amphibians	• Network development communication (39 events) • Cross-border ecological connections to improve otter and fish migration 52 species • International Knowledge Workshops on floodplain development and nature restoration: five times and five developed cases	1,800,000€
ECONNECT – improving ecological connectivity in the Alps	2007–2013 Alpine Space Programme (transboundary) Austria, France, Germany, Lichtenstein, Switzerland 16 Partners	Range of Natura 2000 sites and species (Black Grouse, lynx, Red Deer, Brown Bear, Wolf, Griffon Vulture) for which coherence and connectivity is especially important	• Scientific analysis of targeted species needs in terms of connectivity (corridors) • Spatial analysis of current and potential habitats also imp for future land use planning • Characterisation of barriers (including legal) to better interconnectivity leading to proposed models for transboundary Protected Areas • Detailed mapping and impl. of some measures and management practices in seven pilot projects to remove/diminish barriers • Strong communication and awareness raising for all stakeholders	2.285.120€
DANUBEPARKS – Danube Network of Protected Areas (six Interreg projects so far – Step 1 & 2 covered here)	2007–2013 South East Europe, then 2014–2020 Interreg VB Danube (transboundary) Austria, Germany, Slovakia, Hungary, Romania, Bulgaria, Croatia, Serbia, Bosnia-Herzegovenia 14+ partners	River and riverine habitats – focus on 16 Protected Areas in nine countries (containing or overlapping with over 30 Natura 2000 sites)	• Set up of transnational task forces to promote knowledge exchange and develop transnational strategies (e.g. river morphology action plan, White-tailed Sea Eagle action plan) • Scientific studies and inventories • Over 150 actions implemented in pilot areas for river rivitalisation (e.g. sediment balance, restoration, corridor, floodplain management, conservation flagship species (White-tailed Sea Eagle, Black Poplar) • Monitoring of indicator species, especially re Natura 2000 species (Little Ringed Plover, Sand Martin, Beaver, European Mink, migratory fish) • Guidelines for nature tourism and environmental educational programmes, installation of info-corners • Heavy cross-sectoral dialogue as well as cross-border and strong links with other Danube initiatives e.g. ICPDR, EUSDR	+/- 5,000,000€

Table 3 cont'd, Summary of case studies.

Project title	Programme and Countries involved	Habitat/species targeted	Type of actions	EU funding
Natura 2000 sustainable development				
PARTRIDGE – Protecting Area Resources Through Researched Innovative Demonstration of Good Examples	2014–2020 Interreg VB – North Sea Region UK, Belgium, Netherlands, Germany 11 Partners (mix of researchers, farm advisors, conservationists, hunters, civil servants and farmers)	Farmland habitats (mainly intensive arable land) but important for huntable species Grey Partridge listed in BD which acts as umbrella species for other farmland bird species	• Implementation of best practice models for biodiversity in farmland in 10 demo-sites to showcase to decision makers and stakeholders and to encourage better use of agri-env funds • Bottom-up approach with 100 local farmers, hunters, volunteer groups and government agencies • Demo-sites involve creation of high quality habitats in farmland, supplementary winter feeding and predator management (e.g. tailored flower mixes, beetle banks, winter stubble arable margins) • Monitoring of indicators species in demo-sites • Write-up of guidelines and strong communication, publicity and outreach activities	2,390,068€
SALTWORKS – ecological permanent valuation salt pans between Italy and Slovenia	2007–2013 Italy – Slovenia (cross-border) 5 Partners	Four Natura 2000 sites, habitats 1310, 1420, 1410 – internationally important bird species populations	• Guidelines for authorities to increase sustainable tourism at each site and ecological salt production • Implementation of actions as pilot projects, e.g. nature trails, harbour for fishermen, bird towers, paths for electric minibus and boats • Promotion and marketing for tourists/locals including guided visits, local events, cooking workshops, brochures, press releases etc.	1,071,000€
NATURA PEOPLE – engaging with people to build a sustainable future for natural heritage of Natura 2000 sites	2007–2013 Interreg 2 Sea UK, Belgium, Netherlands (transboundary) 4 partners	Four coastal sites mostly in Natura 2000 sites	• Develop an economic model and guidance on economic values of Natura 2000 sites • Develop business network to integrate Natura 2000 sites within local economies, including tourism • Influence policy makers to support sustainable development and the natural environment • Develop a transnational network of volunteers and visitors to share bird sightings, experiences • Create innovative strategies to attract more and broader range of visitors a • Improve visitor experience at each partner site by improving the facilities, activities and access	2,26,486€
CEETO – Central Europe Ecotourism project	2014–2020 Interreg VB Central Europe Programme Italy, Germany, Slovenia, Hungary, Austria, Croatia	Not Natura 2000 specific but most of eight pilot sites are in Natura 2000	• Integrated tools for the sustainable management of Protected Areas and Natura 2000 sites in relation to touristic activities and impacts • Guidelines for policy makers to increase their capacity in developing sustainable tourism policies • A manual to increase site capacities in planning and managing sustainable tourism and related activities and uses • Five-year Sustainable Tourism Action Plans for each PA • Eight pilots to test the effectiveness of the sustainable tourism governance model	2,304,885€

Table 3 cont'd, Summary of case studies.

Project title	Programme and Countries involved	Habitat/species targeted	Type of actions	EU funding
Knowledge and experience exchange				
IMPACT Innovative models for Protected Areas – exchange and transfer	2014–2020 Interreg VC Europe Belgium, Italy, Germany, Romania, Lithuania	Not Natura 2000 specific but most pilot Protected Areas also Natura 2000	• Assessing carrying capacity for tourism in two sites and developed a Carrying Capacity Tool. Also a digital tourist handbook has been developed • Promoting local products and traditional activities in two sites (farm produce, olive oil) • Outdoor activities adapted to different types of visitors • Working in nature conservation with stakeholders and volunteers	1,010,755€
BIG – improving governance, management and sustainability of rural and coastal Protected Areas and N2000	2007–2013 Interreg IVA Greece – Italy 9 partners	Coastal and agricultural areas in Natura 2000 on both sides of the Adriatic Sea	• Creation of joint protocols for monitoring species and habitats and development of a biodiversity database and information system • Centralised register and manual on best practices for management of natural resources • Elaboration of a simulation application that allows conducting experiments in order to simulate population dynamics. • Transnational 90-hour course for managers of Protected Areas, one part conducted in Greece with field visits and one part conducted in Italy • Design and creation of visitor infrastructure (trails, observatories, Port Museum of Tricase) • Creation of a cross-border portal for touristic promotion	Total budget 4,000,000€ (EC contribution unknown)
PHAROS4MPAs – Blue economy and marine conservation	2014-2020 Interreg VB Mediterranean Spain, France, Belgium, Italy, Slovenia, Croatia, Malta Greece, Tunisia, Albania, 17 Partners,	Marine Protected Areas	• Compilation of information and best practices, followed by recommendations in following activities affecting MPAs in the Mediterranean: Maritime transport and industrial ports; Cruise super yachts, Tour boats; Leisure boating; Offshore wind farms; Aquaculture, Recreational fisheries; Scuba diving; Small-scale fisheries • Facilitate dialogue between authorities, MPAs managers and marine businesses • Create a framework for the integrated management of the Mediterranean taking full account of MPA needs	1,002,572€
PANACEA - Streamlining Networking and Management efforts in Mediterranean Protected Areas for Enhanced Natural Conservation and Protection	2014-2020 Interreg VB Mediterranean Spain, France, Italy, Montenegro 7 Partners	Marine and coastal protected areas	• 'Capitalisation' project aiming to increase the visibility and impact of 11 on-going Interreg projects in the Mediterranean Sea and build a community of nature conservation stakeholders across the Mediterranean in order to streamline the networking and management efforts of MPAs. • Creation of A Mediterranean Biodiversity Protection Knowledge Platform to ensure the transfer and dissemination of synthesised project outcomes across and beyond the region	1,463,830€

NETCET – Network for the Conservation of Cetaceans and Sea Turtles in the Adriatic

Name of the Interreg Programme: IPA CBC Adriatic Programme

Period of implementation: Three years (October 2012 to September 2015)

Countries covered and beneficiaries: Project was coordinated by the City of Venice and implemented by 13 partners situated in several countries of the Adriatic Basin (Italy, Croatia, Albania, Montenegro and Slovenia)

Associate partners are the Institute of the Republic of Slovenia for Nature Conservation; Veneto, Marche and Emilia Romagna Regions in Italy.

Project budget: €2.732.541, EU funding: €2.322.660

*The Common Bottlenose Dolphin (*Tursiops truncatus*) in the Adriatic Sea.*

Project background

The Adriatic Sea hosts several species of cetaceans and sea turtles and is considered a key foraging and development area for young sea turtles. Unfortunately, cetaceans and sea turtles are vulnerable to interactions with human activities especially related to fisheries and coastal tourism (e.g. impacts with recreational boats). Over 130,000 sea turtles are incidentally caught every year in the Mediterranean and of these animals over 40,000 die. One-hundred-and-eighty marine mammals are found dead each year along the Italian shores. Interaction with human activities is responsible for at least 30% of the strandings. In the Adriatic Sea, between years 2012–2015, 24 Bottlenose Dolphins died from interactions with fishing gear (seven in Italy, three in Slovenia and 14 in Croatia).

The main objective of the NETCET project was to develop common strategies for the conservation of cetaceans and sea turtles in the Adriatic through pan-Adriatic cooperation. Due to the migratory nature of these species and the joint responsibility of Adriatic States, collaboration was considered essential to planning effective long-term conservation strategies. The analysis of the baseline situation highlighted:

1. lack of technical and institutional capacity in many areas related to conservation measures – training of local actors needed;
2. incomplete scientific knowledge of the institutions involved in conservation actions – networking and cooperation among institutions needed;
3. lack of awareness of threats that may affect long term survival of cetaceans and sea turtles populations – reduction of direct threats needed;
4. lack of complete coverage of rehab/emergency centre – strengthening the rescue centre coverage along the Adriatic coast needed; and
5. lack of conservation strategies – definition of common policies and management strategies at transnational level needed.

Linkages with NATURA 2000

The NETCET project targeted two cetacean species considered native: the Common Bottlenose Dolphin (*Tursiops truncatus* – Annex II HD) and the Short-beaked Common Dolphin (*Delphinus delphis*). However, several other species were also taken into consideration, in particular Striped Dolphin (*Stenella coeruleoalba*) but also Fin Whale (*Balaenoptera physalus*), Humpback Whale (*Megaptera novaeangliae*), Sperm Whale (*Physeter macrocephalus*), Cuvier's Beaked Whale (*Ziphius cavirostris*), Long-finned Pilot Whale (*Globicephala melas*), False Killer Whale (*Pseudorca crassidens*) and Risso's Dolphin (*Grampus griseus*). The project also targeted the Loggerhead Turtle (*Caretta caretta*) – Annex II HD and the Green Turtle (*Chelonia mydas*) – Annex IV HD).

Stakeholder involvement

Dissemination and awareness-raising activities were carried out targeting mostly fishermen, local communities and leisure boat owners. In particular:

- More than 800 fishermen have been made aware of the impact of their activity on sea turtles, and of the correct procedures to rescue animals accidentally captured in their fishing gear through specific materials and events;
- More than 4000 leisure boat owners have been informed about how to drive and behave around cetaceans and sea turtles to minimise their disturbance; and
- Over 3000 schoolchildren living along the Adriatic coast have been taught about the conservation of these species using a dedicated educational kit.

In general, NETCET project organised 130 public releases of sea turtles attended by over 10,000 people. It has been calculated that two million inhabitants were reached by mass-media about the conservation of sea turtles and cetaceans.

Results and achievements

The project achieved the following:

- Identification of the conservation needs of cetaceans and sea turtles in the Adriatic Sea and developing **two distinct common strategies for cetaceans and sea turtles** which foresee actions addressing the main threats challenging Adriatic populations for the decade 2016 – 2025 (Štrbenac 2015a, Štrbenac 2015b). These Strategies should be used as guidelines for the development of National Action Plans in each Adriatic country.
- **Coordinated monitoring programme** to increase availability of data and improve knowledge relevant for the conservation of cetaceans and sea turtles (satellite system, more than 10,000 km boat survey, more than 100 hours of aerial survey). A common data collection framework on cetaceans and sea turtles was prepared through two databases[16].
- **A significant aerial survey activity** (over 14,000 km) was carried out providing an overview of the use of the Adriatic Sea by these species and revealing that the Adriatic Sea is more important for cetaceans and sea turtles than ever imagined before. This was confirmed by the satellite tracking of 20 juvenile Loggerhead Turtles and 3 Green Turtles which proved that juvenile Loggerhead Turtles remain in the Adriatic Sea with seasonal movements strongly dependent on the Northern Adriatic

16 http://www.marinemammals.eu/index.php and http://www.adriaticseaturtles.eu/

foraging grounds, and Green Turtles move to warmer waters of the Southern Adriatic during winter. An on-line system was set so that everyone could follow the movements of the "NETCET" turtles. The aerial survey also showed a diversity of cetaceans in the region with large numbers of striped dolphins and the presence of Cuvier's Beaked Whales in the Southern Adriatic Sea. Bottlenose Dolphin populations were monitored through consistent photo identification studies in all the Adriatic countries.

- Establishment of a **Technical Scientific network** (30 members) with experts from different research fields within the Adriatic basin in order to share knowledge and experience, and to develop common databases for reporting strandings. This network helped scientists observe any increase in mortality of animals living in the Adriatic Sea and to follow common protocols and strategies in case of emergencies.
- Development of an **Adriatic emergency task force** in order to respond to mass stranding and environmental emergencies: a group of experts (biologists and veterinarians) in cetacean and sea turtle sciences trained to intervene in case of unusual mortality events or mass strandings. One-hundred-and-thirty-three veterinarians have been trained; standard protocols for *post-mortem* and physical examination and reference textbooks on veterinarian operations were produced and distributed. Stranded animals were also examined and causes of death analysed for both mass and individual beaching.
- Building of **three new emergency and rehabilitation centres** and improvement of the equipment of 13 other existing centres in Italy and Croatia. Creation of a rehabilitation pool in Numana.
- **Network of 29 cities to enhance Adriatic cities role in the conservation of cetaceans and sea turtles** (www.netcet.eu/city-network). The NETCET project underlined the importance of a multidisciplinary, integrated and basin-based approach in studying and monitoring aquatic animals' populations. The actions carried out gave the opportunity to exchange knowledge and create technical networks aimed to enhance all efforts for large marine vertebrate's conservation. NETCET project highlighted the necessity to spread common knowledge and practices considering local approaches and necessities.

Integration with other initiatives

The NETCET project has addressed pressures related to different policy areas. Regarding the Common Fisheries Policy it has dealt with incidental catch, fisheries measures for Natura 2000 and data collection. The development of common strategies for cetaceans and sea turtles and the identification of spatial protection measures are related to the objectives of the Marine Strategy Framework Directive.

The NETCET project has developed an intense cooperation with 'sister projects':

- COCONET, an FP7 project (7th Framework Programme for Research and Technological Development) based on Coast-to-Coast Networks of Marine Protected Areas from the shore to the high and deep sea, coupled with sea-based wind energy potential.
- SHAPE, an Adriatic Instrument for Pre-Accession Assistance (IPA) project based on a cross-border cooperation that aimed at the sustainable development of the Adriatic maritime region through a multi-level and cross-sector governance to manage conflicting uses and users.
- AdriPLAN, a Pilot Project on MSP implementation in the Adriatic Ionian Region (co-financed by DG MARE) to develop proposals and recommendations for an operational cross-border process.
- Defishgear, a project under the IPA Adriatic CBC Programme to face the problem of polluting the Adriatic Sea with marine litter and related economic impact on coastal communities.

- LIFE_GHOST, a LIFE project focused on developing techniques to reduce the impact of ghost fishing gears and to improve biodiversity in North Adriatic Coastal Areas.
- AMER, a project funded by Università politecnica delle Marche in collaboration with Stanford University to analyse transboundary large areas to address measures of management to allow the recovery of the Adriatic.
- TARTALIFE, a LIFE project aimed at reducing the mortality of Loggerhead Sea Turtle (*Caretta caretta*) and thus contributing to the conservation of the species in the Mediterranean through reducing by-catches and post-capture mortality.

Sustainability of project results

The two common strategies for cetaceans and sea turtles will be used as guidelines for the development of National Action Plans in each Adriatic country. Throughout the implementation of the NETCET project, partners have organised consultation meetings in their countries (Italy, Slovenia, Croatia, Montenegro and Albania) with Ministries and with the stakeholders dealing with cetaceans and sea turtles in order to: detect the key elements to improve in the existing National Action plans, define new Plans and receive official approval from the competent Ministries, give impetus for the implementation of the existing National Action Plans.

Other sustainability elements: Emergency and Rehabilitation centres will continue their activities for at least five years after the end of the project; the NETCET project has been presented as a good example of regional cooperation in the framework of the ACCOBAMS Scientific Committee (October 2015) and ACCOBAMS Meeting of Party (MOP 6) in November 2016.

Case study compiled by: Livia Bellisari, Comunita Ambiente / N2K GROUP

Sources of more information

- **Project website: http://www.netcet.eu/**
- **Sea turtles database: http://www.seaturtle.org**
- **Cetacean database: http://www.marinemammals.eu**
- **Network of cities: http://www.netcet.eu/city-network**
- **Final conference proceedings: http://www.netcet.eu/2013-01-04-21-37-20/item/128-final_conference_presentations**
- **Štrbenac A. (ed.) 2015a. Strategy on the conservation of sea turtles in the Adriatic Sea for the period 2016–2025. Document produced under the NETCET project, IPA Adriatic Cross-border Cooperation Programme. http://www.netcet.eu/files/Booklets/NETCET_WP7_Common_strategy_for_sea_turtles_conservation_booklet.pdf**
- **Štrbenac A. (ed.) 2015b. Strategy on the conservation of cetaceans in the Adriatic Sea for the period 2016–2025. Document produced under the NETCET project, IPA Adriatic Cross-border Cooperation Programme. http://www.netcet.eu/files/Booklets/NETCET_WP7_Common_strategy_for_cetaceans_conservation_booklet.pdf**

ČIGRA – Preserving the population of Terns in Sava and Drava basin

Name of the Interreg Programme: Interreg V-A Slovenia – Croatia

Period of implementation: three years (September 2017–February 2020)

Countries covered and beneficiaries: Croatia and Slovenia; Lead partner: Croatian Academy of Sciences and Arts (Institute for Ornithology)

Project budget: €579,177.41, EU funding: €478,981.98

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*Courtship of the Common Tern (*Sterna hirundo*).*

Project background

The project ČIGRA ("čigra" is the Croatian and Slovenian name for the tern) aims at the conservation of terns along the Sava and Drava rivers and the improvement of existing conservation value of Natura 2000 sites designated for terns. Several groups of activities have been designed to reach this aim, the core one being the improvement of the options for nesting of terns, as the lack of suitable nesting sites represents the main restrictive factor for maintaining the stable population. The project is concentrated on the continental population of the Common Tern along the two rivers shared between Slovenia and Croatia. Both countries have designated Natura 2000 sites for terns. They have already conducted separate monitoring of terns and took habitat management measures in the past, but without satisfactory results.

In 2017, several organisations from both countries, under the leadership of the Croatian Institute for Ornithology, gathered to prepare a project in order to improve the situation. Scientific institutions and conservation NGOs, in cooperation with relevant national and local authorities and other stakeholders, have joined forces to increase the surface of suitable habitat for nesting of terns as well as to implement needed research and transboundary monitoring according to the agreed protocol, and finally, to prepare the transboundary action plan for terns to be implemented in cooperation between two countries – all this accompanied with numerous educational and awareness-raising activities.

Linkages with NATURA 2000

The only breeding site of terns in Slovenia is on the artificial islands on the Ptuj accumulation on the Drava river, which is situated in the Natura 2000 site Drava. In Croatia, the project efforts are directed towards the Sava river where the only remaining natural nesting habitats for terns include the river gravel islands of the Natura 2000 site Sava kod Hruščice near Zagreb. Project also deals with the nesting island on the Ormož accumulation on Drava, situated in Croatian Natura 2000 site Dravske akumulacije. The Common Tern is the target feature of all three Natura 2000 sites while the Little Tern (*Sternula albifrons*) is also the target feature in the Sava site.

Normally, terns use river gravel islands as nesting sites. Today, due to the past intensive regulations of Sava and Drava rivers and their use for gravel extraction and hydropower, such habitats remained only on small river segments which are almost completely included in Natura 2000 network. Even where gravel islands still exist, the breeding is often not successful or even possible because of the high water levels during the season. So, the long-term survival of terns can be ensured only through providing additional suitable nesting sites like artificial islands or specially designed platforms on river accumulations or nearby gravelpits.

The project is concentrated exactly on this problem. It builds on several previous stand-alone activities of creating artificial islands for nesting of terns in Slovenia (the Ptuj accumulation) and Croatia (the Ormož accumulation and the Rakitje gravelpit which is outside Natura 2000 network) and uses already gained experience with problematic maintenance of these habitats due to quick overgrowing with vegetation. By applying new habitat management methods and ensuring additional nesting sites, the prospects for long-term survival of terns are improved and the relevant conservation site assessment for all three Natura 2000 sites (mentioned in respective Natura 2000 Standard Data Forms) is expected to be improved from B to A. Moreover, in cooperation with Croatian authorities, the Natura 2000 site Sava kod Hruščice is proposed to be enlarged to include additional important nesting site on Rakitje gravelpit.

Stakeholder involvement

The prime awareness-raising target group is the wider public, together with all users of the project area (concessionaires, fishermen, visitors and others) and especially the school children. Project activities aim at creating or upgrading their proper attitude towards nature conservation in general and specifically towards the conservation of terns and the need to actively manage their breeding habitats. A number of local stakeholders have voluntarily contributed to works on building or improvement of nesting sites for terns.

The knowledge of stakeholders is also being increased by means of targeted lectures, publications, ornithological camps and the film about terns. The contribution to the scientific community and to its knowledge of continental populations of terns in Europe is also significant, including the published papers with results of the project research on genetics and on the daily movements of birds from different colonies. Important stakeholders are also national and local authorities who have in both countries been included since very beginning of the project implementation and have actively contributed to preparation of transboundary monitoring protocol and transboundary action plan for terns.

Results and achievements

There are several groups of activities designed to achieve the three specific objectives of the project:

1. **Improving the conservation of breeding habitats for terns** – As it was described previously, the long-term survival of terns along the Drava and Sava rivers depends on ensuring sufficient suitable nesting sites. This need was clearly demonstrated already during the very beginning of project implementation. Due to extremely high water levels during the breeding season in 2018, terns were not able to colonise existing nesting sites on the Sava river nor on the Rakitje gravelpit. They even tried to nest on abandoned dredging machines in the area. When the new nesting platform was

built on the gravelpit Siromaja in Natura 2000 site, birds colonised it immediately. The first eggs have been observed already after five days and altogether 26 pairs bred successfully that year.

Arranging suitable nesting sites, besides building the nesting platform, includes different works and methods for improvement of existing artificial nesting islands. Artificial islands on the Ptuj accumulation in Slovenia are being repaired and raised with additional gravel materials and covered with pine chops or grass carpets to slow down overgrowing. The small nesting island on Ormož accumulation in Croatia has been enclosed with the electric fence to protect the nestlings from the otter which predated nests in previous years. The Rakitje gravelpit island has been covered with the layer of gravel over the geotextile sheet which prevents growing of vegetation. Important contribution to this objective is also preparation of the proposal to enlarge the Natura 2000 site Sava kod Hruščice in Croatia in order to include the Rakitje gravelpit as an important breeding site for terns.

2. **Determining the dynamics of the tern populations** – In order to evaluate the effect of conservation measures, the inter-boundary monitoring of the colony size and breeding success was undertaken. A prerequisite for the correct interpretation of population dynamics on colonies is understanding the population boundaries. Therefore, a number of terns from the colonies in Slovenia and Croatia have been equipped with GPS-UHF tags in order to investigate birds' daily movements, their feeding range, habitat use and connection between colonies within the project area. Genetic analysis of blood samples was used, allowing comparison among studied populations and with other European populations.

3. **Preparation of transboundary action plan for terns** – The transboundary action plan has a vital role for further work on improving nesting sites for terns and ensuring their long-term survival. Such a document, prepared with participation of all groups of stakeholders and adopted by competent authorities of both countries, is supposed to ensure the ownership and continuation of project activities and achievements.

In connection with mentioned objectives, numerous **educational and public awareness project activities** contribute to building-up the positive attitude of all stakeholders and general public towards conservation of terns and nature in general, including popular lectures, publications, scientific papers, a documentary film, information boards, an exhibition and several ornithological camps.

Integration with other initiatives

The project area is located in the Danube river basin and therefore covered with the EU Strategy for the Danube Region, namely its priority area for action 6: "to preserve biodiversity, landscapes and the quality of air and soils". The objective of the project contributes directly to one of the actions set out in the Action Plan – to "effectively manage Natura 2000 sites and other Protected Areas", which promotes the cross-border cooperation in management of Natura 2000 sites.

The project is also in synergy with two LIFE projects. In the framework of the LIFE11 project NAT/SI/000882 LIVEDRAVA "Riparian Ecosystem Restoration of the Lower Drava River in Slovenia" measures were implemented to improve the habitats of nesting and migrating waterbirds, including terns. Nesting islands which were built on the Ptuj accumulation during the LIFE project are being improved through the Interreg project.

Project LIFE14/NAT/HR 000115 “DRAVA LIFE – Integrated River Management” is aimed at improving the ecological status of the river Drava and its ecosystem through a series of river restoration activities. They include improvement of the river gravel habitats which represent natural nesting sites for terns.

Sustainability of project results

The project outcomes are designed in a way which ensures their continuity even after the project is terminated. The nesting habitats will be managed as the part of Natura 2000 network with active involvement of key stakeholders who will in future take care of individual localities. Concessionaires on gravelpits Rakitje and Siromaja (Sava), Croatian energy company HEP Group (Ormož accumulation) and Slovenian water management company DRAVA Ptuj d.o.o. (Ptuj accumulation) will carry out their activities in a way that is beneficial for terns and their habitats.

The transboundary monitoring protocol for terns was submitted to competent national authorities in both countries so they could ensure its further implementation and apply it for monitoring of terns even outside the project area. They are also expected to officially adopt the transboundary action plan for terns and ensure implementation of planned activities. The Croatian Government is expected to designate the extension of Natura 2000 site Sava kod Hruščice to include the Rakitje gravelpit. The knowledge acquired through genetic analysis and tracking the movements of terns will be published in scientific papers and relevant data available in the Movebank database, contributing to the knowledge about terns on European level.

Case study compiled by: Jasminka Radovic, Ecosystems LTD / N2K GROUP

Sources of more information

- Croatian Academy of Sciences and Arts: http://info.hazu.hr/hr/o-akademiji/jedinice/zavod_za_ornitologiju/interreg_cigra
- Association BIOM: https://www.biom.hr/vijesti/udruga-biom-partner-na-interreg-projektu-cigra/
- DOPPS – BirdLife Slovenia: http://ptice.si/cigra-2017-2020/
- Faculty of Science, University of Zagreb: https://www.pmf.unizg.hr/?@=1kg5g
- National Institute of Biology, Slovenia: http://projects.nib.si/cigra/
- Public Institution “Green Ring”: http://zeleni-prsten.hr/web/category/projekt_cigra/
- EU Strategy for the Danube Region: https://ec.europa.eu/regional_policy/en/policy/cooperation/macro-regional-strategies/danube/
- Interreg V-A Slovenia – Croatia. Approved projects: http://www.si-hr.eu/en2/projects/approved-projects-2/#toggle-id-2
- LIFE projects: http://ec.europa.eu/environment/life/project/Projects/
- Project - Preserving the population of terns in Sava and Drava basin: https://www.keep.eu/project/18256/preserving-the-population-of-terns-in-sava-and-drava-basin

Malschemuschel – Promotion of the natural environment and occurrence of Freshwater Pearl Mussels (*Margaritifera margaritifera*) in the Malše catchment area

Type of Interreg Programme: Interreg V-A Austria – Czech Republic Programme

Period of implementation: four years (January 2017 – December 2020)

Countries covered and beneficiaries: Lead beneficiary is the Ministry of Environment of the Czech Republic with partners in Czech Republic and Austria

Project budget: €1,663,826.96, EU Funding: €1,414,252.90

The monitoring of water quality for Freshwater Pearl Mussel.

Project background

Freshwater Pearl Mussel is a typical umbrella species for clean running freshwater habitats; unfortunately, it is very rare in the whole of Central Europe. Its conservation usually demands extensive alteration of current farming and forest management practices causing soil erosion, water pollution, insufficiency of small detritus (source of nourishment), and unsuitable water temperature in vast parts of river catchments.

Populations of Freshwater Pearl Mussel in South Bohemia (southern part of the Czech Republic) is the largest in Central Europe. The highest abundances of the animals are in the Blanice River catchment area and in the Vltava River catchment area in the National Park Šumava. Another area with the presence of the species, Malše River catchment area lying in both Upper Austria and South Bohemia, is suitable for the mussel too, but it has been overlooked, mainly because no natural breeding of the species has been detected for the last 30 years (Freshwater Pearl Mussels live up to 100 years so the population can exist for a long time without breeding). Moreover, the latter river is considered to be quite polluted from farming and human settlements on the Austrian territory, therefore being not very favourable for the species. However, plenty of adult animals have been found in the last years, and the importance of Malše River has since been revised upwards.

The aim of the project is to share information and enforce the same requirements for the conservation and protection of Freshwater Pearl Mussel in the entire Malše River catchment. To reach this objective, both countries will target the same stakeholder groups on both sides of the border (taking into account the specificity of particular arrangements), support the ageing mussel population, analyse its habitat, and recommend some changes in landuse practices and water management.

The project objectives are to release new young animals into the border river; analyse the reasons for long-term natural non-breeding; prepare technical materials with proposals for improving of water

quality and preventing soil erosion in the catchment to help the natural reproduction of the animals; educate stakeholders in the region; and prepare the groundwork for legislative steps to protect the species in the Malše River.

It is the very first Austrian-Czech project cooperation in this area, although there were some contacts and talks about the Freshwater Pearl Mussel conservation before, especially in relation to farming and forest management. This project should provide data for the long-term planning and groundwork for some legislative actions, and help to involve all relevant stakeholders in both the Czech Republic and Austria. It will be a baseline for more detailed projects to solve particular interconnected problems (e.g. the semi-natural revitalisation of the water course).

The Czech partners bring their 20-year-plus experience with Freshwater Pearl Mussel conservation and semi-natural breeding. The Austrian partner shows Austrian commitment to the issue, and is further specifically interested in sedimentation and erosion measures due to flood prevention. They have already taken part in a project about management of sedimentation in Mühlviertel and Bavarian Forest. Another idea behind the project is to facilitate new linkages between the Czech and Austrian organisations in favour of Freshwater Pearl Mussel conservation. Czech governmental bodies are committed to the project because of the implementation of the official rescue programme for the species.

Linkages with NATURA 2000

Freshwater Pearl Mussel is a species on Annex II of the Habitats Directive 92/43/EEC. The project directly aims at SACs CZ0314022 Horní Malše and AT3115000 Maltsch. All project outputs are in line with the valid “summary of recommended measures” (Czech Natura 2000 management plan) for the mentioned sites. As the species does not breed in these sites nowadays, increasing the number of individuals and rejuvenation of the population should help improve the population. Intensive monitoring in the entire catchment area and identification of potential hazards will lead to improvement in water habitat quality and support the species.

Stakeholder involvement

Freshwater Pearl Mussel conservation, however, is not only about the state of the water and water catchment, it is also about the attitude of stakeholders. Under the project an education programme for the key stakeholders on both sides of the border was established targeting landowners, locals, foresters, fishermen, farmers and municipality officials. Land use and management methods and decision-making procedures with a positive effect for the protection of water and soil resources as a prerequisite for successful Freshwater Pearl Mussel conservation and protection will be promoted during a series of training workshops and consultations.

Institutions and persons with decision-making powers (representatives of municipalities and regional authorities, landowners, fishermen and foresters) will also be trained in practices friendly to the species. The aim is to introduce Freshwater Pearl Mussel as an umbrella species for oligotrophic river catchments and as an indicator of sustainable land use that is of interest of many landscape managers. At the end of the project, a good practice manual will be elaborated.

A methodology for optimal fish management in Freshwater Pearl Mussel regions will be developed in cooperation with Czech and Austrian fishermen associations. There is a need for sensitive approach

Conducting a population survey of Freshwater Pearl Mussels.

to the Brown Trout management and overall fish stock composition plans for the catchment areas. Involving fishstock-managing bodies into the process of Freshwater Pearl Mussel protection and conservation can support elimination of frequent negative impacts and events caused by non-informed activities of the other users of water bodies.

Last but not least, there are activities focused on the general public and children such as commented excursions, education programme for schools, and a colouring book about the Freshwater Pearl Mussel.

Results and achievements

There are four main activities in the project – direct support of the species (in terms of increase the number of individuals and occurrence of its host), analysis of habitat, stakeholder involvement, and policy measures. It is too soon to talk about results as the project still has two years to go but already now it is clear that it is making a significant impact.

As the species has not been breeding in the area for a while, this could cause future problem from the genetic and population age-structure point of view. Czech conservationists have a vast experience with semi-natural breeding of the species and reintroduction of juveniles to original places. Since 2017, breeding in captivity of Malše River individuals has been running; altogether, there will be four breeding cycles during the project. After three months under laboratory conditions, young individuals are positioned into the river bed in safe breeding boxes. At the age of three years, grown-up individuals are released into the wild.

However, the situation of the species cannot be solely dependent on artificial release of individuals. Natural breeding also needs support. Therefore a fish management, especially regarding the Brown Trout, is crucial. The mussel's glochidias (larvae) host in the area is a Brown Trout. The larvae are not able to live on Rainbow Trout (*Oncorhynchus mykiss*) which is, however, preferred by fish managers. During the project, fish managers are being educated in this regard and an optimal fish management plan is being created and carried out.

For better understanding of the conditions in site and the choice of the right places for placement of young mussels, an analysis of biotope, food availability, water temperature and chemistry, and soil erosion is being carried out. A historical review and the first two years of monitoring have been completed; however, river catchment areas are highly dynamic and further continuation of the research is needed. This will help identify future threats and challenges.

Stability and permeability of the river bed is being evaluated too. In 2017 and 2018, the all-year-round monitoring of oxygen availability and water purity was conducted by automatic readers. Following its results, potential microhabitats suitable for mussels release were identified, and bioindication by Freshwater Pearl Mussels in 'cages' is ongoing. Based on these results, the individuals from laboratory breeding scheme will be posted at the most suitable places. This three-phase-procedure is quite innovative as usually only bioindication is used.

There will be 22 educational workshops held, and a methodology for fish management will be produced in cooperation with fishermen associations. Support of Brown Trout (*Salmo trutta*), a host of glochidias, is necessary for ensuring natural breeding of the species.

At the policy level, the project provides groundwork for legislative and management synchronisation of Freshwater Pearl Mussel protection and conservation in both countries that is necessary for meeting the European action plan for the species (adopted by the Council of Europe). Moreover, the aim is to describe negative and positive impacts of different managements, and to share information about key human activities in the area, e.g. farming and forestry, to make possible to identify critical stakeholders, events and investments. Coordinated approach to protecting oligotrophic river catchment can serve as a good practice example with or even without regard to the Freshwater Pearl Mussel.

Integration with other initiatives

There are some other projects with the same objectives:

- ETC AT-CZ (Interreg IV A): Flood control measures on the Malše River in Markt Leopoldschlag (2013 – 2016) studied erosion and sedimentation in the Malše River catchment, and planned a better management by land use and active measures. This can help both Freshwater Pearl Mussel as well as flood protection of human settlements.
- Natura 2000 implementation and management in the South Bohemia region (2009 – 2013) financed by Operational Programme Environment CZ was focused on the same sites; the Malsemuschel project is a follow-up one fulfilling the need for the population de-aging support and detailed habitat analyses.
- Water quality and suitability of the area were studied within the project 'Monitoring of chemical conditions and biomonitoring in Horní Malše catchment with focus on Freshwater Pearl Mussel´s requirements' (2015–2016) financed by EEA grants. This project helped recognise the importance of the area for the given species.

Sustainability of the project results

The necessity to protect Freshwater Pearl Mussel follows both European and Czech action plans/ rescue programmes for the species. On the Czech side, the species has the longest running rescue programme of all endangered species in that country, and the institute of "rescue programmes" is stipulated in the Nature Protection Act. There has been a 20-year-plus tradition of subsequent steps in developing action plans at the site level, followed by preparation of the necessary documents for each proposed action (e.g. semi-natural revitalisation of the watercourse) and their implementation. The legislative and stakeholder involvement groundwork done by the Malsemuschel project will be able to be used by other projects in other locations.

After the reintroduction of young Freshwater Pearl Mussels into the Malše River, at least basic monitoring of the survival of reintroduced individuals as well as of the overall nutrient and sedimentation conditions will be provided by the Nature Conservation Agency under the official rescue programme.

Until now, any plans for a potential follow-up project or procedure have not yet been considered. However, as the significant part of the project is education and communication with stakeholders, it would be very important not to disrupt the cooperation after it has been established.

Case study compiled by: Simona Polakova & Petr Roth, Daphne / N2K GROUP

Sources of more information

- Project website: https://www.at-cz.eu/cz/ibox/po-2/atcz37_malsemuschel
- European action plan for Freshwater Pearl Mussel: https://rm.coe.int/168074690e
- Czech rescue plan for Freshwater Pearl Mussel: http://www.zachranneprogramy.cz/perlorodka-ricni/zachranny-program-zp/
- Chemical monitoring and biomonitoring of Horní Malše focused on Freshwater Pearl Mussel demands. T.G. Masaryk Water Research Institute: https://heis.vuv.cz/data/webmap/datovesady/projekty/eeamargaritiferamalse2015/default.asp?lang=en&tab=1&gallery=&wmap=
- Project webpage on the KEEP.EU database: https://www.keep.eu/project/18401/promotion-of-the-natural-environment-and-occurrence-of-freshwater-pearl-mussels-margaritifera-margaritifera-in-the-mal%C5%A1e-catchment-area

3Lynx – Population-based (transnational) monitoring, management and stakeholder involvement for the Eurasian Lynx (*Lynx lynx*) affecting three Lynx populations in the Central Europe Area

Type of Interreg Programme: Interreg Central Europe Programme

Period of implementation: Three years (July 2017 to June 2020)

Countries covered and beneficiaries: Leading partner: Ministry of Environment of the Czech Republic. Partners In Czech Republic, Germany, Austria, Italy, Croatia

Project budget: €2,318,783.94, EU Funding: €1,910,296.38

A young Eurasian Lynx.

Project background

The 3Lynx focuses on three Lynx populations with three common features – they are small and transnational; all of them have already gone extinct once; and all have been reintroduced through a few animals originating from Slovakia (and other Carpathian regions). Today, the BBA population (Bohemia [part of the Czech Republic] – Bavaria – Austria) is the biggest of these three, comprising of around 100 independent animals. The Dinaric (Slovenia – Croatia) population reached 300 adults during the '80s but then, hunting was allowed for a decade, and nowadays, there are around 20 animals left in this region. The South-Eastern Alpine "population" is dependent on migration from the Central Alps or the Dinaric region and because of the bad situation in both of them, there are only two animals left, which is not a viable population.

The idea behind the 3Lynx project is based on sharing expertise and information about Lynx monitoring and conservation and getting other stakeholders involved in Lynx conservation. The BBA population has a verified, long-running Lynx monitoring scheme based mainly on camera traps, and experts from the region are practiced in Lynx capturing and GPS tracking. These experiences will be transferred to Slovenia, Croatia and Italy as these countries are planning to establish their own extensive monitoring schemes during the 3Lynx project (in Croatia, this is not funded by the 3Lynx project).

In Croatia, because of the fast expansion followed by a sudden drop of the Dinaric population due to hunting, genetic issues have started to arise there. Thus, in the BBA population, a comprehensive genetic analysis will be carried out and compared to that of Dinaric population to help predict the future development of the former. As there is much more long-term information about the BBA population available, a Lynx conservation strategy based on the IUCN methodology will be prepared only for this one while the other partners will acquire a cognisance about the process to work out the Slovenian-Croatian strategy later on. For the status report – an important part of the strategy – data from 2018 monitoring is necessary. All partners work hard on cooperation with other in-country important stakeholders – hunters, foresters and landowners – to protect and conserve Lynx and ensure its monitoring.

Overall, the outputs of the project should be two action plans for Lynx monitoring (BBA, Dinaric + South-Eastern Alps populations) and operational monitoring schemes, a Lynx conservation strategy and a memorandum of understanding about the implementation of that strategy among the governments of the BBA population, as well as 10 training schemes for different stakeholder groups (e.g. Lynx tracking, forensic analyses of dead Lynx, general information about Lynx biology and legislative protection for hunters, foresters and public).

This project is a follow-up of the Translynx project (Interreg CZ - Bavaria, 2013–2015). The basic team of the 3Lynx project (Ministry of the Environment of the Czech Republic, Nature Conservation Agency of the Czech Republic, NGO Alka Wildlife (LP), Bavarian Environmental Agency, NGO WWF DE) was already established during that project. In the 3Lynx, Austrian partners were invited as an indivisible part of the BBA region, and cooperation was expanded throughout the whole Central Europe.

Linkages with NATURA 2000

The whole project is focused on Eurasian Lynx, listed in Annex II of the Habitats Directive 92/43/EEC. It covers numerous Natura 2000 sites with Lynx as subject of designation. However, not all Natura 2000 sites are covered as the monitoring scheme requires only two monitoring sites per grid. Among monitored sites belong Šumava (SiteCode: CZ0314024), Boletice (SiteCode: CZ0314123), Blanský les (SiteCode: CZ0314124), Čerchovský les (SiteCode: CZ0320180), Böhmerwald und Mühltäler (SiteCode: AT3121000), Waldviertler Teich-, Heide- und Moorlandschaft (SiteCode: AT1201A00), Nationalpark Bayerischer Wald (DE6946301), Krimsko hribovje - Menišija (SiteCode: SI3000256), Javorniki - Snežnik (SiteCode: SI3000231), Trnovski gozd - Nanos (SiteCode: SI3000255), Kočevsko (SiteCode: SI3000263) and Gorjanci - Radoha (SiteCode: SI3000267). Also the list can change depending on where the best places for Lynx monitoring are.

The project is focused on the monitoring of Lynx that will help with reporting under Article 17 of the Habitats Directive and on preparation of Lynx conservation strategy for the BBA population that will be implemented by the three involved countries. The objective of the conservation strategy is to achieve favourable conservation status of the BBA population through international cooperation, active support of Lynx population, and cooperation with stakeholders.

Stakeholder involvement

The main stakeholders are hunters, foresters and landowners. There are a few ways how to involve them in the Lynx issues:

- Monitoring – during this project, cooperation on Lynx monitoring mainly with foresters on the lower management level as well as landowners has been established in all five countries. Camera trap positions are consulted with them, and during these meetings, other Lynx issues can be discussed too. The data from camera traps is shared with them. In turn, they inform researchers about their own Lynx observations.
- Information events – at least once a year, there is a series of meetings with foresters and hunters held in the monitoring areas where the results of monitoring, Lynx biology and legislative issues are discussed.
- Round-tables about Lynx conservation strategy in the BBA region are organised for foresters and hunters at the middle and high management levels as well as landowners to discuss the strategy

and management measures. Governmental bodies (e.g. the Ministry of Agriculture of the Czech Republic) are involved too.

Then, there are also secondary stakeholders groups:

- Veterinary surgeons and police – there is a training scheme for conducting a forensic search of dead Lynx.
- Public – the project established an international Lynx day on 11 June to use the opportunity to inform the public about the Lynx.

Results and achievements

Lynx monitoring

There are three monitoring regions – BBA, Dinaric and South-Eastern Alps. Till March 2018, a handbook for Lynx monitoring was prepared and based on it, two action plans (BBA, Dinaric + South Eastern Alps) were elaborated and signed by all partners involved in monitoring. Since January 2018, the implementation of the action plans has been running, planned at least by June 2020 (end of the project). One hundred and thirty-five grid cells in the BBA and 21 in the Dinaric + South-Eastern Alps regions are mapped under 3Lynx project. In the BBA, genetic sampling is running each winter. A Lynx monitoring database for sharing and analysing data internationally was created in 2018. It is specifically designed for the Lynx data gathering.

Lynx conservation strategy

A transnational conservation strategy for the BBA region is under preparation based on the "Cat conservation compendium – a practical guideline for strategic and project planning in cat conservation"

Discussing Lynx monitoring with stakeholders in the field.

by the IUCN. The work on it started in the second half of 2018, to be finished in the first half of 2020. Part of the process includes round tables with stakeholders about the concept of the strategy.

Important technical assistance for the strategy is granted by common working and data exchange routines for Lynx conservation and database of supporting data for a long-lasting transnational cooperation in Lynx monitoring, to be prepared by June 2020. A memorandum of understanding about the strategy will be signed among the Ministry of Environment of the Czech Republic, the Government of Upper Austria and the Bavarian State Government in May or June 2020, and a road map towards wide acceptance and implementation of the strategy will be prepared, too.

Communication with stakeholders

By mid-2018, face-to-face meetings with foresters and landowners in all Lynx monitoring sites were arranged where the importance of Lynx monitoring and conservation was explained and discussed. This is a way how to involve landscape managers other than conservationists to the monitoring and, indirectly, to the conservation of Lynx. A series of regional information events on the results of Lynx monitoring is running during the whole project. During international stakeholder visits, hunters, foresters, landowners and researchers from each country can meet and discuss Lynx and large carnivores' issues with the stakeholders from all other participating countries.

Ten training schemes for stakeholders are running during 2019. Majority of them are directed towards the main stakeholder groups – foresters, hunters and landowners. The schemes are focused on Lynx biology, legislative issues, and tracking, and are differentiated for hunters and foresters if it is needed in given country. Then, there are four specific training schemes: one for veterinary surgeons about a forensic search of dead Lynx, one for journalists, one for teachers, and one for school children. They run in different countries with respect to local conditions.

Integration with other initiatives

- LIFE Lynx LIFE16 NAT/SI/000634 (2017–2024) – the objective of this project is to improve situation of the Dinaric and South East Alps Lynx populations by active measures such as reintroduction, stakeholder cooperation, and improvement of population connectivity. The linkage to the 3Lynx project is in Lynx monitoring and transfer of the scientific information into management plans and other strategic documents.
- LIFE EuroLargeCarnivores (2017–2022) – the objective of this project is to improve the coexistence between humans and large carnivores in Europe. It uses communication with stakeholders, cross-border cooperation and knowledge exchange as tools to help improve the public acceptance of Lynx, wolf, bear and wolverine. The linkage to the 3Lynx project is in communication with stakeholders and sharing good practice examples.
- Lynx conservation and management plan in the Czech Republic – a new conservation and management plan for Lynx is under preparation in the Czech Republic. It will be the first implementation document following from the envisaged strategy. Then, the Bavarian Environmental Agency is planning to adjust their Lynx management plan according to the strategy, too.

Sustainability of the project results

A road map of the next steps towards wide acceptance and implementation of the strategy is planned as one of the outputs. There is a plan for follow-up projects to ensure the implementation of the

strategy. Through the Memorandum of Understanding, there should be a governmental guarantee for at least a basic monitoring effort in each country, and taking the Lynx conservation strategy into consideration in legislative and governmental documents. One of the documents is the conservation and management plan for Lynx in the Czech Republic, another one revision of management plan for Lynx in Bavaria.

In Slovenia and Croatia, Lynx is the rarest of their large carnivore species and a lot of effort is focused on its protection. The project LIFE Lynx is running in parallel with the 3Lynx over there. Its time frame will allow to implement some of the outputs of the 3Lynx project.

In Italy, the population of Lynx is not viable. It fully depends on the situation in the Dinaric region, therefore the Italian Lynx Project (PLI) is keen to cooperate and learn from the results of the 3Lynx project. PLI is involved in the LIFE Lynx, too.

Case study compiled by: Simona Polakova and Petr Roth, Daphne / N2K GROUP

Sources of more information

- **Project webpage: https://www.interreg-central.eu/Content.Node/3Lynx.html**
- **Project webpage on the KEEP.EU database: https://www.keep.eu/project/18422/population-based-transnational-monitoring-management-and-stakeholder-involvement-for-the-eurasian-Lynx-affecting-3-lynx-populations-in-the-central-europe-area**
- **LIFE Lynx: Preventing the Extinction of the Dinaric-SE Alpine Lynx Population Through Reinforcement and Long-term Conservation project webpage: https://www.lifelynx.eu/**
- **LIFE EURO Large Carnivores project webpage: https://www.eurolargecarnivores.eu**

Grenzenlos Moor – Grenzeloos Veen

Name of the Interreg Programme: 2014–2020 Interreg V-A Germany – The Netherlands

Period of implementation: Three years (June 2015–September 2018)

Countries covered and beneficiaries: Germany and The Netherlands. Lead partner International Nature Park Bourtanger Moor-Bargerveen e.V. (DE) which works together with 10 partners on both sides of the border:

Project budget: €6.57 million, EU funding: €3.29 million

Grenzeloos Veen restoration works buffer zone.

Project background

The project area is located on the north-eastern border between Germany and the Netherlands, in the Dutch Province of Drenthe and the German districts of Emsland and Grafschaft Bentheim (both in the state of Lower Saxony). The area has relics of what was once the largest raised bog in central Europe, the well-over 200,000 ha large Bourtanger Moor, which over a period of six centuries was almost entirely destroyed by peat extraction.

In 1968, the Dutch State Forest Service acquired 70 hectares of the area for nature conservation, starting a long-term challenge of reconciling conservation of the last remaining active bogs (a protected habitat under the Habitats Directive) with ongoing drainage for peat extraction in the site and agriculture around the site. After peat extraction stopped in 1997 on the Dutch side of the border[17] more significant measures were taken to prevent water seepage from the bog to the surrounding farmland, which in some places was 4 m lower than the bog. Also, on the German side of the border similar measures have been taken since the 1980s.

The restoration of the bogs and cessation of industrial activities also increased opportunities for tourism and recreation. In June 2006 the German and Dutch regional governments, together with four municipal governments founded the International Nature Park Bourtanger Moor-Bargerveen (140 km^2) run from the Emsland tourism office in Meppen (DE). The initiative to work cross-border initially came from the German partners, as in order to be a legally recognised nature park under German law, a minimum share had to be designated as a nature protection site. For this reason, more than 2000 ha of the Dutch Bargerveen site was included in the scope of the park. Between 2009 and 2013, the implementation of the measures defined by the Park's plan was supported through Interreg[18], which built much of the groundwork for the follow-up Grenzenlos Moor project.

17 Peat extraction on the German side of the border continues until today in some of the sites, mainly for potting earth.

18 Project Nachhaltige Entwicklung von Natur und Landschaft im Internationalen Naturpark Bourtanger Moor- Bargerveen (NPE - II-3-01=108), https://www.keep.eu/project/14350/nachhaltige-entwicklung-von-natur-und-landschaft-im-internationalen-naturpark-bourtanger-moor-bargerveen

Within the regional sustainable development strategy, the Interreg project worked towards three interconnected objectives of making space for: 1) nature; 2) experience; and 3) living and doing business.

This involved seven concrete sub-projects:

- the (further) development of a buffer zone around the Bargerveen site;
- construction of a sheepfold in the Bargerveen site;
- improvement of the drainage system in the German municipality of Twist;
- research into the possibilities for increased paludiculture[19] in the park;
- improvement of the availability of visitor information through decentralisation of facilities to a number of entrances to the park or 'bog gates' (DE: 'Moorpforten');
- development of a more uniform cross-border network of recreational trails; and
- improvement of accessibility to the Bargerveen from the five municipalities in and around the park.

Linkages with NATURA 2000

The wider International Nature Park (INP) includes 10 protected nature sites, of which the 2500 ha Dutch *Bargerveen* SAC & SPA (NL2000002) and the 2700 ha Dalum-Wietmarscher Moor und Georgsdorfer Moor SPA (DE3408401) are designated under the Natura 2000 network.

The Bargerveen is the largest remaining raised bog in the Netherlands and while it still has a tiny fraction of active raised bog (1 ha or 0.5%, but growing), the largest part of the site exists of degraded raised bog still capable of regeneration (1447 ha, or 69%). The site also hosts 29 ha (1.4%) of rare species-rich Nardus grassland (6230 habitat type) developed on peatland through long periods of light drainage and extensive agricultural management. In places of the site where peat was removed close to the mineral soil, large lakes were created, in particular since restoration of traditional water table started in the 1970s.

Today the Bargerveen is a varied but mostly rather open site rich in water and insects, and hosts 300 species of birds, 40 species of dragonflies, 30 species of butterflies and 900 species of night butterflies. This includes 120 species of breeding birds, such as the Red-backed Shrike (*Lanius collurio*) and Black-necked Grebe (*Podiceps nigricollis*). The site is also important for wintering water birds such as the Bean Goose (*Anser fabalis*) and Bewick's Swan (*Cygnus columbianus*)[20].

The Dalum-Wietmarscher Moor und Georgsdorfer Moor was traditionally was part of the same Bourtanger Moor, and has similar habitats and species as the Bargerveen. However recent peat extraction and more intensive sheep grazing have maintained a more open landscape, favouring bird species dependent on more open habitats such as Little Ringed Plover (*Charadrius dubius*), Eurasian Curlew (*Numenius arquata*), Redshank (*Tringa tetanus*), Northern Wheatear (*Oenanthe oenanthe*) and even the European Golden Plover (*Pluvialis apricaria*), a rare breeding bird in this part of Europe[21].

19 Paludiculture is wet agriculture and forestry on peatlands. Paludiculture combines the reduction of greenhouse gas emissions from drained peatlands through rewetting with continued land use and biomass production under wet conditions.

20 Ministerie van Landbouw, natuur en Voedselkwaliteit, Natura 2000 gebieden: Bargerveen, https://www.synbiosys.alterra.nl/natura2000/gebiedendatabase.aspx?subj=n2k&groep=2&id=n2k33&topic=introductie

21 Niedersächsische Landesbetrieb für Wasserwirtschaft, Küsten- und Naturschutz (NLWKN), EU-Vogelschutzgebiet V13 Dalum-Wietmarscher Moor und Georgsdorfer Moor, https://www.nlwkn.niedersachsen.de/naturschutz/natura_2000/euvogelschutzrichtlinie_und_gebiete/euvogelschutzgebiete_niedersachsen/eu-vogelschutzgebiet-v13-dalum-wietmarscher-moor-und-georgsdorfer-moor-132559.html

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Naturpark Moor-Veenland.

Water scarcity and nutrient pollution are the two most urgent pressures facing the Bargerveen. The management plan of the Bargerveen identifies the following short term conservation priorities: 1) Further development of buffer areas for water retention to avoid leakage and restore favourable conditions for restoration of active bogs (by the province of Drenthe); 2) make better agreements on water retention (Water Board Vechtstromen); 3) finding a suitable location for a planned windmill park (in the municipality of Emmen); and 4) Better permitting to reduce nitrogen pollution (ammonia) from surrounding livestock farms (by the Province of Drenthe)[22].

The Grenzenlos Moor – Grenzeloos Veen project contributed to the objectives of the Bargerveen management plan in various ways. Most critically, by directly supporting the further development of buffer zones, stimulating agricultural management on higher water tables and establishing water management plans to improve the hydrological situation. Secondly, the building of the sheepfold made it possible to reduce manure loads from cattle to the bog area. Lastly, and importantly, the project further increased the positive impact of growing tourism, which is recognised in the Natura 2000 management plan.

Stakeholder involvement

Stakeholder engagement was a critical part of the project and took place throughout all the sub-activities in the project. Under the previous Interreg IV project working relationships had already been established, and under this Interreg project many key stakeholders were already part of the project team.

The most critical external stakeholders to the Interreg project were inhabitants and businesses on the location where the buffer zone was created. To facilitate the development of three buffer zones around the Bargerveen, of which one was funded through the Interreg project, the Province of Drenthe in 2013 launched a dedicated implementation project[23]. This project included eight participating organisations

22 Executive Agency of the Twelve Dutch provinces (BIJ12), Natura 2000 beheerplannen: 33.Bargerveen, https://www.bij12.nl/onderwerpen/natuur-en-landschap/natura-2000-beheerplannen/33-bargerveen/

23 https://bargerveen-schoonebeek.nl/

four of which were also partners in the Interreg project (Province of Drenthe, State Forestry Service, Municipality of Emmen, and the Nature Park) as well as the Land Registry, the farming union (LTO), the Water Board (Vechtstromen) and the project team of the northern Interreg-funded buffer zone.

A dedicated project governance board was appointed which included representatives of all key stakeholders. Secondly, a formal consultative body was set up between the management board and the three surrounding villages. Thirdly, at key project milestones, information meetings were organised. Fourthly, a dedicated communication team was set with advisers from the consultant implementing the project (Prolander), the State Forestry Service as site manager, the Provincial and Municipal administration, the Nature Park and the Water Board. This team met regularly to monitor developments and maintain open channels with stakeholders, which included a digital subscription newsletter (five–six/year) and an annual newspaper distributed widely in the region.

Lastly, an aftercare committee was appointed to continue stakeholder management once the large project works are finished. Both the overarching buffer zone project as well as the northern buffer project had dedicated a website on which progress was regularly shared.

Results and achievements

The project has been very successful and all its seven key objectives were met. From a Natura 2000 conservation objectives' perspective, the finalisation of the northern buffer zone in Autumn 2018 was probably the most remarkable achievement, as it directly and significantly reduced groundwater seepage from the site. This directly reduced one of the site's principal threats. In addition, the buffer zone increased the environmental quality around the site, which has important indirect conservation benefits for example as an alternative roosting area for wintering bird species and feeding area for breeding species.

The second biggest achievement was the finalisation of the sheepfold, which was opened by the Dutch King in September 2018 and significantly reduced two other related pressures on the site, namely natural succession and unnaturally high nutrient loads. By collecting manure at night, a significant share of nutrients can be taken from the site, thereby counteracting the impact of airborne ammonia pollution from nearby livestock farming. Not only is the new sheepfold significantly larger than the previous one which allows a larger heard, it is also located in a more central location at the site. This enables an adequate grazing management throughout the site, where before this was often insufficient to combat natural succession. Another indirect benefit of the sheepfold is to protect the flock from wolves, which have recently returned to the area after more than a century of absence.

Thirdly, the project made great strides to improve visitor accessibility and interpretation facilities. For the former, the project funded an international network of bicycling paths through the site, the acquisition of a two-story covered vehicle to tour visitors, and the upgrading of several visitor centres on both sides of the border including in combination with the new sheepfold and a bilingual bee-museum. For the latter, partnerships were built with local recreation enterprises to encourage both visitor education and local jobs

Visitor facilities.

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and growth simultaneously. Together with the research on the opportunities of paludiculture in the different buffer zones, the project made an important contribution to local socio-economic growth and in doing so also improved long-term support for continued conservation.

Lastly, and importantly, the project has greatly supported the deepening of the working relationship between key stakeholders on both sides of the border, an important precondition for long-term conservation success.

Integration with other initiatives

The project cut across a number of larger and smaller programmes and projects in the fields of sustainable regional development, spatial planning, tourism development – the most important of which are:

- ***Regional spatial planning, development and nature policy frameworks:*** Both the Province of Drenthe and the regional development office Weser-Ems of the State of Niedersachsen have set out long term development and spatial strategies to focus and guide development along. These strategies are further developed in sub-regional (in case of DE) and municipal planning (for both countries) frameworks. In the latter, the development of the peatland area, both in terms of carbon storage, nature and hydrology as well as finding alternative sources of income post-peat extraction are important operational goals. Improving the attractiveness of landscapes, while improving income and employment opportunities in rural areas, in particular around Natura 2000 areas is also a specific objective[24]. The environmental vision of the Province of Drenthe specifically aimed at improving hydrological conditions in desiccated nature areas including the Bargerveen SAC. The latter was partially driven by EU WFD commitments.
- ***Regional rural development policies, including LEADER programmes 'Moor ohne Grenzen'*** **(DE)**[25] **and *'Zuidoost Drenthe'* (NL)**[26]**:** On both sides of the border a local action group is implementing a local development strategy in the framework of the LEADER programme. In the German strategy, the protection and development of the area as a natural attraction plays a central role. Both strategies strongly aim at further developing the tourism sector, among other things, by providing more benefit from local agriculture through both marketing of local produce and diversifying economic activities on farms.
- ***The Dutch National Nature Network (NNN) and Programmatic Approach to Nitrogen (PAN):*** The Bargerveen is, as all other Natura 2000 sites, part of the Dutch NNN at the core of Dutch nature policy. As such, the measures in the project also contributed to the achievement of the NNN. The Bargerveen is one of the 118 Dutch Natura 2000 sites included in the PAN[27] which combines active reduction of excess nitrogen in Natura 2000 sites with increased control of emissions at source near these sites. As part of the programme, dedicated restoration strategies are developed including for Bargerveen.

24 Amt für regionale Landesentwicklung Weser-Ems, Regionale Handlungsstrategie Weser-Ems 2014–2020, https://www.arl-we.niedersachsen.de/regionale_handlungsstrategie/regionale-handlungsstrategien-125615.html
25 https://www.moor-ohne-grenzen.de/
26 https://netwerkplatteland.nl/kamer/leader-zuidoost-drenthe
27 Ministerie van Landbouw, Natuur en Voedselkwaliteit, Programma Aanpak Stikstof, https://www.synbiosys.alterra.nl/natura2000/gebiedendatabase.aspx?subj=pas&deel=0

Sustainability of project results

Further improving hydrological conditions for active peat bog restoration remains a priority and the development of similar buffer zones is still ongoing under other projects. However even with these buffers on the borders of the remaining bog areas, the low water levels and corresponding agricultural and –water management in the wider vicinity are still causing drainage not only in the Bargerveen but also in surrounding bog sites on the German side of the border.

The Interreg project developed a helpful knowledge base to improve the drainage system in the German municipality of Twist and possibilities for increased paludiculture in the wider park. However, in both cases an important challenge remains to bring the findings into implementation. Rural development could play an important role in this for example through non-productive investments for the hydrological measures as well as agri-environment schemes for paludiculture.

The active LEADER groups *Moor ohne Grenzen* and *Zuid-Oost Drenthe* could play an important role in both stimulating such measures, as well as projects to consolidate and capitalise on the improved cross-border tourism- and recreational opportunities realised under the Interreg project. The resubmission for a follow-up Interreg project proposal is under consideration too.

Case study compiled by: Erik Gerritsen, IEEP

Sources of more information

- Provincie Drenthe 2017. Beheerplan Bargerveen, Uniek en grenzeloos hoogveen: https://www.bij12.nl/wp-content/uploads/NW17022303-BP-N2000-Bargerveen-en-bijlagen.pdf
- Natu(u)rpark Moor-Veenland 2018. Factsheet Interreg V A – project "Grenzeloos Veen": https://edr.eu/wp-content/uploads/2018/05/Grenzeloos-veen.pdf
- Provincie Drenthe 2017. PAS-Gebiedsanalyse Natura 2000-gebied Bargerveen (033): https://www.synbiosys.alterra.nl/natura2000/gebiedendatabase.aspx?subj=n2k&groep=3&id=n2k33
- Website Natu(ur)park Moor-Veenland: https://nl.naturpark-moor.eu/
- Website of the Dutch State Forest Service on the Veenland park and Bargerveen: https://www.staatsbosbeheer.nl/Natuurgebieden/veenland
- Dutch Ministry of Agriculture, Nature and Food Quality Natura 2000 webpage on the Bargerveen SAC: https://www.synbiosys.alterra.nl/natura2000/gebiedendatabase.aspx?subj=n2k&groep=2&id=n2k33&topic=introductie
- Province of Drenthe Natura 2000 webpage on the Bargerveen: https://www.provincie.drenthe.nl/onderwerpen/natuur-milieu/natuur/natura-2000/onze-kroonjuwelen/bargerveen/
- Lower-Saxony State Ministry for Water Management, Coastal- and Nature Conservation (NLWKN) Natura 2000 webpage on the Dalum-Wietmarscher- und Georgsdorfer Moor SPA: https://www.nlwkn.niedersachsen.de/naturschutz/natura_2000/euvogelschutzrichtlinie_und_gebiete/euvogelschutzgebiete_niedersachsen/eu-vogelschutzgebiet-v13-dalum-wietmarscher-moor-und-georgsdorfer-moor-132559.html
- EEA EUNIS webpage on the Dalum-Wietmarscher Moor und Georgsdorfer Moor: https://eunis.eea.europa.eu/sites/DE3408401 and Standard Data Form on website NLWKN: https://www.nlwkn.niedersachsen.de/naturschutz/natura_2000/downloads_zu_natura_2000/downloads-zu-natura-2000-46104.html#volstDat-VS

- KEEP.EU database page project *Grenzenlos Moor - Grenzeloos veen*: https://www.keep.eu/project/17649/grenzenlos-moor-grenzeloos-veen
- KEEP.EU database page project *Nachhaltige Entwicklung von Natur und Landschaft im Internationalen Naturpark Bourtanger Moor- Bargerveen* (NPE - II-3-01=108): https://www.keep.eu/project/14350/nachhaltige-entwicklung-von-natur-und-landschaft-im-internationalen-naturpark-bourtanger-moor-bargerveen
- LEADER webpage *Moor ohne Grenzen*: https://www.moor-ohne-grenzen.de/
- LEADER webpage *Zuidoost-Drenthe*: https://www.leaderzuidoostdrenthe.nl/
- Project website with information on buffer zones around the Bargerveen: https://bargerveen-schoonebeek.nl/
- Van den Brink H., Pot A., Strating F. And De Vries, J., 2018. *Bargerveen, Grenzeloos Groeiend*: https://www.kleineuil.nl/uit-de-regio/bargerveen-grenzeloos-groeiend-details
- Personal communication: Ms I. Groenke, Project Manager International Nature Park Bourtanger Moor – Bargerveen, Landkreis Emsland, Lower Saxony, Germany.

Vogelwarte Madárvárta – cross-border cooperation in the Hungarian-Austrian sites of Lake Fertő and the Hanság

Name of the Interreg projects: Project 1: Building and expanding the bird watching infrastructure in the Hungarian-Austrian sites of Lake Fertő and the Hanság

Project 2: Vogelwarte Madárvárta 2 – Cross-border coordination of ecological monitoring activities in the NATURA 2000 areas of Lake Neusiedler and Hanság

Type of Interreg Programme: Vogelwarte Madárvárta – Territorial Co-operation, Operational Programme Austria-Hungary 2007–2013; Vogelwarte Madárvárta 2 – 2014–2020 Interreg V-A Austria-Hungary

Period of implementation: 2013–2015; 2016–2020

Countries covered and beneficiaries: Austria, Hungary; 1st project lead partner: Biologische Station Neusiedler See, with partners. 2nd project lead partner: Fertő-Hanság (HU) National Park, with partners

Project budget: Project 1: €699,495, EU contribution: €594,571; Project 2: €2,227,905.4, EU contribution: €1,893,719.59

*Grey Heron (*Ardea cinerea*), Neusiedler See lake, Austria.*

Project background

The area occupied by the Neusiedler See–Seewinkel (AT) and the Fertő-Hanság (HU) national parks are important Natura 2000 sites because of the significant number of migratory birds they harbour. Because the lakes lie on the border between two countries, practices have varied as regards ecotourism, bird monitoring and site management. In order to effectively manage the natural sites and habitats of the lake, cross-border cooperation is essential, especially in carrying out joint research, analysing relevant data and establishing common monitoring and management protocols.

To achieve this, the two national parks firstly co-implemented the Vogelwarte Madárvárta project, which based on its success, was followed by Vogelwarte Madárvárta 2. Within Vogelwarte Madárvárta the objective was to achieve cross-border harmonisation in the Fertő-Hanság region's two national parks. The outcomes of the project had been adopted and implemented by both national parks, which resulted in more efficient and cross-border management of natural resources. Due to lack of institutional background of the two national parks, their cooperation in ecological monitoring was limited.

As a result, Vogelwarte Madárvárta 2 project was compiled in a way that it would aid the coordination of conservation activities (mainly monitoring) in both the Austrian and Hungarian parts through a uniform methodology and joint implementation. During the project preparation, the two national parks presented and discussed their actual conservation monitoring protocols and programs and based on it, agreed on common target species and habitats, which to provide the focus of the following Vogelwarte Madárvárta 2 project.

The hereby established joint research project includes bird monitoring, botanical and faunal mapping and studies of other target species and habitats as well as limnological and hydrobiological research activities of the Lake Fertő and Hanság areas. In addition, habitat restoration activities and cross-border infrastructure development of the birdwatching establishments have been planned to minimise the disruptive effect of visitors to the breeding grounds and nesting sites.

The additional aim of the partners is to demonstrate the outcomes of the research as wide as possible involving not only experts, but the general public as well. Therefore, awareness raising activities are an important pillar of the project (for example, bat nights, butterfly nights for the locals or common data collection with volunteers), which allow the active involvement of the residents. To show best practice mostly for an expert audience, cross-border conferences are also organised. Coordinated mappings, monitoring programs and habitat restoration projects will provide a good basis for the cross-border management of the areas' Natura 2000 sites contributing to stabilise and improve the protected species and habitats conservation status.

Linkages with NATURA 2000

Within the first project, data on more than 350 bird species were collected and published in an ornithological publication booklet, at ornitho.at (which provides opportunities for both professional and amateur bird watchers to publish observation data on bird species) and at parcs.at thus contributing to the understanding of the area's bird species, populations and migration.

During the preparation of Vogelwarte Madárvárta 2, the partners' experts exchanged their ongoing nature conservation and monitoring programs, and jointly identified the target species and habitats they would like to examine in a coordinated manner. In addition to the wetlands bird monitoring, the joint research work was undertaken for other protected target species and habitats, as well as for limnological and hydrobiological research of the Fertő landscape and Hanság. In addition, there are smaller habitat rehabilitation measures and cross-border expansion of bird-watching infrastructure, which has been designed to minimise the disruptive impact of visitors on nesting sites.

In addition to monitoring activities, recent habitats mapping of the area has been carried out in Fertő hills, where for instance 13 ha of 6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia), 2.4 ha 6240 Sub-pannonic steppic grasslands, 506.1 ha of 91H0 Pannonian woods with *Quercus pubescens*, 73.4 ha of 91M0 Pannonian-Balkanic turkey oak-sessile oak forests, 387.3 ha of 91G0 Pannonic woods with *Quercus petraea* and *Carpinus betulus* have been identified with numerous other Natura 2000 habitats in mostly favourable conservation status (80.5% of the habitats were classified as such).

Stakeholder involvement

The main stakeholders of the Vogelwarte Madárvárta and Vogelwarte Madárvárta 2 projects are the two national parks staff, especially their bird monitoring and restoration experts as well as the staff of the research stations. The specific cross-border monitoring programmes based on unified methodology, thorough consultation and joint implementation, which could serve as a best practice not only in Austria and Hungary, but in the whole of Europe.

Reed Belt Landscape in National Park Lake Neusiedl / Seewinkel on Austro-Hungarian Border.

Also, within the monitoring of the bird species and data collection, many volunteers, local residents and amateur bird watchers participate directly, e.g. by taking part in e.g. ringing of *Anser anser* or using the renewed 18 birdwatching spots for data collection.

The project also targets the general audience. For instance, Vogelwarte Madárvárta compiled a booklet on the region's bird fauna targeting visitors, whereas Vogelwarte Madárvárta 2 showed the first results of the bird ringing for the general audience during the Researcher Day in October 2018 in the Biology Station Neusiedler See. About the bird ringing a short, entertaining video is also available: https://youtu.be/XHInUUemp1s.

Results and achievements

Vogelwarte – Madárvárta had numerous outcomes, namely:

- Assessment of the economic and scientific potential related to bird watching and monitoring, and as a result, improved cross-border ecotourism activities and joint monitoring activities.
- Development of new bird watching sites and infrastructure and renovation of old ones in Austria and Hungary.
- Compilation and publication of a brochure in German and Hungarian languages about the local bird fauna.
- Organising and conducting two joint ornithological training courses with auxiliary materials.
- Creation of a cross-border regional website-based bird database, which is open for contribution for amateur bird watchers too.
- Creation of a user-friendly ornithological database populated with data of Austrian-Hungarian bird species and populations.

- Reconstruction of bird ringing and ornithological research stations and construction and renovation of the Neusiedler See – Seewinkel Biological Research Station and the Fertő-Hanság National Park Esterházy building.
- Purchase a research boat for research in reeds areas.

The project also resulted in the increased cooperation of the two national parks, best practice, increased data quantity and quality as well as availability, improved capacities in research, monitoring and communication, enhances stakeholder involvement (especially among local residents) and awareness raising.

Vogelwarte Madárvárta 2 had similar results including:

- joint monitoring protocols, and based on it, common management measures;
- habitat mapping and surveying of target species and habitats (including ringing of 80 Greylag Geese (*Anser anser*) in 2017, 200 Greylag Geese in 2018, where 16 birds received GPS transmitters, hence their migration routes are easily detectable and measurable);
- restoration pilot projects mostly on breeding and nesting sites affected by human activities;
- awareness-raising activities and increased citizens science due to increased residents' involvement in bird monitoring (e.g. thematical awareness raising events where participants can learn more about the specific animal groups, or directly participate for instance, in bird-ringing activities); and
- enhanced best practice sharing through international scientific meetings and public events.

It is expected from the project that it did not only contribute to improved cross-border monitoring protocols and information on the protected species and habitats, but the results may also be integrated to the Natura 2000 management plans.

Integration with other initiatives

Vogelwarte Madárvárta 2 is based on the project of Vogelwarte Madárvárta. Due to the projects, both national parks adapted their institutional frameworks in order to enable the cross-border information exchange, data collections and potential management measures. Their results are expected to feed into the Natura 2000 management and maintenance plans of both national parks and provide best practice for cross-border cooperation, monitoring protocols and habitat mappings. The related research can also contribute to further scientific information for the management of similar sites and species EU-wide. Being also a Ramsar site, such best practice can also deliver lessons learnt to other international biodiversity policy and site management practice besides Natura 2000.

Sustainability of project results

To continue to maintain the project results and achievements, continuous funding of the national parks must be ensured both for monitoring and for management of the sites. Due to the fact both national parks have annual budgets, key outcomes of the project can be continued to be maintained and certain practices can continue to be carried out, but these are very limited compared to LIFE or Interreg funded projects.

Case study compiled by: Agnes Zolyomi, Daphne / N2K GROUP

Sources of more information

- Interreg Austria – Hungary 2014–2020. Vogelwarte Madárvárta 2 project description (HUN): http://www.interreg-athu.eu/hu/vogelwartemadarvarta2/a-projektrol/a-projekt-tartalma/
- Fertő-Hanság National Park. Vogelwarte Madárvárta project description (HUN): https://www.ferto-hansag.hu/hu/vogelwarte-madarvarta-neusiedler-see-hansag-madarmegfigyelo-infrastruktura-letesitese-es-bovitese-a-ferto-to-es-a-hansag-magyar-osztrak-ramsari-teruletein.html
- KEEP - EU. Vogelwarte Madárvárta 2: https://www.keep.eu/project/18613/grenz%25C3%25BCberschreitende-koordination-der-%25C3%25B6kologischen-monitoringaktivit%25C3%25A4ten-in-den-natura-2000-gebieten-der-neusiedler-see-und-hans%25C3%25A1g
- Territorial Co-operation, Operational Programme Austria-Hungary 2007-2013. Building and expanding the bird watching infrastructure in the Hungarian-Austrian Ramsar sites of Lake Fertő and the Hanság: http://www.at-hu.net/at-hu/en/projects.php?we_objectID=601

Joint valorisation of natural areas (Natura 2000) as Transboundary Biosphere Reserve

Name of the Interreg project:
Project 1: Joint valorisation of Natura 2000 as Transboundary Biosphere Reserve (0508_BIOSFERA_TRANSFRONTERIZA_2_E)

Project 2: Cultural heritage, local products, nature and tourism as an economic basis for the development of the Transboundary Biosphere Reserve Iberian Plateau (0202_ZASNET_MESETA_IBERICA_2_P)

Project 3: Network of rural landscapes on the border of Duero: A strategic map of the Iberia Plateau (0421_PAISAJE_IBERICO_2_E)

Name of the Interreg Programme: Interreg A – Cross-border Cooperation Spain-Portugal (POCTEP)

Period of implementation: P1: 2011–2015; P2: 2015–2018; P3: 2015–2018.

Countries covered and beneficiaries: Portugal, Spain. P1 and P2: Project leader is ZASNET European Grouping of Territorial Cooperation P3: the leader is the University of Valladolid

Project budget: P1: €400.000. P2: €1.924.454,50; P3: €290.710

La biosfera Transfronteriza Meseta Iberica.

Project background

North-eastern Portugal and the border region of Castilla León is an area of the Iberian Peninsula sparsely populated (14 inhabitants per km^2) and economically depressed. With similar problems on both sides of the border, and a long history of life in common, the ZASNET initiative emerged as an instrument for coordinating joint activities on both sides of the border (the "line" as the inhabitants call it).

Three Interreg projects have been developed from 2011 to 2018 to boost this area economically and socially, based on green economy and promoting nature and landscape conservation as the basis for local development.

The first project (2011–2015) involved the assessment of natural resources and the declaration of a big Biosphere Reserve (in 2015) including natural areas on both sides of the border (four natural parks, 22 Natura 2000 sites) as well as the creation of interpretation centres and the elaboration of studies for the management of nature, water and forest resources.

The main objectives of the project were:

- to promote the conservation and protection of transboundary natural areas;
- define joint management of natural resources as a Biosphere Reserve; and
- strengthen the cooperation of the authorities responsible for the Natura 2000 network.

As a result of the project a comprehensive strategy for future joint development was also prepared, which is currently being applied in the area.

The second project (2015–2018) provided continuation to the previous one by using nature as an economic base for the development of the border region, promoting local products and tourism linked to nature and culture.

A third project (2015–2018) was aimed at increasing the knowledge base about the natural resources of the area as well as the protection of agro-ecosystems in the Iberian Plateau Biosphere Reserve Area. It focused on the identification, classification and mapping of landscapes of the area and defining ways to encourage the maintenance of traditional practices, ecotourism, and local market structures, strengthening the involvement of local population in productive activities.

Linkages with Natura 2000

The transboundary Biosphere Reserve Meseta Ibérica is the largest biosphere reserve in Europe (1,132,607 ha, 87 municipalities from Portugal and Spain) and includes 22 sites of community importance (14 in Spain and eight in Portugal) and 10 SPAs (six in Spain and four in Portugal). These Natura 2000 sites cover in total 300,000 hectares. The area hosts numerous protected species including one of the best wolf populations in the Iberian Peninsula.

The Interreg projects have strengthened the cooperation among the authorities responsible for the Natura 2000 network and promoted a quality label for local products and services of the area. A Natural Resources Management Plan has also been drafted including the Natura 2000 sites.

Moreover, the action plan of the biosphere reserve prepared under one of the projects, includes actions for the promotion and evaluation of the economic benefits of the conservation of emblematic species, as the Black Stork (*Ciconia nigra*), Egyptian vulture (*Neophron pernocpterus*), Bonelli's Eagle (*Aquila fasciata*), Eagle Owl (*Bubo bubo*), Otter (*Lutra lutra*) and Iberian Wolf (*Canis lupus signatus),* by supporting nature tourism activities associated with these species and measures in rural development programs that favour their conservation. Joint actions for the monitoring and conservation of these protected species are being developed. Actions to promote the use of "shepherd dogs" in the region to protect livestock from wolf attacks have been also encouraged.

Stakeholder involvement

The involvement of the main local stakeholders from this big area has been achieved with the creation of a European Grouping of Territorial Cooperation (EGTC) named ZASNET. The EGTC is a European legal entity designed to facilitate and promote cross-border, transnational and interregional cooperation. It has legal personality and includes local authorities and other public bodies from the two member states (Portugal and Spain).

The members of the ZASNET EGTC are the Provincial Councils of Zamora and Salamanca and the City council of Zamora in Spain, and two associations of municipal councils (Associação de Municípios da Terra Fria do Nordeste Transmontano, Associação de Municípios da Terra Quente Transmontana) and the City council Bragança in Portugal.

The specific objectives of the ZASNET EGTC are:

- To promote cross-border cooperation in the domains of environment, tourism, culture and business development.
- Promotion of the territory of the ZASNET EGTC abroad for the valorisation of its resources.
- Supporting the population and generation of synergies to attract new inhabitants to the territory, contributing to reverse the negative demographic trends.

In the third Project, other new stakeholders have been involved in the development of activities for this area, including three universities from both countries and the regional government of Castilla and León.

Results and achievements

One first achievement was the creation of the Iberian Plateau Biosphere Reserve in 2015 and the adoption of the action plan to promote the development of sustainable initiatives in the area.

Another important result has been the creation of a quality brand for the territory that can allow increasing the number of visitors to the area through its recognition as a Biosphere Certification destination. The brand can be used to recognise sustainable production of agri-food products, handicrafts and tourism services in the Iberian Plateau Biosphere Reserve.

Integrated management of the natural and cultural heritage has also been encouraged and joint efforts have been undertaken to increase knowledge and promote de dissemination of intangible heritage of this remote area (e.g. the Winter Masks Festival).

The Interreg projects have produced tools for the management of natural resources, including action plans, cartography, awareness raising elements and various studies that provide technical support to the promotion of sustainable activities, including nature and cultural tourism.

The Committee of the Regions selected the ZASNET EGTC as an example of best practice in territorial cooperation in its Brochure on Best Practices of the European Groupings of Territorial Cooperation of Europe (2018)[28].

Integration with other initiatives

The activities carried out in the Biosphere reserve are integrated in the UNESCO Man and Biosphere Programme (MaB).

The ZASNET EGTC also cooperates with other initiatives in the region. For instance, it supported the organisation of a Workshop on Nature conservation in the border regions of Spain and Portugal in 2018 together with a Life project (LIFE12NAT/ES/000595).

The EGTC promotes common activities between Portugal and Spain through the preparation of joint projects, local discussion fora and implementation of rural development measures that allow linking nature conservation with the economic development of the area.

28 https://portal.cor.europa.eu/egtc/Pages/welcome.aspx

Sustainability of project results

The continuation of results is be assured by the members of the ZASNET EGCT, which dedicate their own resources to promoting new initiatives in the area, also looking for financial support from other sources.

For instance, a new project has been recently submitted to the Interreg CBC Spain-Portugal programme on “Sustainable lighting and Starlight Destination”. This will enable sustainable lighting of landmark buildings while avoiding light pollution and promoting the area as a tourism destination for the observation of stars.

Case study compiled by: Ernesto Ruiz, Atecma / N2K GROUP

Sources of more information

- http://www.poctep.eu/es/2007-2013/valorizaci%C3%B3n-conjunta-de-espacios-naturales-red-natura-2000-como-reserva-de-biosfera
- http://www.poctep.eu/en/2014-2020/patrimonio-cultural-productos-aut%C3%B3ctonos-naturaleza-y-turismo-como-base-econ%C3%B3mica-del
- http://www.biosfera-mesetaiberica.com/es
- http://www.zasnet-aect.eu/
- http://www.paisajeiberico.eu/
- https://patrimonionatural.org/proyectos/interreg-paisaje-iberico

The Green & Blue Rhine Alliance

Name of the Interreg Programme: 2014–2020 Interreg V-A Germany – The Netherlands

Period of implementation: three years (May 2017–April 2020)

Countries covered and beneficiaries: Germany and The Netherlands, a partnership of 10 organisations, led by NGO ARK Nature in the Netherlands

Project budget: €3.5 million, EU funding €1.8 million

The Green & Blue Rhine field lessons.

Project background

The project broadly covers the river valley of the Rhine between the German city of Dusseldorf and the Dutch city of Nijmegen. While the river had been heavily modified for flood defence and agricultural purposes, its floodplains and former floodplains still hold important relics of a once more dynamic river system.

Moreover, deliberate efforts were made since the 1990s to restore these rivers dynamics, driven by a combination of flood risk management, sand extraction and nature conservation interests. This has led to the recovery and even return of habitats and species that had been rare or lost sometimes for decades[29].

One of these species was the Eurasian Otter (*Lutra lutra*) listed on Annex II of the Habitats Directive which returned to the area by itself in 2014 after an absence of 50 years following a reintroduction programme elsewhere in the Netherlands. This was the reward for 20 years of restoration efforts, but also marked the start of a new conservation challenge: otters had gone extinct in the Netherlands in 1988 and were first reintroduced in 2002. While improved habitat conditions enabled a successful reintroduction, traffic mortality has been on average 24% of the population annually since reintroduction (Kuiters 2018).

A second challenge, from a European perspective, is the genetically isolated population in The Netherlands which is as sensitive to inbreeding. While the otter is still absent from much of western Germany, along the Lippe River, otters have been found with genetic combinations of Dutch and middle-German populations. A core population of otters in the project area could therefore be an important stepping-stone to both reduce genetic isolation as well as recovery upstream along the German Rhine system.

The restoration of the floodplains also reinstated the historical importance of the area for migratory fish species in the Rhine system such as European Eel (*Anguilla anguilla*), Atlantic Salmon (*Salmo salar*),

29 Flora- en Faunawerkgroep Gelderse Poort (2017) Meerjarenoverzicht 2012–2016, https://www.naturetoday.com/intl/nl/nature-reports/message/?msg=23991

European sea sturgeon (*Acipenser sturio*), Sea- and River Lamprey (*Petromyzon marinus, Lampetra fluviatilis*), Allis shad (*Alosa alosa*) and Houting (*Coregonus oxyrinchus*). Yet, for most species little is known on their ecology in the region.

After the first sightings of otters a meeting was convened in 2015 by a Dutch NGO (Association of Cultural Landscapes[30]) to discuss how the return of the otter could be further facilitated. This meeting brought together a number of key public authorities and other NGO's dedicated to nature conservation from both the Netherlands and Germany and an idea was cast to explore a cross-border Interreg project. ARK Nature had previously participated as a contributing partner to two Interreg projects in other regions.

Also in 2015, ARK Nature won a large grant to restore fish migration ahead of the 2018 opening of the Haringvliet sluice complex in the Rhine delta[31]. This triggered a renewed interest in improving fish migration monitoring in the lower Rhine River. When German partners also expressed a particular interest in this topic a suggestion was made to Interreg to combine the two efforts into a single project, which was accepted.

As a result, the Green & Blue Rhine Alliance (GBRA) led by Ark Nature in partnership with 10 other organisations began work via a new Interreg project in 2017 to strengthen transboundary ecological connections along the Rhine across the two countries. The project has four specific objectives:

1. Solving bottlenecks in the migration of otters (work package 1);
2. Improve and share understanding of migratory fish species on this section of the Rhine (work package 2);
3. Knowledge exchange on natural floodplain restoration including the development of a common Dutch-German database of action (work package 3); and
4. A transversal objective to communicate extensively on the project on both sides of the border and to take people of all ages to the field for lessons and excursions (work package 4).

Linkages with NATURA 2000

A large part of the project area has been designated as Natura 2000 site, both in the river itself, and alongt its floodplains and former river arms inside the dikes. On the Dutch side, the 'Gelderse Poort' is one of four sub-sites of the large (8440 ha) Rijntakken SAC (NL2014038). It has been designated for 12 habitat types including flower-rich grasslands[32], various types of ewe forests[33], tall-herb humid meadows and hems, muddy banks and aquatic vegetation. Among the designated species (not birds) are fish (both migratory- and polder fish species), mammals – beaver, Daubenton's Bat (*Myotis daubentonii*) and an amphibian Northern Crested Newt (*Triturus cristatus*). Furthermore, 11 breeding birds and 22 non-breeding birds have been designated as target species including the Eurasian Bittern (*Botaurus stellaris*) and Great Reed Warbler (*Acrocephalus arundinaceus*).

On the German side of the border, the largest part of the project area is designated in the large (25,809 ha) SPA (DE4203401) of which no less than 18 smaller parts are also designated as SAC

30 Vereniging Nederlands Culturrlandschap (VNC), https://www.nederlandscultuurlandschap.nl/

31 Project website 'Droomfondsproject Haringvliet' led by WWF Netherlands and funded by the Dutch postal Code Lottery: https://www.haringvliet.nu/english-summary

32 Including EU priority habitat 6120 *Xeric sand calcareous grasslands*

33 Including three different types of EU priority habitat 91E0 *Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)*

Habitat types and species are similar habitat types as the Rijntakken SAC. The area is important for both wintering bird species such as the Greater White-fronted Goose (*Anser albifrons*) as well as breeding birds such as Black Tern (*Chlidonias niger*) and Corncrake (*Crex crex*). In addition, a significant part of the river itself (2336 ha) is designated as a SAC specifically for six fish species (DE4405301), of which the Atlantic Salmon (*Salmo salar*), Sea Lamprey (*Petromyzon marinus*) and River Lamprey (*Lampetra fluviatilis*) are the most important.

Although the project as such was not initiated in the framework of implementing the EU Birds- and Habitats Directives, the project objectives 1 and 2 directly contribute to Natura 2000 conservation objectives by increasing survival of Eurasian otter (Habitats Directive Annex II) and the migratory fish species for which a significant part of the project area has been designated.

Moreover, the transboundary exchange of conservation experience under Objective 3 will indirectly contribute to otters, migratory fish species as well as potentially a wide range of protected habitats and other species. Lastly, Objective 4 will contribute to the long-term conservation of target species as well as wider project area.

Stakeholder involvement

The principle stakeholders mainly target regional- and local governments, conservation groups, scientists and citizens who can help identify and implement solutions to improve transboundary ecological coherence and in particular for otters and migratory fish species.

The project is co-funded by the regional authorities who have competence for the implementation of Natura 2000 in the region on both sides of the border, the State of North Rhine-Westphalia and the Province of Gelderland (only terrestrial). The German regional authority implementing Natura 2000 and water management (Bezirksregierung Düsseldorf), the Dutch competent authority for Natura 2000 implementation in large water bodies (Rijkswaterstaat) and the regional water management authority (Water Board Rijn en Ijssel) are project partners.

The seven NGO partners all bring significant expertise as well as national, regional and local networks in ecology, nature and landscape restoration and -management, recreational fisheries and communication and education.

Important external stake- and knowledge-holders are: 1) land owners and –managers in locations where restoration measures will be required, such as municipalities, farmers and nature managing organisations; 2) external experts advising on technical issues, for example fish ecology and nature-based flood risk management; and 3) local citizens, schools, decision makers and media.

Results and achievements

The implementation phase of the project only started in August 2017, hence many of the foreseen actions still have to take place. Nonetheless, many actions were already implemented:

In the first year of the project, three transboundary workshops were organised on natural flood plain development, the solving of otter migration bottlenecks and migratory fish monitoring. The Alliance organised a number of events in the framework of World Fish Migration Day in April 2018. The first

school visits to the project area were undertaken and the first ecological stepping-stone, an artificial riverbank for breeding kingfishers, was constructed. In July a first artificial otter shelter was inaugurated, a measures which has proven its success in the UK and will be placed in 40 different locations in the project area.

In the same month an interactive map with all bottlenecks for otter migration in the project region was launched which will be used as a guide the remainder of the project to mitigate traffic mortality in at least 12 most critical locations.

An important realisation during the workshops was that German and Dutch practitioners work and are organised differently, and use different but often complementary knowledge and experience. Participants expressed a strong wish to further reduce these differences and exchange best practice.

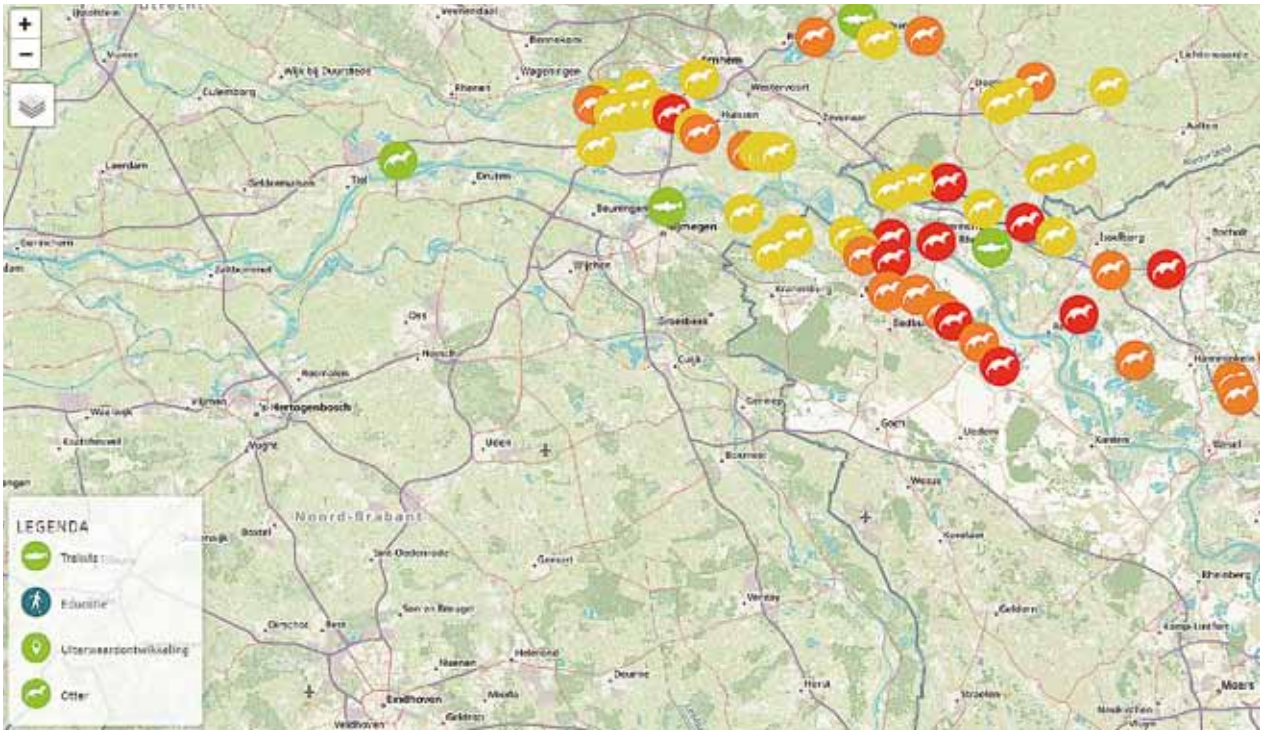
Since then additional international workshops were organised to exchange knowledge and experiences on the impacts from inland navigation on migratory fish species, on the restoration of secondary river channels and on practical measures to encourage successful otter migration.

In addition, several awareness-raising events and excursions were organised in the framework of the project. In November 2018, camera traps installed as part of the project to better map presence and migration of otters in the project area, recorded an otter's presence in a new German territory. It demonstrated the timeliness and urgency of the project's actions. A dedicated web platform and email newsletter inform on the project's latest developments.

Integration with other initiatives

The measures taken in the project have an important interface with the implementation of the EU Floods Directive and Water Framework Directive on both sides of the border. In the Netherlands,

Figure 9. Interactive map of foreseen project activities under the project.



natural floodplain restoration for flood risk reduction and improving good ecological status under the WFD (GES) was and is driven from various strategies and programmes, including the ground breaking *Room for the River* programme that ended on 31 December 2018[34]. Under the 2019 Delta Programme the Dutch authorities are working closely with those of Nord-rhine Westphalia to exchange experiences and coordinate action[35].

Another important interface of the GBRA are broader conservation efforts to enable the otter to return to other wetlands in Germany and the Netherlands. Between 2002 and 2014, 38 otters were reintroduced in the Netherlands of which four in the Gelderse Poort. Today many public and private stakeholders across the Netherlands implement actions to encourage further recovery of the species.

In 2013, the Dutch Court of Justice ruled that the Dutch Authorities were not meeting their obligations under the Habitats Directive to protect the otter, and had to increase efforts to reduce hotspots for traffic mortality and improve monitoring. Since 2014, an annual monitoring report has been published. The GBRA helps to both implement the findings from this work, as well as informs it with new insights from the transboundary Rhine region.

Similarly, the project ties in with broader conservation efforts to restore fish migration along the Rhine on both sides of the border and through the International Commission for the Protection of the Rhine (ICPDR)[36]. In 2012, the World Wide Fund for Nature Netherlands (WWF NL), Ark Nature and the Netherlands Anglers Alliance joined forces to bring the European Sea Sturgeon (*Acipenser sturio*) back to the Rhine River[37]. The success of sturgeon and other species' recovery largely depends on free access of the Rhine's two largest tributaries Waal and Ijssel to the sea which are both locked with a dam (Haringvliet and Ijssel Lake).

Also thanks to the support of the EU's LIFE programme[38], from January 2019 the Haringvliet sluices have been reopened[39] and the Ijssel Lake will be reopened through the innovative artificial 'fish migration river' [40]. This is expected to greatly enhance the positive outcomes of many measures already implemented in particular on the German Rhine. The efforts of the GBRA will directly contribute to these efforts by providing monitoring evidence as well as indirectly through improving migratory habitat conditions. The measures are also expected to contribute to the efforts for the recovery of European Eel (*Anguila anguila*) populations and the EU Eel regulation[41].

Finally, but equally importantly, the project will greatly contribute to the implementation of the German Federal Nature Conservation Act (Bundesnaturschutzgesetzes or BNatSchG[42]) and the Dutch Nature Conservation Act (Wet natuurbescherming or Wnb[43]).

34 https://www.ruimtevoorderivier.nl/
35 Dutch Delta Commission (2019) *Deltaprogramma 2019 'Doorwerken aan de delta: Nederland tijdig aanpassen aan klimaatverandering'*, chapter 7.4 on the Rhine, https://deltaprogramma2019.deltacommissaris.nl/7.html#h7_4
36 ICPDR webpage on migratory fish: https://www.iksr.org/en/topics/ecology/plants-and-animals/fish/migratory-fish/
37 https://www.haringvliet.nu/english-summary
38 LIFE15 IPE/NL/000016: DELTA Nature – Integrated approach N2000 Delta Nature to catalyse the implementation of The Netherlands' Prioritised Action Framework, http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=6103 and https://life-ip-deltanatuur.nl/english1
39 Dutch Government news item of 15 November 2018, Haringvliet Sluices, https://www.government.nl/latest/news/2018/11/15/haringvliet-sluices
40 Introduction to the Dutch Fish Migration River: https://www.theafsluitdijk.com/projecten/fish-migration-river/wat-is-het/
41 European Commission webpage on the European eel (*Anguila anguila*): https://ec.europa.eu/fisheries/marine_species/wild_species/eel/
42 German Federal Agency for Nature Conservation (BfN) webpage on the German legal framework: https://www.bfn.de/themen/recht/rechtsetzung.html
43 Dutch government webpage on the Dutch legal framework for nature conservation: https://www.rijksoverheid.nl/onderwerpen/natuur-en-biodiversiteit/wetgeving-voor-natuurbescherming-in-nederland

Sustainability of project results

Please note: At the moment of writing this case study, the project was only halfway, and outlook on sustainability of project results therefore only preliminary.

The intention of the project partners is to continue the work of the Green-Blue Rhine Alliance well beyond the lifetime of the Interreg V project. The project identified a large number of physical bottlenecks for otter migration on both sides of the border of which can only be partly addressed within the project's budget and lifetime. This will require significant additional financial resources. Moreover, the implementation of the project has unearthed a number of fundamental differences between approaches between German and Dutch stakeholders, for example in fish monitoring methodologies, which cannot all be streamlined overnight and will require a more longer-term cooperation. The project partners therefore have already expressed an interest and intention to further deepen the cooperation and are exploring if a follow-up project would resonate with the next Interreg programme.

Case study compiled by: Erik Gerritsen, IEEP

Sources of more information

- Kuiters, A.T. 2018. Genetische monitoring van de Nederlandse otterpopulatie, Ontwikkeling van populatieomvang en genetische status 2017/2018, WOt-technical report 140, Wageningen University & Research: http://library.wur.nl/WebQuery/wurpubs/547990
- Homepage of the Green Blue Rhine Alliance (GBRA): https://www.gbra.eu/
- Webpage ARK Nature on the GBRA: https://www.ark.eu/groen-blauwe-rijn-alliantie
- Homepage Interreg Germany – The Netherlands: https://www.deutschland-nederland.eu/en/
- Green-Blue Rhine Alliance press releases
- Webpage Dutch Anglers Alliance: https://www.sportvisserijnederland.nl/actueel/nieuws/20628/ruim-drie-miljoen-subsidie-voor-de-groen-blauwe-rijn-alliantie.html
- Flora- and fauna working group Gelderse Poort: https://www.geldersepoort.net/
- Personal communication: Mr F. Zanderink, Project Manager, Green-Blue Rhine Alliance, ARK Nature, Nijmegen, The Netherlands.

ECONNECT – Improving Ecological Connectivity in the Alps

Name of the Interreg Programme: Funded by the EU ETC Alpine Space Programme and co-funded by ERDF

Period of implementation: three years (September 2008–August 2011)

Countries covered and beneficiaries: University of Veterinary Medicine, Vienna, and 16 partners from Austria, France, Germany, Italy, Lichtenstein and Switzerland

Project budget: €3,198,240, EU Funding: €2,285,120

A valley impacted and fragmented by human activities in which fish passage can be difficult.

Project background

The Alps are exceptionally rich in biodiversity but, being one of the most densely populated mountain ranges in Europe, they are also under heavy pressure from a wide range of threats. Many Protected Areas have been put in place to conserve biodiversity and the natural environment, however, it has become increasingly obvious that connectivity plays also a significant role in conserving biodiversity. In the Alps Protected Areas need to be interconnected to allow the migration of species. Genetic flow across the whole alpine range is also crucial in helping species to adapt to the environmental transformations caused by climate change. A coordinated and transnational approach is needed in accordance with the legal framework provided by the Alpine Convention.

The ECONNECT project aimed at enhancing ecological connectivity across the Alpine range. The project involved a wide range of international umbrella organisations linked to the Alpine Convention, scientific institutions and local partners responsible to implement project outcomes. Together, these entities have been able to analyse the specific connectivity needs across the Alps and explore the best options for coordinated action, whilst also developing innovative tools to promote ecological connectivity.

Linkages with NATURA 2000

The ECONNECT project's aim was to link the Protected Areas in order to achieve connectivity between alpine ecosystems. For this it carried out the following activities:

1. Selected a representative sample of species classified by migration needs, ecosystem requirements and zoological classes (mammals, birds, fish).
2. Analysed species' habitat needs in terms of habitat connectivity (e.g. maximum distances, characteristics of corridors/stepping stones). Scientific documents were prepared on the habitat distribution and connectivity for six species: Black Grouse (*Lyrurus textris*), Eurasian Lynx (*Lynx lynx*), Red Deer (*Cervus elaphus*), Brown Bear (*Ursos arctos*), Wolf (*Canis lupus*) and Griffon Vulture (*Gyps fulvus*).

3. Carried out spatial analysis of current and potential habitats, their lack of connectivity and its reasons (qualitative and quantitative assessment). The so-called JECAMI software was developed, which is a computer-based system for mapping ecological barriers and corridors. The programme enables users to view the potential migration routes of a given species, and thus to take them into account during regional land-use planning processes in order to ensure their protection.
4. Characterised the barriers (including legal ones) by their origin, size, shape and degree of permeability. The project compared the legal statutes of the Alpine Protected Areas and using this comparison the project proposed models for transboundary Protected Areas.
5. Developed measures and management practices to diminish the identified barriers, classifying these measures by their practicability and feasibility. Seven pilot projects have been since implemented.

Stakeholder involvement

The ECONNECT project considered not just the purely environmental aspects (such as, for example, size of core areas) but also the economic and social aspects of promoting ecological networks. Therefore, it strengthened the cooperation among relevant institutions of different social, environmental and economic sectors. Furthermore, the project involved international umbrella organisations linked to the Alpine Convention, scientific institutions and local implementation partners.

Project activities included very strong communication and awareness raising activities within the pilot regions, *inter alia* ensuring the involvement of stakeholders with expertise in connectivity, biodiversity and local development. At a specific workshop for knowledge transfer, key actors from the Alps and other mountain areas (especially the Carpathians and Pyrenees) were invited in order to jointly elaborate the implementation guidelines and to develop common policy recommendations.

The final conference was attended by political representatives of the six Alpine countries, as well as experts and scientific researchers from local and international institutions. A striking result of the ECONNECT project was that the most significant barriers which have to be tackled in order to achieve effective international collaboration on ecosystem protection are cultural. ECONNECT has been an important opportunity for discussing and developing solutions for the identified cultural issues from a broader, multi-stakeholder perspective.

Results and achievements

ECONNECT took a holistic approach to the development of ecological networks. It provided an Alpine-wide overview on the areas important to ecological connectivity by referring to quantitative and qualitative information on selected sites (core areas) and the level of interconnectivity between them (corridors). Project activities and results can be grouped as follows:

1. **Information gathering**
   Project partners harmonised geographical data across participating countries. ECONNECT adapted, integrated and harmonised the existing data bases especially in the selected seven pilot regions. In preparation for this, data harmonisation methods developed previously in other EU and national projects were evaluated and documented. This assessment set the basis for launching a harmonisation process that was suitable for ECONNECT. For data access and information, a web-based geodata and metadata catalogue was set up[44].

44 The tool is available at: http://gis.nationalpark.ch/arcgisserver_app/secure/econ_jecami.htm

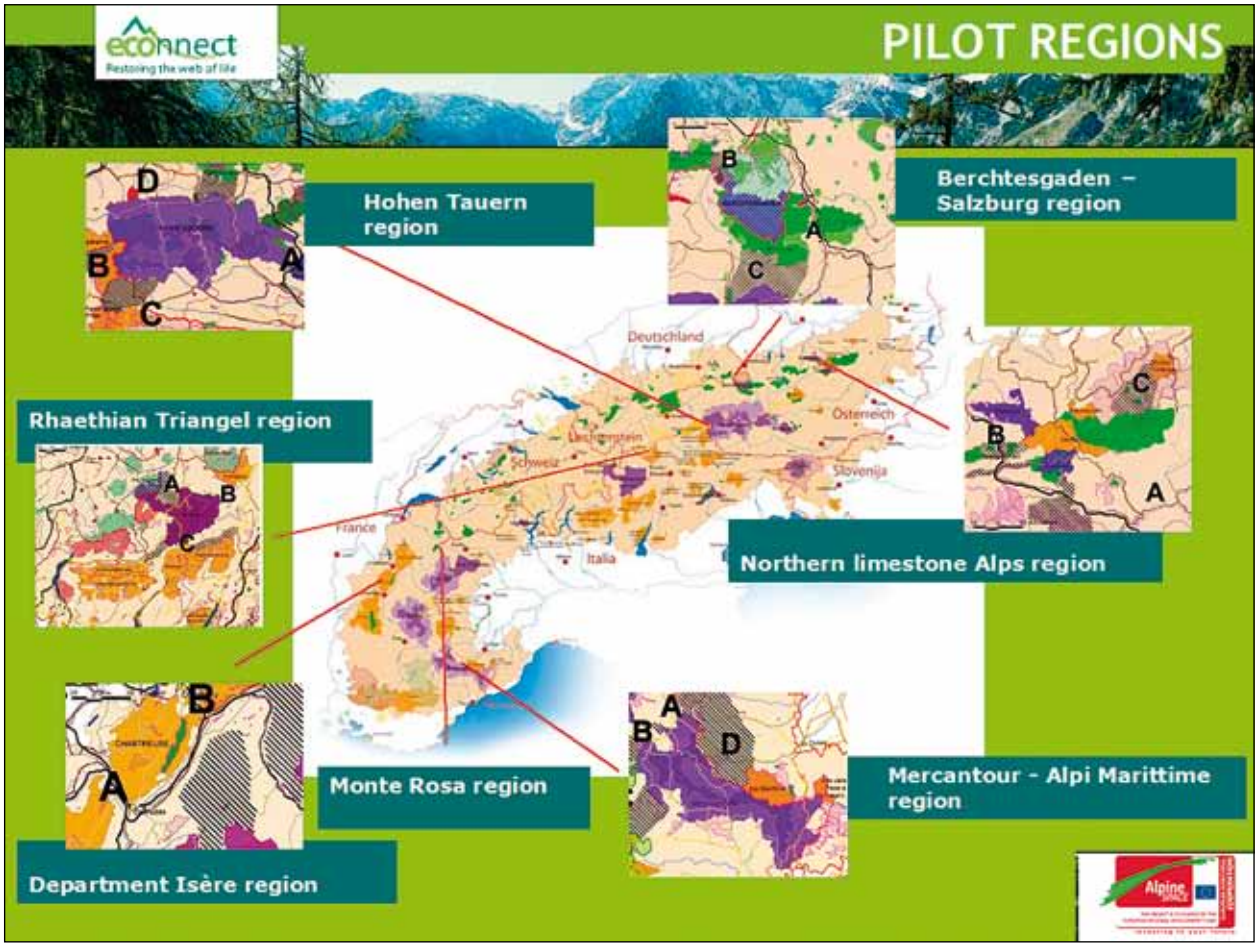
Project partners developed a broad overview on those legal barriers that can hinder the creation of ecological networks: The project paid particular attention to the pilot areas and transboundary aspects when collecting legal barriers. Its documentation was published and widely disseminated among concerned actors throughout the Alps. Through the project, partners also analysed existing physical barriers to the establishment of ecological corridors. The identified barriers were classified, and concrete measures were developed to reduce barriers in the way of species migration and to promote an exchange of gene fluxes. These proposed measures were tested and implemented in the pilots.

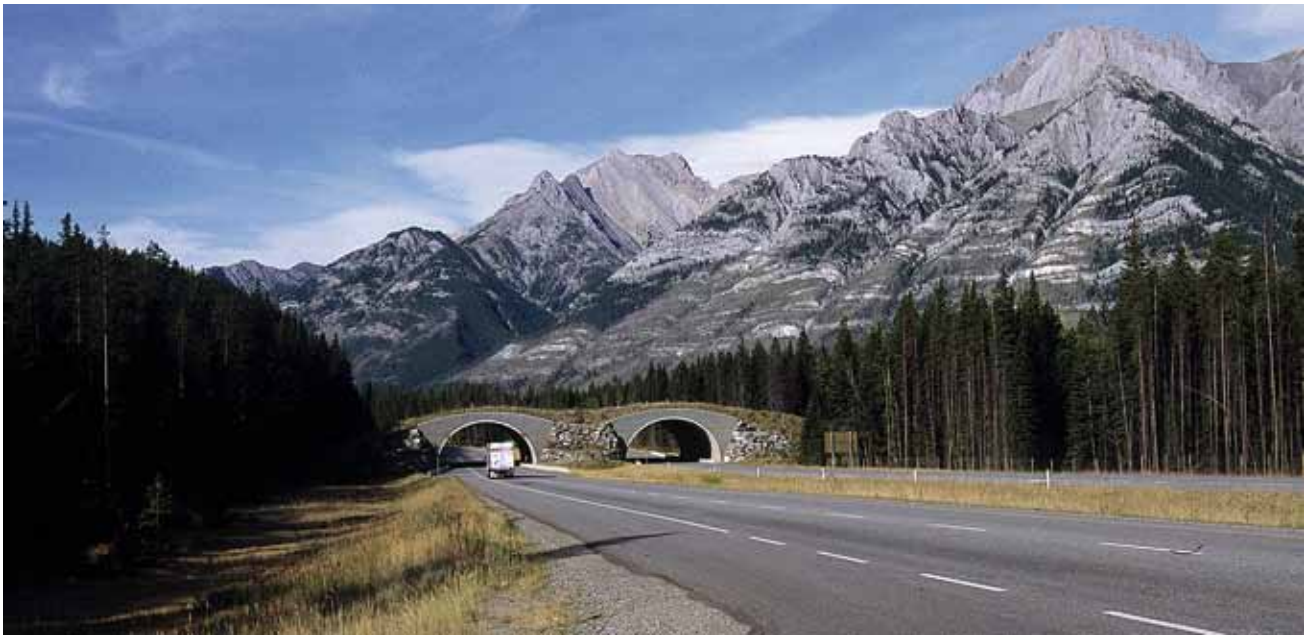
2. Actions on the ground

Project partners created, approved and tested a methodological approach for the establishment of ecological corridors and promoted this procedure across the alpine region. ECONNECT applied concepts and action especially to pilot regions of high biodiversity value. The project provided a very detailed planning process in the seven different pilot regions. This process of planning included detailed habitat mapping, landscape modelling as well as the identification of connectivity potentials in linking important habitats in order to ensure migration corridors for special species. The process aimed to establish continuous habitats and to reduce fragmentation especially of those areas where a high degree of conflicts in territory use, was presumed.

At the same time the planning process was a key element for further physical planning of the territory to make sure that spaces not yet fragmented and important for migration of species and special habitats are maintained. Furthermore, the project strengthened the cooperation between relevant institutions (as detailed above in Stakeholder involvement section).

Figure 10. Pilot project areas.





An example of a passage for animals over a motorway.

3. **Communication**
   The project raised awareness about the importance of ecological connectivity. The results of the project were spread widely: general and scientific results and policy recommendations were presented in the form of scientific publications, oral and poster presentations at conferences organised in the Alps and in the Carpathians.

The listed project activities resulted in the following findings and outputs:

- Connectivity in the Alps is actually still adequate for many species. These connections between Alpine habitats have to be preserved and maintained by adequate and well-planned management strategies covering the entire territory and by means of specific tools.
- Sharing environmental data across the Alps to support research activities is an essential precondition for effective transnational collaboration on biodiversity conservation. Therefore, the highly innovative JECAMI platform was established (see in detail above).
- Through the concrete actions in seven pilot carried out under the project, ECONNECT has provided specific contribution for protecting the ecological linkages in these regions.

Integration with other initiatives

Natural, social and economic barriers to the establishment of connectivity were identified and proposals were made on how to overcome them. Since the idea of ecological connectivity also refers to non-Protected Areas, attention was paid both to how policies may affect their establishment and how the ecological networks may in turn affect spatial/infrastructure development and economic activities.

The project established contact also with related projects, such as:

- Platform Ecological Network of the Alpine Convention and Ecological Continuum Project
- CIPRA's info pages on Ecological networks in the Alpine region
- TRANSECONECT – Transnational Ecological Networks in Central Europe
- Joint ecological continuum analysis and mapping initiative (JECAMI)

- AdaptAlp – Adaptation to Climate Changes in the Alpine Space
- Alp-Water-Scarce – Water Management Strategies against Water Scarcity in the Alps
- CLISP – climate change adaptation by spatial planning in the alpine space
- PermaNET – Longterm Permafrost Monitoring Network
- TRANSGREEN – Integrated Transport and Green Infrastructure Planning in the Danube-Carpathian Region for the Benefit of People and Nature
- CONNECTGREEN – Restoring and managing ecological corridors in mountains as the green infrastructure in the Danube Basin.

Sustainability of project results

The ECONNECT project paid particular attention to communicating its results in a way that common understanding was reached, through which transferring the knowledge gained throughout the project could be passed on also to other mountain regions in the EU. It managed to do so due to the fact that knowledge-transfer activities of the project included reaching out to key actors at all levels of responsibility (stakeholders, managers, NGOs, GOs, scientists) and to all spatial dimensions (local, regional (Alps), European).

In order to guarantee the sustainability of ECONNECT results, implementation guidelines and project syntheses were distributed to key actors at local, Alp-wide and European levels. Furthermore, specific emphasis at an advanced project state was paid to transfer knowledge to other mountain regions, thus other stakeholders were informed continuously about interim project results, and as a result the above detailed consensus could be reached more easily. Last, but not least, due to its activities, the collaboration potential among Protected Areas was enhanced, hence, also the improvement of the migration possibilities and conservation efforts for wildlife, which ensured the long-lasting impacts of the project.

Case study compiled by: Agnes Zolyomi, Daphne / N2K GROUP

Sources of more information

- **The project website: http://www.econnectproject.eu**
- **Final project brochure: http://www.econnectproject.eu/cms/sites/default/files/EN_3.pdf**
- **Project webpage on the KEEP.EU database: https://www.keep.eu/project/11786/improving-ecological-connectivity-in-the-alps**

DANUBEPARKS – Danube River Network of Protected Areas

Name of the Interreg project:
DANUBEPARKS STEP 1 and 2

Type of Interreg Programme:
European Territorial Cooperation in South East Europe (ETC-SEE)

Period of implementation:
March 2009–February 2012, October 2012–September 2014

Countries covered and beneficiaries:
DANUBEPARKS projects consisted of 14 project partners – Donau-Auen National Park as lead partner and 17 observers

Project budget:
Project 1 and 2: €2.7 million, €2.2 million

Danube east of Vienna.

Project background

To aide transnational collaboration, DANUBEPARKS, the Danube River Network of Protected Areas was formed in 2007. It is now composed of 16 protected areas in 9 countries. DANUBEPARKS aims to involve all protected areas administrations along this international river and its tributary in order to tackle similar problems and provide joint actions and solutions.

The network carries out an array of cooperation activities and projects, several of which were funded by South East Europe INTERREG. The first project (Danubeparks step 1) focused on river revitalization, floodplain management, conservation of flagship species, monitoring and Natura 2000 and sustainable tourism development. The second project (Danube step 2) concentrated on the Danube-wide monitoring of indicator species for river dynamics (Little-ringed Plover and Sand Martin). This was followed up by a further project DANUBEparksCONNECTED that runs until November 2019.

Linkages with NATURA 2000

Passing ten countries, the Danube is one of Europe's most important rivers. With its diverse habitats, it forms the backbone for biodiversity in South East Europe. Its relevance for nature conservation is reflected by numerous Natura 2000 sites as well as National Parks, Biosphere Reserves and Nature Parks. Within DANUBEPARKS, for the first time all relevant Danube Protected Areas, managing over 30 Natura 2000 sites at the Danube, have systematically tackled common challenges on a Danube-wide scale.

Setting up transnational task forces, promoting intensive experience exchange, elaborating transnational strategies and implementing pilot actions have all contributed to a much more coherent approach to the management and interconnectivity of Natura 2000 sites and species across the region. Since 2009, 150 actions were implemented on Natura 2000 habitat management, conservation of flagship species and river restoration.

Figure 11. Protected Area network in the Danube Parks.

Key achievements

- **River Morphology and Revitalization.** Studies have been carried out on river dynamics and morphology. Planning of pilot projects focusing on sediment balance and restoration, were also realised along with a concept for a habitat corridor based on dynamic Danube islands, the drafting of a river morphology action plan and cross-sector workshops with NEWADA Duo, the Network of Danube Waterway Administrations.

- **Floodplain Management and Habitat Network.** The WILDisLAND initiative aims to preserve natural Danube islands as flagship habitats for river dynamics. The Danube Wild Island Habitat Corridor contributes to strengthening the ecological connectivity and to preserving natural wilderness that exists in the heart of Europe. The WILDisland map presents the results of the first inventory of Danube islands: over 900 islands were identified along the Danube River which covers an area of more than 138,000 hectares.

- **Conservation of Danube Flagship Species White-tailed Eagle and Black Poplar.** The White-tailed Eagle is a flagship species for wetland forests. The "Action Plan for the Conservation of the White-tailed Eagle along the Danube" was developed which forms the foundation for the implementation of conservation activities. In January 2014 the first Danube-wide winter count of the White-tailed Eagle was organised. Around 3000 kilometres, 300 mainly volunteer counters, and 3000 hours were spent on the survey. They identified the Danube is an important winter habitat for as many as 750 eagles. As the first ever Danube-wide report on the over-wintering areas of the species, it is an essential instrument in planning future protection measures.

  A document on 'Perspectives for Floodplain Forests' was also developed. The first step was to set up a Danube-wide black poplar (indicator species) cadastre of single trees, old growth stands and rejuvenation areas, together with a genetic analysis of black poplars from eight Danube countries. The promotional campaign "Danube parks poplars" raised awareness for the most this important habitat.

- **Natura 2000 monitoring.** As regards of monitoring Natura 2000, handbooks were created to aid monitoring of Natura 2000 species including beaver and European mink, whilst an online database for fish monitoring data was also set up.

- **Nature Tourism** – quality guidelines for environmental education programmes in the Danube Protected Areas. Digital "Info Corners" were also developed and installed in existing visitor centres and exploratory assessment tours were realised.

Under the second project, monitoring was carried out as a part of the ICPDR's Joint Danube Survey, and also included the downstream stretches of important tributaries. The monitoring of the two key indicator species could be directly used to plan restoration actions and measure their success.

Stakeholder involvement

The DANUBEPARKS Network pursues its goals on the basis of continuous cooperation. Within all projects, the network aims to achieve a balance between the three identified steps of cooperation: Exchanging experiences builds the base for transnational strategies that outline the tasks for the future. Pilot projects implement the common plans locally and visibly all along the Danube River.

Considering the Danube is a multifunctional system, the cooperation is based on a cross-sectorial approach, and the integration of relevant stakeholders and land managers is therefore at the core of the project objectives.

Integration with other initiatives

DANUBEPARKS has become a widely recognized nature conservation network. It became partner of the international bodies such as:

- ICPDR (International Commission for the Protection of the Danube River). The DANUBEPARKS Network is an observer to the ICPDR, integrating the voice of the Protected Areas in General Assembly and Working Groups. Cooperation with the ICPDR, however, goes far beyond this formal observership as the Danube-wide Monitoring in the DANUBEPARKS STEP 2.0 project shows
- EUSDR (EU Strategy for the Danube Region) This macro-regional strategy is the new framework for cooperation in the Danube region with DANUBEPARS as "flagship project".
- NEWADA (Network of Danube Waterway Administrations). The NEWADA Network represents the navigation sector, with which nature protection has many conflicting fields but also important opportunities for synergies. Both networks are represented as observer partners in each respective project

- DCC (Danube Competence Centre). The DANUBEPARKS Network is a member of the DCC, an association of tourism stakeholders with the aim to improve and promote sustainable tourism along the Danube. The membership provides access to education and training, joint marketing activities and allows for the promotion of nature-friendly tourism.
- DANUBEPARKS is also actively cooperating with the Carpathian Network of Protected Areas (CNPA) and Alparc (Alpine Network of Protected Areas).

Other INTERREG associated projects have also been approved to promote different socio-economic and tourism related activities, such as angling routes or cycling routes and More than 30 successful and best practice LIFE-projects were also implemented by the Danube Protected Areas - for river restoration, habitat management, conservation of species.

Case study compiled by: Viera Šefferová Stanová, Daphne / N2K GROUP

Sustainability of project results

The ongoing DANUBEparksCONNECTED is now focussing on bridging the Danube Protected Areas towards a Danube Habitat Corridors – Danube Dry Habitat Corridor, Riparian Forest Corridor, Wild Island Habitat Corridor and Air Corridor (Danube Free Sky). A Danube-wide LIFE-project under the umbrella of DANUBEPARKS is also in preparation.

Sources of more information

- **Project webpage: http://www.interreg-danube.eu/approved-projects/danubeparksconnected**
- **Webpage of DANUBEPARKS – the Danube River Network of Protected Areas: www.danubeparks.org**
- **DANUBEPARKS STEP 2.0 PROJECT REPORT 2012–2014: http://www.danubeparks.org/files/2047_DanubeparksStep20FinalReport_web.pdf**
- **http://www.interreg-danube.eu/uploads/media/approved_project_public/0001/07/ae92edd0ac4e84449f56d02091b04687f1bbebfb.pdf**

PARTRIDGE – Protecting the Area's Resources Through Researched Innovative Demonstration of Good Examples

Name of the Interreg project: PARTRIDGE: Protecting the Area's Resources Through Researched Innovative Demonstration of Good Examples

Type of Interreg project: Interreg North Sea Region

Period of implementation: four years (2016–2020)

Countries covered and beneficiaries: 15 partners from the UK, Belgium, the Netherlands and Germany. Lead partner, the Game and Wildlife Conservation Trust (UK). The partners are research institutes, conservation NGOs, agricultural and hunting bodies.

Project budget: Original €4,780,138

Core project area, farmland, UK.

Project background

An alarming decline in biodiversity related to farmland, notably insects and birds, has been well-documented in recent years in Europe. For example, in Germany, abundance of insects has decreased by 75% in 25 years. Even some common species like the grey partridge face dramatic reductions in their populations: in France and the UK 80% and 91% of the partridge populations respectively has been lost during the last couple of decades.

The PARTRIDGE project (Protecting the Area's Resources Through Researched Innovative Demonstration of Good Examples) aims at addressing the loss of biodiversity in farmland. More specifically, its aim is to implement best practice models in 10 farmland pilot sites in four North Sea Region countries (UK, Germany, the Netherlands, Belgium) to demonstrate how new management techniques can improve biodiversity and ecosystem services by up to 30% in four years, and how these can be transferred across all regions of the EU. The project is innovative in that it is run by hunting and agricultural bodies.

The ultimate goal is to bring about changes in behaviours and practices among rural stakeholders, in particular regarding the uptake of agri-environmental schemes. Despite their significant potential, such schemes have not delivered on a large scale or to their full potential. The project has identified a number of factors explaining the low uptake and effectiveness of the agri-environmental schemes: every Member State has designed its own scheme (often without using existing experience in other areas and other countries) and most have ended up with schemes that are ineffective in reversing biodiversity loss, even on a local scale.

Current measures are often developed on poor quality lands, are of insufficient quality and make up less than 2% of farmed areas. Other weaknesses lie in the lack of in-depth advice available to farmers and a failure to encourage other local stakeholders to take an active part in management plans.

The key focus of the pilot project actions will be on Grey Partridge (*Perdix perdix*) habitat restoration; the loss of such habitats has proved to be a key factor in the decline of farmland wildlife and ecosystem services throughout Europe. The Grey Partridge is one of the best indicators of farmland ecosystem health, which is why the project is focusing on its habitats: partridge habitats coincide with areas of high biodiversity and intact ecosystem services. In order to monitor the project's success, a set of bioindicator groups have been chosen, in addition to the Grey Partridge, such as brown hare and farmland birds as well as ecosystem services such as pollen and nectar habitats, which are monitored during the course of this project.

Linkages with NATURA 2000

The PARTRIDGE demonstration sites are generally situated on intensive arable farmland, given that this is where farmland biodiversity is particularly negatively affected across the EU. As a result, only few demonstration sites are within Natura 2000 sites, but several are close by.

The project targets the habitats of the Grey Partridge which is an Annex II – part A species of the Birds Directives (i.e. species that can be hunted under national legislation in the geographical sea and land area where this Directive applies). As aforementioned, the species' habitats are targeted as the grey partridge constitutes an excellent biodiversity indicator; restoration of its habitats is thus an umbrella action that favours a number of protected bird species, such as Skylark (*Alauda Arvensis*), Yellowhammer (*Emberiza citrinella*), Corn Bunting (*Emberiza calandra*), Linnet (*Linaria cannabina*), Red-backed Shrike (*Lanius collurio*), Turtle Dove (*Streptopelia turtur*) and several harrier species.

Stakeholder involvement

Working with a wide range of rural stakeholders is a basic tenet of the project. The main stakeholders on a local level are farmers, hunters, volunteers and agri-environmental scheme (AES) advisors. On a regional and national level, it is civil servants who work to implement and design AES, farmer unions, hunter unions, agronomists, seed suppliers, politicians (including environment ministers), Members of the European Parliament and even the European Commission.

To ensure their proper involvement, the project studied farmers' attitudes in regards to agri-environmental schemes, formed farmers' clusters, organised farm walks and demonstration site visits for farmers and civil servants. Additionally, cross-border visits for all stakeholders, including farmers and landowners, are being organised, resulting in a flow of information exchange and enthusiasm among all involved. At most of the project sites, PARTRIDGE has already managed to ignite a sense of pride for partridge/wildlife-friendly farming.

Results and achievements

The project is based on a bottom-up approach implemented by more than 100 local farmers, hunters, volunteer groups and other stakeholders and government agencies. The demonstration sites are used

© Partridge Project

Beetle bank.

to showcase best practise not only to local farmland stakeholders but also to local, regional and national decision-makers, in particular those involved in agri-environmental schemes and agricultural policy in general.

The practices tested in the demonstration sites include focus on the establishment of high-quality habitat on at least 7% of each agricultural surface, supplementary winter feeding during the winter when natural food sources are less abundant, and legal predator management where applicable. The project's most effective habitat measures are partridge-tailored flower mixes, which provide suitable habitat all year round, together with beetle banks, winter stubbles and arable margins. Each site developed its own improved and locally adapted mixes.

Halfway through the project, PARTRIDGE has achieved a very high uptake of high-quality habitat measures on all 10 demonstration sites. This has resulted in habitat improvements that already reach or even exceed the targeted 7% of the farmed areas at most sites, which significantly surpass average levels recorded in areas with agri-environmental schemes across Europe. This level of habitat measures was reached at all sites in 2018, with all measures expected to achieve their desired benefit for farmland wildlife as from summer 2019.

This means, that the indicators (partridges, hares, farmland songbirds) are expected to show an increase in numbers as from summer 2019. Though there are no conclusive results at this stage of the project, some of the indicators have started to show an upwards trend and some demonstration sites already. The project partners are confident that if the project were to be extended, it would be able to demonstrate increases at the order of 30% for most indicators at most sites by 2023.

The project has also made significant achievements in terms of communication: to date, almost 2000 people have visited the PARTRIDGE demonstration sites, among them prominent visitors such as the Danish, Belgian and UK environment ministers and the EU Commissioner for Agriculture and Rural Development.

Integration with other initiatives

The project's focus has direct links with Target 3a of the current EU Biodiversity Strategy to 2020 which aims to "increase the contribution of agriculture to maintaining and enhancing biodiversity". The project has the ambition to influence the post-Brexit agri-environment policies and the CAP negotiations for the post-2020 period. For this, the project targets policy level authorities and has managed to attract their attention. As aforementioned, a number of high-level policy makers (both national and EU) have visited the demonstration sites and have seen first-hand the effects of biodiversity-friendly agricultural practices. The transnational aspect of the project gives its partners a wider potential for influencing policy making.

Sustainability of project results

Achieved changes in agricultural practices of farmers and their behaviours are a good guarantee for the sustainability of the project results, subject to the continued availability of agri-environmental schemes.

In addition, the project is having a snowball effect, not only in the wider areas of the demonstration sites, but also in other areas and other countries. The methodologies developed by the project are being adopted by neighbours of demonstration sites and are inspiring stakeholders outside the North Sea Region to adopt similar measures, e.g. in Austria, Ireland, Northern Ireland, and Hungary. After a presentation of the project at the international Fishing, Hunting and Arms International Expo, efforts have started for the setup of a project in Eastern Europe similar to PARTRIDGE.

The project partners have applied for a project extension to Interreg to ensure the continuation of the measures at all demonstration sites. To guarantee this, several things need to take place:

a) enthusiasm among local stakeholders who implement the PARTRIDGE measures needs to be high for them to continue – this is already the case at all sites;
b) the measures implemented need to be available in regional or national AES, and paid for adequately. This is partially the case already – for example, as a result of this project, the Dutch AES has integrated the beetle bank, as well as an improved version of the flower blocks; and
c) the new CAP (post-Brexit agri-policy) needs to support all of the above.

Case study compiled by: Mariella Fourli, Ecosystems LTD / N2K GROUP

Sources of more information

- **Project website: https://northsearegion.eu/partridge/**

Saltworks – Ecological permanent valuation salt pans between Italy and Slovenia

Name of the Interreg Programme: Interreg A – Cross-Border cooperation Italy-Slovenia 2007–2013

Period of implementation: Three years (from November 2011 to July 2014)

Countries covered and beneficiaries: Italy: Po River Delta Park, Emilia-Romagna (lead partner), Cervia municipality, Delta 2000 Soc. cons. S Slovenia: SOLINE Pridelava soli d.o.o., Javni zavod Krajinski park Strunjan

Project budget: €1,260,000, EU funding: €1,071,000

Saltworks in Strunjan, on the Slovenian-Istrian coast.

The Project Saltworks involves four Northern Adriatic saltworks in Italy and Slovenia, and aims to enhance, develop and promote these precious and rich of nature and cultural heritage areas.

Salt production is one of the oldest industries known to man and, for centuries, the Northern Adriatic salt-pans exerted a great impact on the economy of cities in this region. Although high-quality salt is still produced much to the appreciation of gourmets, the economic role of the pans is much diminished.

Saltworks are ecosystems in which the age-old relationship between man and nature has found a happy compromise, giving shelter to all those species of animals and plants that find here the same conditions as in their natural habitats, which today have all but disappeared due to the excessive exploitation of the coasts.

The cultural heritage of the four salt-pans embraces the centuries-old life and work of the salters on the coast of the Adriatic Sea. This heritage includes the salt-fields, channels and banks with stone walls, steps and sluices, salt-pan houses with their immediate surroundings, paths, bridges, pumps, etc. Of the thousands of traditional Salinas once numerous throughout the Mediterranean region, few have survived. Their testimonial value is thus even greater, placing them among the ethnological, technical, historical and landscape heritage of exceptional concern.

The natural and cultural heritage makes salt pans and ideal destination of great value and potential for tourism and related job opportunities, representing therefore a driving factor for the development of the local communities.

The project aims to tackle the problem of the growth of these particular nature areas by promoting a sustainable tourism, able to preserve and value their biodiversity, ecosystems, landscape, quality local salt production, traditions, customs, crafts and ancient structures. Such ecotourism allows the boosting of local economic development in terms of providing revenues and employment, which in turn allows great support for proper natural and cultural heritage conservation.

Linkages with NATURA 2000

The saltworks of Cervia and Comacchio in Italy, and the saltworks of Sečovlje and Strunjan in Slovenia, are all Natura 2000 sites. Characteristic of saline ground in the pans are halophytes or salt-loving plants, which need high salt concentrations. The project area includes typical habitats of Mediterranean saltworks, such as 1310 *Salicornia* and other annuals colonising mud and sand, 1420 Mediterranean and thermo-Atlantic salt marshes and salt meadows (*Sarcocornetea fruticosi*) and 1410 Mediterranean salt meadows (*Juncetalia maritimi*).

Shallow ponds, dykes, islands and the large diversity and dynamic of the saltpans ecosystems make them crucial sites for different species, especially birds. The project saltpans are home to hundreds of species of birds. They are important breeding place for the Black-winged Stilt, the Kentish Plover, the Pied Avocet, terns and gulls. The four saltpans also support internationally important numbers of many water and shorebirds in migration and wintertime.

By promoting sustainable tourism, the project avoids negative impacts of more commercial forms of tourism on habitats and species, among which those listed in the Habitats and Birds Directives. It also generates knowledge, awareness and income triggering a feedback loop, which engages authorities and the wider community in investing in the natural and cultural heritage conservation as a basis to enable a sustainable development of the area.

Stakeholder involvement

To be able to appreciate, and consequently protect a territory, knowledge is necessary. Therefore, the project was promoted among local stakeholders, in particular among young people, along with knowledge about saltworks' nature, historical and cultural value and a culture of eco-sustainable and responsible tourism.

To achieve this objective both the schools of the territory and the universities were mainly involved in a number of activities.

- *Didactic-scientific courses for schools*: 12 hands-on laboratory activities to bring pupils to the knowledge of the importance of the "salt pan environment" created by man to face, over the centuries, the demand for salt and which now hosts rare and fragile ecosystems.
- *Training activities for teachers*: four workshops focusing on the ecosystem, the salt production, the history, and the culture of the salt pans.
- *Didactic-scientific courses for universities*: four summer camps involved 40 researchers/senior students in order to deepen in the field the environmental and naturalistic knowledge acquired in degree courses applying them to fragile and complex areas such as those of salt pans.

People working in the saltpans were also engaged in the elaboration of the guidelines to enhance the sustainable development of each salt pan through meetings and interviews.

Results and achievements

The aim of the project was to enhance the salt-based civilization from a historical, cultural, environmental and tourist point of view. To this aim, activities were focused at **encouraging** a sustainable/slow tourism

joined with nature conservation, traditions maintenance and salt production, and at sensitising local population on the environmental, economic and cultural heritage represented by the saltworks.

The main activities carried out were:

- To equip the management authorities with "*Guidelines for the eco-sustainable valorisation of the saltworks*". The guidelines identify concrete and specific actions for each saltpan to increase their tourism activities in a sustainable way. They also identify common good practices about management, salt production and tourism activities to improve the environmental performances and ensure the best protection of biodiversity.

- Implementation of some actions proposed in the guidelines in each saltwork as *four pilot projects* to enhance fruition. In the Strunjan Saltworks the bank and the pedestrian way were rebuilt and a new bridge was built as a new access point to the salt pans. The little harbour for fishermen was rebuilt to avoid the mooring of fishermen's boats and to preserve the inner side of the lagoon. A 2-km long wooden walkway was built right across the marshes in the Sečovlje Saltworks, allowing visitors to go right inside the salt pans. In the Comacchio Saltworks the 16th-century building "Red Tower" was renovated and transformed into a prime location for bird watchers, making possible to create new itineraries. Furthermore, a new path in electric minibus that goes on to discover the salt pans was organised. In the Cervia Saltworks the old "Hexagonal Tower" of the Waterworks was recovered and transformed into point of departure for a cultural itinerary within the saltworks. Furthermore, a mooring area was realised in the old canal connecting Old Cervia to the sea, allowing people to reach the heart of the saltworks with electric boats.

- Promotion and marketing activities targeting tourists and inhabitants. A series of study visits were organised to discover the fauna and the flora characterising these territories, as well as the production, processing and marketing of salt. Visits were focused on specific activities: birdwatching, naturalistic photography, treasure hunt, etc. Four local events called "Salty Tastes" were planned by restoring popular tradition's memory, and by carrying out conferences, workshops, guided tours, photographic exhibitions, cooking workshops and salt-based tastings. Both visits and events were widely attended thanks to the press releases issued to local, regional and national press. A promotional brochure with environmental, historical and tourist information on the salt pans was published in 40,000 copies and the promotional video "The White Gold" was produced.

The project lead to an increase in the number of visitors of about 10%. Many activities of the project required the employment of qualified people: the creation of a team of experts for the analysis of the territory, such as biologists, architects and tourism experts; a qualified staff for the didactic-scientific courses and the training workshops. The saltworks project has also led to the creation of new job opportunities, namely to a 5% increase in the employment rate as far as the environmental-tourist business is concerned, and to a general improvement of the tourist development as well as of the eco-friendly use of the areas with a consequent larger involvement of the local stakeholders.

Integration with other initiatives

The project is part of a wider strategy pursuing the enhancement of the Saltworks, started more than 10 years ago and funded through various European funds. It integrates with a number of important initiatives in the four saltpans aimed at strengthening the synergies between environmental conservation strategies and growth strategies of these areas.

The project is complementary to the following initiatives, which are previous or contemporary to the project:

- Project LIFE00 NAT/IT/007215 *"Comacchio – Environmental restoration and conservation of the habitat of the Salt-pan of the SCI Comacchio Marshes"* (2001–2006). It aimed to rehabilitate the salt marshes and recover the habitats and species associated with them, by re-establishing water circulation and re-starting the salt works on a small scale for educational purposes.
- Project *"Signs of the past, traces of the future"* Communication and information plan on the natural and cultural heritage of the Po Delta was funded by RDP 2007–2013 (through LEADER). It realised excursions, guided tours, meetings and workshops for tour operators; new paths and itineraries; promotional and tourist material.
- Project *"SLOW TOURISM – Valorisation and promotion of slow touristic routes between Italy and Slovenia"* (2010–2013) was funded by the European cross-border Program Italia-Slovenia 2007–2013 and aimed at increasing and promoting slow tourist itineraries. The identified itineraries include the salt pans in Cervia and in Comacchio. The guidelines produced in the Saltworks project have been also based on the "guidelines for the slow tourism" produced under this project.
- Project *"School-oriented Interactive Identification Tools (SiiT): exploring biodiversity in a cross-border area"* (2011–2014). Funded by the Cross-Border cooperation Programme Italy-Slovenia 2007–2013 aimed to enhance the knowledge of biodiversity providing schools and universities, amateurs and citizens of innovative tools for the identification of plants, animals and other organisms. In particular, two portals have been created to help recognise the flora of the Cervia saltpans.
- Project *"Tourism infrastructure – Raising the competitiveness of the tourism economy"*. Funded through the European Regional Development Fund, the project in 2013 renovated two old salt pans houses in the Strunjan Saltworks. One house has become a visitor centre and the other a place for saltworkers.
- Project LIFE09 NAT/SI/000376 *"MANSALT – Man and Nature in Secovlje salt-pans"* (2010–2015). The project aimed at improving conservation status of habitat types and species in Secovlje salt-pans by water regime control and hydraulic management; and raising awareness about the significance of traditional salt-making, which preserves nature and enables sustainable development of the local community.
- Project LIFE10 NAT/IT/000256 *"MC-SALT – Environmental Management and Conservation in Mediterranean coastal lagoons and salt works"* (2011–2016). In the Cervia saltpans, the project restored and improved the water circulation, which also increased salt production; built 14 small islands for birds species; improved tourist fruition by building a bird-watching structure.

Sustainability of project results

The Guidelines for the valorisation of the saltworks identified possible financing sources for implementing the actions promoting tourism. Funding is mainly recognised in the European Agricultural Fund for Rural Development: in Italy to complete the existing tourist paths, create new circuits and to strengthen the system of local festivals; in Slovenia to upgrade the cultural heritage.

Further projects and initiatives were also activated from the partners to implement further actions and practices proposed in the guidelines to valorise the natural, historical and cultural heritage of the Saltworks. In particular, as regards the two Italian salt pans:

- A three-year *"Agreement for the management, fruition and redevelopment of the Comacchio Saltworks"* was concluded in 2015 between the Municipality of Comacchio, the Regional Park of the Po Delta – Emilia Romagna and CADF (Ciclo Integrato Acquedotto Depurazione Fognatura)

SpA, the Delta Aqueduct. The agreement allowed the maintenance and restoration of the Salina's hydraulic circulation to maintain biodiversity and the salt production process on a reduced scale for educational purposes. Other activities include an environmental education project aimed at schools, and a programme of guided tours and workshops for tourists.

- A three-year *"Memorandum of Understanding for environmental, cultural and tourist enhancement of the salt pans of Cervia and Comacchio"* was signed in 2016 between the Municipalities of Cervia and Comacchio, the Regional Park of the Po Delta, and the Cervia Saline Park society. The memorandum aims to harmonise the valorisation actions of the two sites in a single strategic line, favouring synergies and integrated collaborations. It provides for: the protection and enhancement of biodiversity; the activation of joint tourism initiatives focusing on environmental resources and local excellence production; the enhancement of the salt culture in an identity key; the development of synergies for salt production; sharing of experiences and joint planning that draws on European, national and regional funds.

Case study compiled by: Barbara Calaciura, Comunita Ambiente / N2K GROUP

Sources of more information

- **The project website: http://www.parks.it/saltworks/**
- **The project webpage of the Sečovlje Salina Nature Park: http://www.kpss.si/si/o-parku/naloge-parka/projektno-delo/saltworks**
- **The project webpage of the Delta 2000 Soc. cons. S r.l.: https://www.deltaduemila.net/site/index.php?option=com_content&view=article&id=378%3Aprogetto-saltworks-valorizzazione-ecosostenibile-delle-saline-tra-italia-e-slovenia-&catid=1002%3Aprogetti-attivati-nel-2011&Itemid=23&lang=it**
- **The website of the Comacchio Saltworks: https://www.salinadicomacchio.it/**
- **The website of the Park of the Salina of Cervia Society: https://www.salinadicervia.it/**

Natura People: engaging with people to build a sustainable future for natural heritage of Natura 2000 sites

Name of the Interreg Programme: Interreg 2 seas programme.

Period of implementation: April 2010 – June 2014

Countries covered and beneficiaries: The Royal Society for the Protection of Birds (RSPB) (UK) was the lead partner, working with Province of West Flanders (Belgium), Province of Zeeland (The Netherlands) and Natuur- en Recreatieschap de Grevelingen, (the Netherlands)

Project budget: €4,522,973, EU Funding: €2,261,486

Minsmere nature reserve, UK.

Project background

The Natura People project aimed to ensure the long-term protection of the natural environment by demonstrating the economic value that coastal Natura 2000 sites can play in strengthening and diversifying rural economies and alleviating pressures placed upon them. The project aimed at promoting sustainable recreational options that also had an educational character for local stakeholders and visitors equally and at involving local businesses.

More specifically, the project had the following objectives:

- Develop an economic model and case studies to demonstrate the economic value of Natura 2000 sites.
- Influence and engage with policy makers to support sustainable development and the natural environment
- Develop a transnational network of volunteers and visitors to share bird sightings, experiences and enthusiasm for the partner sites
- Integrate Natura 2000 sites within local economies by engaging with local businesses and developing partnerships with the tourism sector.
- Create innovative strategies to attract more visitors and broaden the type of people attracted to the sites.
- Improve visitor experience at each partner site by improving the facilities, activities and access so as to reach 1,130,000 visitors during the project's lifetime.

This international cooperation was sought after in order to allow partners to collaborate on common approaches to visitor engagement and on modelling of nature's economic values. Pilot actions were implemented in each of the areas, and experience was then shared among partners and further actions were built upon that experience.

Linkages with NATURA 2000

Four areas in the southern North Sea were targeted by the project, all of which are coastal sites and host significant populations of avifauna. However, no particular habitat type or species was specifically targeted by the project. The project allowed for a better understanding of the economic values and of the ecosystem services of the Natura 2000 network, and thus its better acceptance among local stakeholders.

Minsmere Nature Reserve (UK) is both a SPA and SAC; it consists of a coastal lagoon among other habitats, and is notable for hosting bird species such as Eurasian Bittern (*Botaurus stellaris*), European Nightjar (*Caprimulgus europaeus*), Western Marsh Harrier (*Circus aeruginosus*) and Pied Avocet (*Recurvirostra avosetta*).

Zwin Nature Park (Belgium), a SPA and partly also a SAC, is an area of saltmarshes and mudflats with a dune system and polders with halophile creeks and grasslands, reedbeds and canal fringes with reed. The dunes and saltmarshes extend across the border into the Netherlands.

Waterdunen (The Netherlands) is a newly-created nature and recreation reserve, whose initial aim was coastal reinforcement; it borders a marine Natura 2000 site but the terrestrial part is not within Natura 2000. The fourth site, the Grevelingen (The Netherlands) is a Natura 2000 site: its marine part is fully a SPA/SAC, while small segments of its terrestrial part are also Natura 2000. The nature site of Grevelingen is a result of man-made interventions for coastal protection; at its heart lies the saline lake Grevelingen, framed by two islands and two dams. It is bordered mainly by dykes with islets, sand-dunes and wet meadows. The site hosts a large variety of protected bird species.

Stakeholder involvement

Local businesses were a key local stakeholder group that was directly targeted by the project. Close partnerships were set up with this stakeholder group by means of the “Ambassador” initiative, which aimed at enhancing the businesses sense of ownership of the Natura 2000 sites (for more information on the Ambassador initiative see section below). The involvement of local businesses early on in the project allowed use of local experience and knowledge; it also allowed for the development of more sustainable and supported solutions.

Particular attention was also paid to the visitors of the areas. New, innovative ways of engaging with them were implemented. For example, the Province of West-Vlaanderen started people engagement work at Zwin using mobile information points to interact with visitors on the reserve and in the nearby town of Knokke-Heist. New learning facilities built to engage with young people were also established. Policy makers were also involved through tailor-made workshops and press events with politicians.

Overall, a wide array of communication means (printed material, social networks, internet, press, workshops, etc.) were used to convey the project’s messages not only to the aforementioned key stakeholder groups but also to a wider array of interest groups.

Results and achievements

The project focused on two main sets of actions:

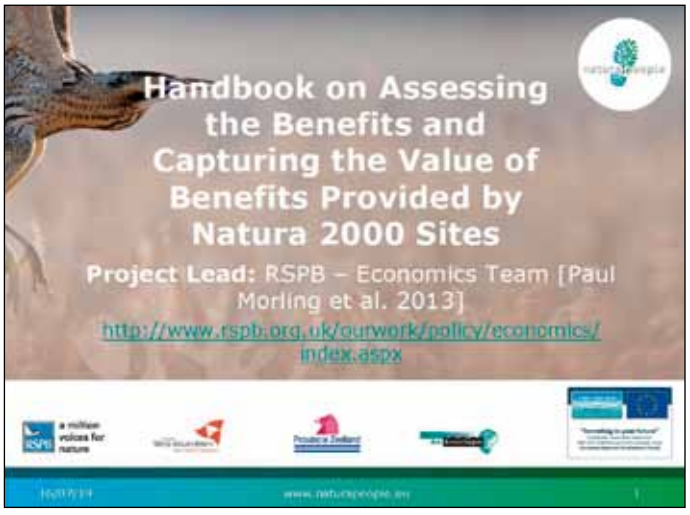
- First, the economic value of nature was measured and demonstrated. In order to achieve this, site case studies were conducted at Zwin, Waterdunen and Grevelingen areas and a report on the Economic Benefits and Income Opportunities for Ecosystems in Natura 2000 sites in Europe was produced[45]. The report showcased the economic benefits of nature reserves and their relationship to the local economy. The findings were incorporated into the Guidance Manual for Assessing Ecosystem Services at Natura 2000 sites[46], the purpose of which was to provide a practical guide to the key steps involved in identifying, assessing, and communicating the value of ecosystem services; the manual was promoted as a learning tool to site managers across the 2 Seas areas.
- Second, business networks were developed. All partners engaged with local businesses to build closer working relationships. An Ambassador course was set up in order to engage with local entrepreneurs in the tourist sectors, where they were presented with information about nature, landscape, culture, history and other facts about the area. They in turn shared this information with their own business contacts and became Ambassadors for the area. Furthermore, during the courses they formed networks between them, which in turn led to several joint initiatives.

The project led to the following outcomes:

1. Appreciation of the natural environment and wellbeing of local people was enhanced. The project activities modified people's attitudes and perceptions towards N2000 sites, protected species and habitats.
2. Quality experiences provided encouraged tourism visitors to these sites and the surrounding areas, thus leading to higher visitation rates and increased revenues for the local communities and businesses.
3. Local businesses increased their skills and set solid networks focused on the natural features of the N2000 sites.

Integration with other initiatives

Three of the Natura People partners – RSPB, Province of West Flanders and Natuur- en Recreatieschap de Grevelingen – are partners in the CaRe-Lands cluster project[47]. This project is sharing knowledge about carbon reduction options on protected nature areas, including using biomass as an energy source. Natuur- en Recreatieschap de Grevelingen is the Lead Partner of the project, which also includes four partners from other IVA 2 Seas projects such as the STEP, MultiFor and Balance projects. The RSPB is bringing its expertise from both Natura People and Balance to the CaRe project.



45 http://www.naturapeople.eu/sites/www.naturapeople.eu/files/u24/7__ce_delft_-_economic_benefits_and_income_opportunities_for_ecosystems_in_natura_2000_sites_in_europe.pdf
46 http://ww2.rspb.org.uk/Images/natura_2000_guidance_manual_tcm9-399208.pdf
47 http://www.care-lands.eu/

The partners are also involved in a number of other Interreg projects, including REECZ (PP2 – Recreation and Ecotourism in the Zwin Area). The partners are sharing information on the findings of the Natura People project with their colleagues and partners in other projects, to ensure the results, particularly around Ecosystem Services, can be used elsewhere when appropriate. Results, outputs and experience were also shared with the BirdLife Partnership.

Sustainability of project results

The implementation of the visitor engagement strategies and business development plans created by the project ensure long lasting effects of the project. A post-project Communication Plan was elaborated to provide the structure for the dissemination of the project's results in partner sites/countries. The Minsmere nature reserve has grown its income sources significantly across all streams in order to ensure sustainability of delivery after the project's end. The ambassador networks were maintained and further developed by the Belgian and Dutch partners as there was significant interest from the local businesses. The partners continued their collaboration and building upon their joint experience through the CaRe-Lands project.

Case study compiled by: Mariella Fourli, Ecosystems LTD / N2K GROUP

Sources of more information

- The project website: www.naturapeople.eu
- Project webpage on the KEEP.EU database: https://www.keep.eu/project/14920/natura-people-engaging-with-people-to-build-a-sustainable-future-for-natural-heritage-of-natura-2000-sites
- The Minsmere Nature Reserve website: www.rspb.org.uk/reserves/guide/m/minsmere
- The Waterdunen Nature Reserve website: http://www.waterdunen.com/

Central Europe Ecotourism (CEETO) project

Type of Interreg Programme: Interreg Central Europe Programme

Period of implementation: Three years

Countries covered and beneficiaries: The project involves a total of 11 partners from six countries: Italy, Germany, Austria, Hungary, Slovenia and Croatia. The lead partner is the Emilia-Romagna Region – Protected Areas, Forestry and Mountains Development Department from Italy.

Project budget: €2.8 million

Fields in Monte Cimone.

Project background

Tourism is an economic activity that is strongly driven by natural features of Protected Areas (PAs). However, when poorly planned and managed, tourism activities can have negative direct and indirect pressures on natural resources and protected features. In addition, conflicting situations can arise with local resource users (water, land, waste, etc.). The CEETO project started out of a need to improve planning, management and monitoring tools related to tourism in order to make tourism activities inside Protected Areas sustainable, environmentally friendly and a positive boost for nature protection and for socio-economic benefits of the local populations.

The CEETO project's main objective is to protect and enhance the natural heritage of PAs included in the Natura 2000 network by promoting an innovative sustainable tourism planning model, which will reduce usage conflicts, sustain social and territorial cohesion, improve the quality of life of local communities, and encourage the tourism industry to contribute to nature conservation.

The CEETO project aims to elaborate an integrated approach that includes environmental, social and economic aspects, in order to identify and test innovative models for a sustainable tourism approach, able to reinforce the effectiveness of nature conservation policies and measures applied in PAs and to make tourism a real driver for nature protection and for local economic and social well-being. To achieve this, CEETO will implement an innovative governance system for tourism based on a participatory planning approach and involving stakeholders at both policy-making and Protected Area management level.

Similarly, CEETO will build upon the sustainability and participation principles of the European Charter for Sustainable Tourism in Protected Areas (ECST) in order to improve the managing capacities of Protected Area managers and implement a sustainable use of nature the natural resources and protected features. This transboundary project takes into account the fact that pressures from different types of economic activities go beyond administrative borders. The transboundary collaboration aims at establishing a macro-regional approach that, nevertheless, takes into account the local specificities, and is based on the establishment of a long-term partnership.

Linkages with NATURA 2000

The project does not target specific habitats or species; it focuses on the sum of protected features of Natura 2000 sites, and in particular of the eight sites that will be used as pilot areas. The eight sites include mainly river and small lake wetlands, mountainous areas as well as coastal sites.

Stakeholder involvement

The involvement of certain stakeholders is key to the project's success. Two main groups of stakeholders are the Protected Area managers (some of which are partners to the project, others not) and the tourism enterprises operating in the projected areas. The project includes specific actions for the stakeholders such as ad hoc meetings and foresees their regular involvement. For example, the first stakeholder meeting took place in February 2018 in Croatia and aimed at discussing the monitoring of a new ski centre to be developed within the Nature Park Medvednica.

Numerous other tailor-made meetings have also been undertaken involving representatives of local tourism operators, resort administrators and local authorities, as well as representative from other sectors, like agriculture and hunting. Furthermore, in order to share experiences and demonstrate commitment to sustainable tourism, WWF Adria is preparing a strategy for the creation of a permanent network which will include representatives of the Protected Areas, tourism enterprises and other stakeholders.

Results and achievements

The project is yet to fulfil the range of its objectives as it is running until May 2020. The project is divided into four phases.

- Phase 1 involves a diagnostic of the most innovative and successful tools currently in practice for tourism management in PAs in the EU and worldwide. It also involves site-specific analysis of the PAs involved in the ensuing pilot phase, in order to identify local needs and specificities. This phase constituted in the inventorying of planning, management and monitoring tools for sustainable tourism in PAs and resulted in the production of a handbook of successful and innovative practices for a sustainable tourism inside Protected Areas (see link below). A key action aimed at promoting socio-economic benefits falls under this phase, namely a report on the potential socio-economic benefits that are likely to arise from a sustainable tourism approach. This report involves structured interviews with key stakeholder groups.

- The second phase, which is ongoing, involves testing of models of governance of tourism flow within eight pilot Protected areas, which aims to deliver one sustainable tourism action plan per pilot area. In addition, a Capacity Building Workplan will support the Protected Areas managing bodies in the implementation of the Action Plans.

- The third phase aims at building up on the experience gained from the pilot action results and at producing a guidance document to support policy makers at regional, national and international level in tourism planning and management within and around Protected Areas. This will involve internal as well as independent evaluation of the pilot actions, assessment of policy implications of the management and monitoring tools tested, and finally the elaboration of the Guidelines.

The final phase of the project aims at setting up a permanent CEETO network, with a joint strategy and common tools (Strategic Agenda, Manual for Protected Areas on tourism governance models, online platform etc.).

Integration with other initiatives

The project builds upon the baselines set by the European Charter for Sustainable Tourism in Protected Areas, an initiative set up by Europarc Federation. This charter is a methodology with over 17 years of implementation in Europe. According to Europarc, "by implementing the methodology, Protected Areas become an active player in the development of sustainable tourism in their region, through a strong participatory process with their local community and authorities, for the creation of a Sustainable Tourism strategy and five-year action plan".

Sustainability of project results

The CEETO project includes some inherent features that guarantee the sustainability of the project results. On one hand numerous practical tools will be developed (guidance documents, online platform); on the other hand, the project aims at setting a permanent network involving all project partners – the sustainability of this network will be ensured through the common work conducted as well as through the elaboration of a joint long-term strategic agenda. Both elements are key pillars for sustainability of the results.

Case study compiled by: Mariella Fourli, Ecosystems LTD / N2K GROUP

Sources of more information

- **Project website: https://www.interreg-central.eu/Content.Node/CEETO.html**
- **Handbook of successful and innovative practices for a sustainable tourism in Protected Areas in English (exists also in four other languages): https://www.interreg-central.eu/Content.Node/Handook-Sustainable-Tourism-EN-CEETO-Interreg.pdf**
- **More on sustainable tourism: https://www.europarc.org/sustainable-tourism/**

IMPACT – Innovative Models for Protected Areas: exChange and Transfer

Name of the Interreg Programme: Interregional cooperation projects. Environment and resource efficiency (topic)

Period of implementation: four years (April 2016–March 2020)

Countries covered and beneficiaries: Ministry of Agriculture, Livestock, Fishing and Sustainable Development, Regional Government of Andalusia (Spain) is the lead partner. Project partners are EUROPARC Federation (Germany), EUCC Baltic Office (Lithuania), Molise Region (Italy), National Institute for Research and Development in Tourism (Romania) and Regional Natural Spaces (ENRx) (France).

Project budget: €1,498,136, EU funding: €1,223,893

Curonian spit, Lithuania.

Project background

IMPACT is an interregional cooperation project aimed at improving policy instruments for the promotion of sustainable development in European Protected Areas, including Natura 2000, and enhancing the livelihoods of local communities around them. Interregional cooperation, exchange of experience and knowledge transfer between different organisations working in conservation is very useful in helping to identify and agree appropriate models for management, conservation and sustainable use of Protected Areas.

It addresses the following main challenges: (1) developing profitable activities without damaging nature; (2) mediating with stakeholders having different economic and conservation interests; (3) stabilising green jobs during low and medium seasons; and (4) involving different stakeholders in biodiversity preservation.

The initiative is being developed between six partnerships from six countries (Spain, Belgium, Italy, Germany, Romania and Lithuania) and involves 15 pilot Protected Areas, which are also part of the Natura 2000 network. The expected results include:

- Improving spatial and management tools for Natura 2000 sites.
- Increasing competencies of different target groups.
- Raising awareness about natural assets (risks and potential).
- Increasing tourism flows in low and medium seasons.
- Involving young people in biodiversity preservation.

Linkages with Natura 2000

IMPACT aims to promote productive activities in Protected Areas and developing good practices in Natura 2000, focusing on many different habitats and species. Several habitats of Community interest

are targeted. For instance, actions to promote sustainable tourism while protecting dune systems are being carried out in the Danube Delta in Romania and Curonian Spit in Lithuania.

Eco-pasture or controlled grazing as is promoted in some project areas as a means to maintain both remarkable natural habitats and open spaces for fire prevention in forests, e.g. in Collserola (Catalonia) and Haut-de-France region (France). Agricultural habitats also have a significant representation, including olives groves in Andalusia. A marine Protected Area is also targeted in the Baltic Sea (Lithuania), where the creation of a harbour that would threaten natural habitats has been avoided.

Stakeholder involvement

This project includes many different actions in six countries, which involve many different stakeholders. First of all, the collaborative work between Protected Area managers and locals is promoted. Work with volunteers is also being developed in different areas, including for the monitoring of biodiversity in Rodna Mountains (Romania) and working in biodiversity conservation activities in several areas.

An important cooperation is also being developed between the administration, farmers and shepherds, tourism business and local population in general, in order to ensure an effective conservation while promoting local economies and traditional activities. Some initiatives have faced however a difficulty to convince local producers to change or adapt their productive systems, but in general the project has achieved good cooperation with the key stakeholders.

Results and achievements

Given the magnitude of the project and the wide range of actions implemented, some notable achievements are already in place. A number of action plans, meetings, workshops and webinars have been developed under the project. Some interesting result specifically focused on Natura 2000 areas in different countries are briefly described below.

Assessing carrying capacity for tourism
The Danube Delta Biosphere Reserve and the Neuburg-Schrobenhausen District, an important tourism destination in Germany, have assessed their carrying capacities for tourism and integrated their gained know-how into a joint Carrying Capacity Tool that is now available to all partners of the network. Also a digital tourist handbook has been developed.

Promoting local products and conservation of traditional activities
In Nord-Pas-de-Calais Region, the Regional Centre of Genetic Resources (ENRx) presented the first harvest of traditional and/or former regional products and was served to tourists in September of 2017. On the Cap Blanc Nez the economic impact of eco-pastoralism is measured; it is allowing multiple farmers to generate revenue from their sheep breeding.

In Andalusia, there is a plan to showcase the olive oil produced in Protected Areas and the increase of fauna and flora diversity and tourist flows that have also been noticed.

Outdoor activities adapted to different types of visitors
In several natural parks the development of recreational sports and outdoor activities designed for non-sportsmen, for the elderly and for convalescent people have been promoted. In Italy, the cooperative

is currently involved in the provision of services to tourists of the WWF Oasis as well as other public services in these areas. One of the initiatives, the "*Percorso dei Sensi*" (Path of the Senses) developed in Molise is appreciated by all the visitors and not only by people with sensorial and motor disorders.

Working in nature conservation with stakeholders and volunteers

In the Pajūris regional park (Lithuania) representatives of the local community are included into the advisory council of the Littoral regional park. In the Curonian Spit (also in Lithuania) the previous gully created by the human-induced dune erosion was filled and the white dune habitat was restored, while the construction of a harbour in the nearshore of the Baltic Sea identified as threat was avoided.

The Administration of the National Park Rodna Mountains in collaboration with local stakeholders has developed an efficient volunteer management model for biodiversity conservation in Romania, which can be promoted as good participative management practices of Protected Areas.

Integration with other initiatives

IMPACT coordinates with other projects or initiatives in natural parks:

- The Rodna Mountains National Park Administration (Romania) has implemented in the period 2004–2017 more than 26 projects in partnership with 35 institutions, with a total budget of €4,403,500 through more than 15 funding sources.
- Pine Processionary Moth-fighting actions at Molise have been co-worked with LIFE-PISA (€1,108,232): Innovative eco-friendly traps for the control of Pine Lepidoptera in urban and recreational places.
- At Matese Mountains (Italy), the process of area protection is involving local universities, public administrations and WWF network, deriving in a current effective conservation.
- LIFE Olive Alive (€2,856,005) is currently working in Andalusia (2015–2020), as an initiative to increase the profitability of the olive grove by recovering its biodiversity.

Sustainability of project results

Some project achievements are self-sustainable but some further activities will also be required to support the continuation of other results. It is expected that the innovative models implemented in Protected Areas will continue receiving support from local and regional administrations and stakeholders that have learnt from the joint efforts and experiences developed with the IMPACT project.

IMPACT was also created to address regional development objectives and EDRF can continue supporting some of the actions started with the project. Funding through LIFE is also expected to be a potential source to support action lines promoted with the IMPACT project in the next years.

Case study compiled by: Alvaro Garcia Herrero, Atecma / N2K GROUP

Sources of more information

- The project website: http://www.interregeurope.eu/IMPACT/
- The Lithuanian Pajuris Regional Parks website: http://www.pajuris.info/
- LIFE-PISA, Innovative eco-friendly traps for the control of Pine Lepidoptera in urban and recreational places, Italy website: http://www.lifepisa.eu/
- LIFE Olive Alive, Toward the design and certification of olive groves reconciled with biodiversity website: http://olivaresvivos.com/en/homesite/
- WWF Oasis, Guardiaregia Campochiario Regional Reserve in Italy website: http://www.oasiguardiaregiacampochiaro.it/

BIG – Improving governance, management and sustainability of rural and coastal Protected Areas and contributing to the implementation of the Natura 2000 provisions in Italy and Greece

Name of the Interreg Programme: The European Territorial Cooperation Programme Greece-Italy

Period of implementation: Two years (January 2014–December 2015)

Countries covered and beneficiaries: The partners are four regions, one Province and four research bodies from Greece and Italy. The lead partner is the Region of Ionian Islands

Project budget: €4 million

Antipaxos island, Greece.

Project background

The project focused on developing common strategies for biodiversity and natural resource regional governance, management and promotion, mainly in agricultural and coastal ecosystems in various Natura 2000 sites across the region bordering the Adriatic/Ionian seas of both Greece and Italy.

The project arose from a need to coordinate tools and methods in this cross-border area for monitoring changes in flora and fauna in order to be able to provide valuable information for the biodiversity in areas that were not so closely monitored in the past. This in turn will help local and national authorities make well-informed decisions about conservation objectives and measures and develop scientific tools to support/improve the conservation status of species and habitats while stimulating citizens to be actively involved in the protection of the environment.

More specifically, the project identified four specific objectives:

1. Improve cooperation among regional administrations for the monitoring of Natura 2000 species and habitats and to set measures for the next programming period.
2. Set cross-border strategies and support decision-makers for management and valorisation of Protected Areas and Natura 2000 sites.
3. Develop coordinated concrete actions for the management and valorisation of pilot rural and coastal ecosystems, through the implementation of on-the-ground interventions in Greek and Italian parks and/or Natura 2000 sites.
4. Promote sustainable tourism in Protected Areas.

Brackish water lagoon and sea, the Oasis Le Cesine, Italy.

Linkages with NATURA 2000

The project focuses on coastal and agricultural areas along the Adriatic/Ionian seas. It did not target specific habitat types or species, but rather the sum of habitat types and species protected by Natura 2000. The key contribution of the project towards the implementation of the Natura 2000 network was through the establishment of key tools for the efficient monitoring of the sites, which in turn can be used to set and modify accordingly the decision-making processes, i.e. the establishment, follow up and adaptation of the conservation objectives of the targeted areas.

Stakeholder involvement

The key target groups of this project were the regional and local administrations, Protected Area management authorities (where they existed), visitors of Natura 2000 areas, and local populations. Numerous local events and information meetings were organised targeting local environmental associations and cultural associations. Local populations were continuously informed about the project through local TV and radio channels.

Local stakeholder groups, such as private lagoon managers, schools, and even a psychiatric clinic, participated in field actions. For example, the private lagoon managers assisted with the collection of material for the monitoring of the sites, while the schools and the psychiatric clinic have been involved in a long-term collaboration for the maintenance of certain bird observatories.

Results and achievements

The project's actions can be divided into two main categories: on one hand horizontal actions of strategic/planning nature, and on the other hand site-specific actions aimed mostly at visitor management. The main actions undertaken were the following:

- Creation of joint protocols for monitoring species and habitats and development of a biodiversity database and information system.
- Elaboration of centralised register with almost 300 documents/sources on best practices for management of natural resources; this online repository covers best practices on issues such as inter-regional cooperation, management of trans-national projects, ecological restoration, staff training, participatory management, conflict management, etc. A manual explaining the utilisation of the online repository as well as a short document entitled "Guidelines for the management and valorisation of Protected Areas were also elaborated.[48]
- Elaboration of an online decision-making support tool, namely a simulation application that allows conducting experiments in order to simulate population dynamics.
- The running of a transnational 90-hour course for managers of Protected Areas, one part conducted in Greece with field visits and one part conducted in Italy.
- Design and creation of visitor infrastructure (trails, observatories, Port Museum of Tricase).
- Creation of a cross-border portal for touristic promotion; this involves the creation of a platform accessible by mobile phones, providing visitors necessary information (map, what to see, ecological information) for eight Natura 2000 sites (six in Greece, two in Italy).
- Organisation of an international workshop entitled "Dissemination of best practices about the European Charter for Sustainable Tourism in Protected Areas".

Overall, the project achievements can be described as follows:

- Reinforced cooperation to respond to common issues related to biodiversity monitoring and risk prevention via the coordination of administrative entities at different levels, the definition of common standards for biodiversity monitoring and the creation and use of a biodiversity database.
- Improved understanding and management capacity from local administrations through the collection and analysis of best practices, creation of decision-making support tool, and capacity building of managers of Protected Areas through joint training.
- Supported and enhanced sustainable tourism through the provision of better visitor infrastructure and through the design of common touristic routes and mobile applications accessible to all visitors. Better tourism support opportunities were also supported through the promotion of sustainable tourism best practices.

Integration with other initiatives

Many traditional agriculture areas can be found within the Natura 2000 sites targeted by the project. Olive groves cover significant parts of those areas – olive and olive oil production are key economic activities for the targeted areas, both in Greece and Italy. In recent years, a key threat to agricultural diversity and associated biodiversity stems from the proliferation of the Xylella bacteria, which desiccate the olive trees as well as other crops (vines, fruit trees, etc.). The Xylella bacteria were first detected in the EU around 2013 in Puglia, Italy. The project partners undertook various contacts with

48 http://big-project.di.ionio.gr/best-practices.html

agricultural authorities and research institutes both in Italy and Greece to obtain information on the bacteria and its prevention and on precise prevention measures to be applied in the target sites.

Sustainability of project results

The project ensured sustainability of results on two levels:

i) At regional level results were embedded in local policies. The project set the necessary requirements and provided helpful tools to allow Protected Area managers to identify, monitor and adapt the various sites' conservation objectives. It also contributed in providing data to meet national requirements about regular monitoring of protected habitat and species.

ii) At local level the concrete site actions and online platforms improved the sustainable tourism demand.

In Greece, a positive evolution is the recent creation of management bodies for all Natura 2000 areas. The areas targeted by the BIG project did not have at the time of the project's implementation management structures; the new management bodies will now be able to take up the monitoring tools and decision-making support systems that have been established by the project.

Due to the successful completion of the project, the partnership scheme has agreed on future cooperation in the next programming period. A BIG2 proposal is currently under elaboration, with an estimated budget of about €1.2 million. In Greece, the management bodies of the Natura 2000 sites targeted will become key actors in whatever interventions/actions concern their respective sites.

Case study compiled by: Mariella Fourli, Ecosystems LTD / N2K GROUP

Sources of more information

- **The project websites: http://big-project.pta.pde.gov.gr/ and http://big-project.di.ionio.gr/ and http://www.servicecentrelifewatch.eu**

PHAROS4MPAS – Blue economy and marine conservation: safeguarding Mediterranean MPAs to achieve good environmental status (GES)

Name of the Interreg Programme:
2014 - 2020 INTERREG VB Mediterranean. Thematic Action 6d

Period of implementation:
Feb 2018–Aug 2019

Countries covered and beneficiaries:
10 countries involved: Tunisia, Malta, Spain, France, Belgium, Italy, Slovenia, Croatia, Albania, Greece. 8 core partners and 9 associated partners, led by WWF France.

Project budget: €1,179,496 EU funding: €1,002,572

Dolphins in the shipping lane

Project background

Blue growth in the Mediterranean Sea has been gathering momentum for several years now. The influence of so many human activities within a closed environment is however considerable, and has led to significant impacts on the Mediterranean's unique marine biodiversity. According to WWF, 41% of marine mammal populations have already been lost and 43% of the Posidonia seagrass beds have been degraded or destroyed.

More and more Marine Protected Areas (MPAs) have been designated over the last four decades with the aim of protecting this important but depleted resource. Today, they cover around 10% of the total Mediterranean Sea area. Most of the Marine Protected Areas (MPAs) are also designated Natura 2000 sites and vice versa.

In practice, however, many of these MPAs are not being sufficiently protected or managed and continue to be eroded away by a whole range of different activities. This is not only hampering the implementation of the EU Nature Directives but also preventing the Mediterranean from reaching a good environmental status under the Marine Strategy Framework Directive.

Project aims and objectives

Many EU projects and other initiatives have published studies and recommendations on MPAs and their interactions with various economic sectors but this information was often very dissipated and poorly publicised, and Mediterranean integrated approach was lacking.

The aim of the PHAROS4MPAs project, led by WWF France in partnership with 16 other organisations, was therefore to capitalize on existing initiatives and resources and ultimately deliver an integrated

Leisure boating can be a problem for marine protected areas if not regulated

framework for recommendations on the necessary practical collaboration between Mediterranean MPAs and the maritime sectors.

The PHAROS4MPAs focused specifically on the following 7 maritime sectors of the Blue Economy:

- Maritime transport and industrial ports
- Cruise
- Offshore wind farms
- Aquaculture
- Small-scale fisheries
- Recreational fisheries
- Leisure boating

The work involved three key stages:

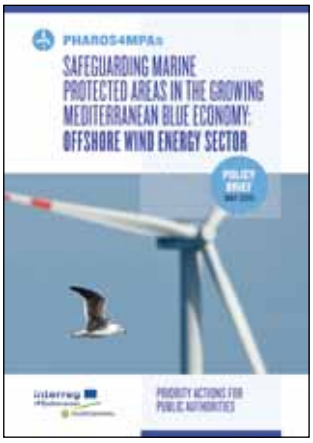
1. Building the project's capitalization baselines and recommendations;
2. Producing the recommendations and building the capacity of the partners to be the ambassadors of the recommendations content;
3. Disseminating the baseline reports, recommendations and policy briefs to the key target groups in order to convince them to apply the recommendations to their sector and to help ensure their take up during future development initiatives.

Stakeholder involvement

The starting premise of the project was to put all parties on an equal footing, from MPA managers, to MSP authorities and business sector representatives, in order to develop a set of practical recommendations for regional stakeholders on how the environmental impacts from these key sectors can be prevented or minimized.

Each has an important role to play and will be the key vectors for following up on the recommendations. The Mediterranean MPA managers for instance were encouraged to engage in planning processes, monitor impacts and integrate recommendations on the Blue Economy interactions into MPA and Natura 2000 management plans. National authorities meanwhile were incited to promote the implementation of ecosystems based MSP- ICZM plans, and to introduce or implement legislation that will sustainably regulate the interactions of the different sectors with MPAs.

Maritime business sectors, on the other hand, were encouraged to endorse and implement the best practices identified through the project and cooperate with national and MPA authorities in order to co-develop strategies to avoid or at least minimize impacts on marine biodiversity.



Key Achievements

The project delivered in total 7 capitalisation baselines, 7 recommendations and 7 policy briefs for the various sectors mentioned above. It also published national or regional reports for seven countries in the Mediterranean (Slovenia, Croatia, Albania, Greece, France, Spain, Italy).

A user friendly online tool was also developed for MPA managers, public authorities, planners and economic operators to support the operationalization of the recommendations and to facilitate their future updating.

The project deliverables were widely disseminated via various international conferences, dedicated workshops and targeted meetings with different interest groups and stakeholders to ensure maximum outreach and uptake.

Sustainability of the project results

Although the project only finished in January 2020, it has already had an important impact and uptake. The recommendations were adopted and distributed by MedPan and webinars and training sessions continue to be organised throughout the region.

The business sectors have also become increasingly engaged in the process through various fora, such as the EU aquaculture advisory group, the European Boating industry, and national capitalization meetings. The France Energie Eolienne has also officially endorsed the project's recommendations for offshore Wind energy.

Overall the project should make a very significant practical contribution to enhancing the management effectiveness and networking for Mediterranean MPAs, and so lead to a better conservation of marine biodiversity and natural ecosystems, taking into account the complex ensemble of human activities developed within the Blue Growth perspective and their interaction with protected areas and marine ecosystems.

Case study compiled by Kerstin Sundseth, Ecosystems LTD / N2K GROUP

Sources of more information

- project webpage: https://pharos4mpas.interreg-med.eu/
- https://pharos4mpas.tools4msp.eu/
- WWF report Blue Growth in the Mediterranean Sea: The Challenge of good environmental status

PANACeA – Streamlining Networking and Management efforts in Mediterranean Protected Areas for Enhanced Nature Conservation and Protection

Name of the Interreg Programme: 2014 - 2020 INTERREG VB Mediterranean. Thematic Action 6d

Period of implementation: Nov 2016– Oct 2019

Countries covered and beneficiaries: 7 Partners in 4 countries (Spain, France, Italy, Montenegro)

Project budget: €1,722,153 EU funding: €1,463,830

The Mediterranean Sea has a rich marine biodiversity

Project background

Numerous Interreg projects are underway across the Mediterranean Sea to study various aspects of marine nature biodiversity and to enhance the management and protection of this important natural resource. Each project produces valuable studies, tools, protocols and best practices that will be of interest to a wide range of stakeholders (policy makers, practitioners, NGOs and the researchers) across the Mediterranean and beyond.

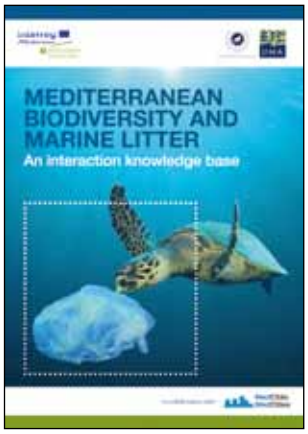
PANACeA is a 'capitalisation' project that aims to increase the visibility and impact of these on-going projects and build a community of nature conservation stakeholders across the Mediterranean in order to streamline the networking and management efforts of MPAs.

The main thematic focus areas include coastal and marine management, biodiversity monitoring, sustainable use of natural resources (such as fisheries), management of protected areas, climate change adaptation, impacts of pollution on biodiversity (particularly marine littler), governance, trans-boundary cooperation and scientific and innovative methodologies.

Links with Natura 2000

Altogether 70 protected areas, covering over 100,000 km2 (including the Pelagos Sanctuary) have been actively engaged in this initiative. They are all targeted in one way or another by the 12 Interreg marine biodiversity projects. These protected areas have various protection categories: national parks, natural parks, Natura 2000 and RAMSAR sites.
Through the network created by PANACeA, concrete transferable actions and tools are being developed for marine protected areas. These will have a much wider benefit for EU protected species, habitats and Natura 2000 sites throughout the Mediterranean Sea.

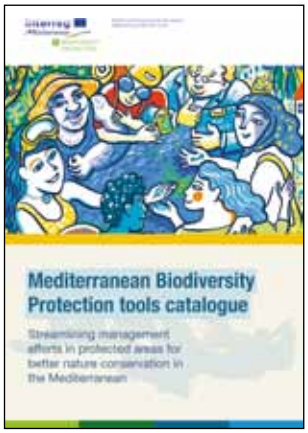
Project aims and objectives

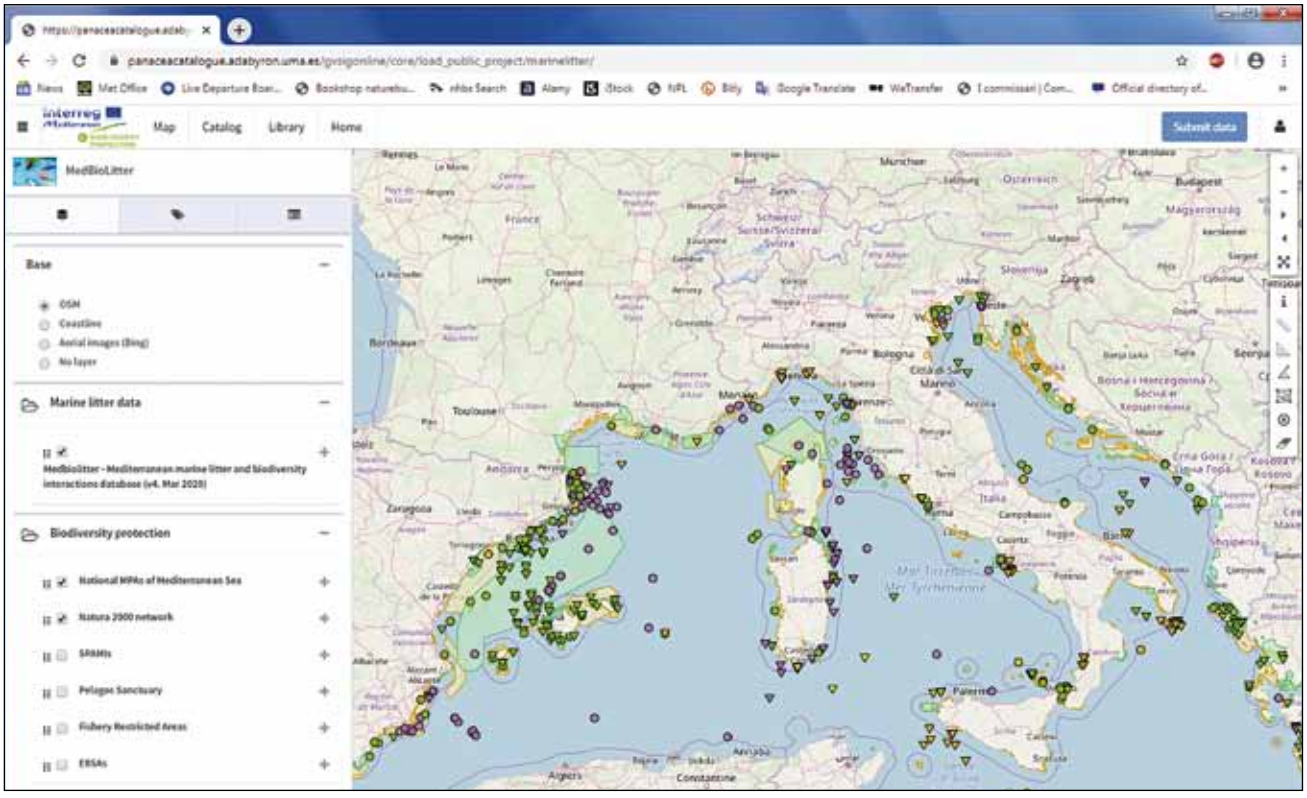


Specifically, the PANACeA projects aims to synthesise outcomes and experiences from the 11 other on-going projects (see list) and produce joint recommendations targeting the gaps and actions needed for better biodiversity management and more effective policy implementation. It also aims to develop a long-term capitalization tool and collaboration platform to ensure evidence-based policy enforcement and promote an ecosystem-based multi-stakeholder approach.

To contribute to these objectives, the project set up three dynamic working groups:

1. WG1 on biodiversity protection and management with a focus on pollution, climate change, cumulative impacts and trans-boundary governance of ecologically important areas;
2. WG2 on sustainable use of natural resources with a focus on co-management and small-scale fisheries in protected areas; in particular the working group aims to
3. WG3 on integrated ecosystem monitoring and management, with a focus on land and sea interactions and wetlands.





https://panaceacatalogue.adabyron.uma.es/gvsigonline/core/load_public_project/marinelitter/

Table 4. The 11 Interreg MED Biodiversity Protection Thematic projects covered by PANACeA (which is considered the 12 project) https://panaceacatalogue.adabyron.uma.es/gvsigonline/core/select_public_project/

ACT4LITTER	Joint measures to preserve natural ecosystems from marine litter in Mediterranean Protected Areas
AMAre	Actions for Marine Protected Areas
ConFish	Connectivity among Mediterranean fishery stakeholders and scientists for connectivity
EcoSUSTAIN	Ecological sustainable Governance of Mediterranean protected areas via an improved Scientific, Technical and Managerial Knowledge Base
FishMPABlue2	Fishing governance in Marine Protected Areas: potentialities for a Blue Economy 2
MEDSEALITTER	Developing Mediterranean-specific protocols to protect biodiversity from litter impacts at the basin and local Marine Protected Area scales
MPA-ADAPT	Guiding Mediterranean Marine Protected Areas through the climate change era: Building resilience and adaptation
PHAROS4MPAS	Blue Economy and Marine Conservation: Safeguarding Mediterranean MPAs in order to achieve Good Environmental Status
PLASTIC BUSTERS MPAs	Preserving biodiversity from plastics in Mediterranean Marine Protected Areas
POSBEMED	Sustainable management of Posidonia beach-dune systems in the Mediterranean
WETNET	Coordinated management and networking of Mediterranean wetlands

Through these working groups and thanks to a wide range of other workshops, conferences, bilateral discussions, webinars, presentations and contributions to regional key reports, the project has been actively:

- Integrating knowledge and data on current pressures and impacts, including significant biodiversity features, to help define priority measures and management plans towards protection and conservation. The report on Mediterranean biodiversity and marine litter is one example of a practical outcome of this work *http://www.etc.uma.es/mediterranean-biodiversity-interaction-with-marine-litter-new-knowledge-base/*
- Synthesising metadata and information from different sources, existing databases and formats, using INSPIRE standards and specifications and making them available through an online Mediterranean Biodiversity Protection Knowledge Platform as a repository and analytical tool for the community and the Interreg Med programme. The example below is of an interactive GIS database on marine litter.
- Disseminating common guidelines for monitoring and assessing major pressures at regional and local scales.
- Promoting transfer and adoption of participatory methods and best practices for protected areas benefiting from existing human networks of protected area managers for an effective ecosystem-based approach to biodiversity protection and management.
- Advocating for an ecosystem approach (EcAp) to the management of natural resources by raising awareness of, and addressing, cumulative transboundary impacts and fostering co-management solutions at multiple sectors and geographical scales, with particular attention to the integration of several ecological do- mains, EBSAs (Ecologically or Biologically Significant Marine Areas according to the Convention on Biological Diversity) and relevant ecological functioning units.
- Providing guidance for the prioritization of actions towards a more coherent, representative, and effective network of MPAs in line with the UN Environment/MAP SPA/RAC 2020 Mediterranean MPA Roadmap.

Key Achievements

Thanks to the PANACeA project, a **Mediterranean Biodiversity Protection Community** has been created. It is composed of around 200 organisations across 18 countries that have shared information and exchanged experiences on different topics. Now established, this Community will continue to function beyond the life of the project.

A **Mediterranean Biodiversity Protection Knowledge Platform** was also created to ensure the transfer and dissemination of synthesised relevant outcomes across and beyond the region. Devised as a single entry point to scientific evidence supporting best practice on protected area management and environmental policy making in the region, this platform provides a gateway to the spatial data generated by the Mediterranean Biodiversity Protection Community.

It acts as a knowledge reference (enriched with relevant external sources) on protected areas, ecoregions, and environmental pressures to support regional environmental policy on biodiversity protection, natural resource management, and sustainable growth in Mediterranean protected areas and beyond. The Mediterranean Biodiversity Protection Knowledge Platform can be accessed by anyone interested in the themes of biodiversity protection and the implementation of an ecosystem approach to the Mediterranean.

Sustainability of the project results

At the end of the project, the Mediterranean Biodiversity Protection Community met for a three day encounter in Malaga to share and discuss effective actions under the theme of 'Ecosystems based adaptation: a pulse for transformative changes in the Mediterranean'. This encounter celebrated three years of collaborative work by nearly 200 Mediterranean and European Institutions working to support a more effective management of biodiversity across the Mediterranean.

The Community developed a Mediterranean Declaration for an Ecosystems Based Approach and a common vision for joint action to better manage our natural resources and reduce the multiple pressures and their impacts on Mediterranean biodiversity. This Declaration provides a detailed list of recommendations for policy makers, illustrated by science-based solutions from individual projects.

Both the Mediterranean Biodiversity Protection Community and the Mediterranean Biodiversity Protection Knowledge Platform will continue to function well after the end of the PANACeA project. A new phase is also expected to continue the work until at least 2022.

Case study compiled by Kerstin Sundseth, Ecosystems LTD / N2K GROUP

Sources of more information

- https://biodiversity-protection.interreg-med.eu
- https://www.youtube.com/channel/UC6ouZ8hoAhnNyLK3mafpH_w
- Biodiversity Protection Knowledge Platform
- http://panaceaweb.adabyron.uma.es/
- Mediterranean biodiversity and marine litter: an interaction knowledge base
- http://www.etc.uma.es/wp-content/uploads/PAN_report_Mediterranean-biodiversity-and-marine-litter_LowRes.pdf
- http://www.etc.uma.es/mediterranean-biodiversity-interaction-with-marine-litter-new-knowledge-base/
- https://panaceacatalogue.adabyron.uma.es/gvsigonline/core/load_public_project/marinelitter/
- Mediterranean Biodiversity Protection tools catalogue
- https://biodiversity-protection.interreg-med.eu/fileadmin/user_upload/Sites/Biodiversity_Protection/horizontal_project/5-Deliverables/WP4_Capitalisation/4-2_SystematizingKnowledge/4-2-3_PANACeABestPractices/PANACeA_Tools_Catalogue.pdf

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