



Land-Sea

Sustainability of the land-sea system for eco-tourism strategies



Foto:Mariano Cebolla

Regional Action Plan for the Ebro Delta (Catalonia, Spain)

Part 0 - Introduction

The Land-Sea project aims to favour a more inclusive, effective and efficient processes of regional governance to increase and to encourage the creation of institutional competences and skills for the development of a sustainable coastal system able to preserve natural habitats and contextually to support the development of regional ecotourism strategies.

In Catalonia (Spain), the **Ebro Delta**, the pilot area chosen for Land-Sea project, is the largest wetland in the region and one of the main marshes zones in the Iberian Peninsula. It is still well preserved and with relevant natural and cultural assets that implies optimal conditions to boost ecotourism in the region.

Territorial scope

The territorial scope of the Action Plan is the Ebro Delta, emphasising on the Delta de l'Ebre Natural Park (PNDE), which is understood to be the area encompassed in the environmental protection terms: Natural Park and Plan for Areas of Natural Interest.

- **Natural Park.** The term applied to an area subject to environmental protection is Natural Park, in accordance with the protection categories established in Law 4/1989, of 27 March, on the conservation of natural areas and of wild flora and fauna. In 1983, the Government of Catalonia declared El Delta de l'Ebre Natural Park to be a protected area and expanded it in 1986 through the declaration of the partial nature reserves of La Punta de la Banya.
- **Plan for Areas of Natural Interest.** In addition to the area included in the Natural Park, there is a proportion of the territory included in the Plan for Areas of Natural Interest, which was approved in Decree 328/1992, of 14 December, covering the areas of the Natura 2000 Network and Special Protection Areas (SPAs).

The Ebro Delta lies in the northeast of the Iberian Peninsula and covers the area where the River Ebro flows out into the Mediterranean Sea. The River Ebro is the second largest river on the Iberian Peninsula after the River Duero, with a length of 930 km and a basin of 83,093 km².

Covering an area of 320 km², the Ebro Delta is the largest wetland in Catalonia and encompasses a wide array of environments: river, sea, bays, beaches, dunes, wetlands, riverine woodlands, coastal lagoons, river islands and springs all make up the natural environment and, along with the rice paddies, are home to a large number of organisms that have adapted to the different habitats.



Population

The current population of the Ebro Delta is 56,588 inhabitants, distributed into the towns cited in Table 2. Amposta is the most populous town in the Ebro Delta, concentrating 33.83% of the delta's population (Chart 1), followed by the towns of Sant Carles de la Ràpita and Deltebre, both with a population of more than 10,000 inhabitants. These three towns account for more than 75% of the population of the Ebro Delta. The four other towns (Camarles, l'Aldea, L'Ampolla and Sant Jaume d'Enveja) each have a population of more than 2,500 inhabitants.

Amposta is the capital of the region of El Montsià and also includes the small town of El Poble Nou del Delta, which has approximately 300 inhabitants, in addition to the Eucaliptus housing development, whose very small population percentage significantly increases in the summer season. The town of Deltebre is home to a similarly sized housing development called Riumar. Sant Carles de la Ràpita meets the definition of a beach town.

In the last nine years the population of the Ebro Delta has shown a rising trend that is similar to the rate of Catalonia as a whole and slightly higher than the rate of the province of Tarragona (Chart 2). If the various towns are compared, it is evident that the population increase from 1996 to 2006 was much more pronounced in Amposta (3,242 inhabitants more than in 1996) and in Sant Carles de la Ràpita (2,660 inhabitants more) than in the rest of the towns. The town that has shown least growth in its population is Sant Jaume d'Enveja.

Legal framework

El Delta de l'Ebre Natural Park was declared as such in 1983 through Decree 357/1983, of 4 August, on the declaration of El Delta de l'Ebre Natural Park. It was extended in 1986 through Decree 332/1986, of 23 October, on the declaration of El Delta de l'Ebre Natural Park and of the partial nature reserves of La Punta de la Banya and Sapinya Island.

According to Law 12/1985, of 13 June, on natural areas, protected natural areas in Catalonia are covered by two types of regulatory instruments in terms of their zoning and management.

- The objective of the **Special Environmental and Landscape Protection Plans** is to define the main actions to conserve natural heritage and achieve sustainable development in the area, including general zoning rules and regulations (urban development, exploitation of natural resources, etc.). That is, it is a transversal planning instrument.
- The second instrument is the **Plan Governing Use and Management (PRUG)**, covering mid-term management actions in the protected natural area, in accordance with the Special Protection Plan.

El Delta de l'Ebre Natural Park does not yet have its own special environmental and landscape protection plan or a plan governing use and management. So far, the park has managed its protected area by means of declaration decrees, annual action programmes approved by its governing board, and a management plan (in the period from 2005 to 2009).

The preparation of a Special Environmental and Landscape Protection Plan for El Delta de l'Ebre Natural Park is a highly complex process, given that the area is currently used for a number of purposes (tourism, hunting, fishing, etc.) that depend on a large number of public and private socioeconomic organisations.

Landscape and natural values

The landscape of the delta has a powerful personality; the totally flat terrain gives it a unique appearance. The vast rice paddies, which change according to the seasons (earthy in winter, flooded with water in spring, bright green in summer) dominate the physiognomy of the delta. Along the coast you will find one of the most attractive landscapes in the Mediterranean: extensive lagoons surrounded by reed swamps and rush communities, bordered by huge swathes of salt marshes and wetlands and long, deserted beaches backed by dunes crowned with cordgrass and other plants that are well suited to this environment.



The Ebro Delta is home to a diversity of aquatic environments. The delicate balances established between its marine and continental waters both on the surface and underground are mainly responsible for them.

The Ebro Delta is an important site for flora (740 catalogued species) and fauna (more than 379 bird species and 101 fish species, 25 of them continentals).

Cultural heritage

The Ebro Delta, due to its ecological and geological characteristics, has always constituted a rather hostile environment. This is reflected in its relative dearth of historical heritage. In the area that covers the scope

of the park and the area included in the Plan for Areas of Natural Interest, this has been accentuated and historical traces have often been buried by the natural processes of sedimentation, erosion and subsidence. Despite this, some constructions, objects and customs that have helped to understand the development of this space over the last few hundred years have been conserved:

- **Irrigation network:** the failed construction of a navigation canal on the right bank of the Ebro was key to the start of the cultivation of rice. In the twentieth century the expansion of this crop led to the consolidation of an irrigation system throughout the delta.
- **Watchtowers (twelfth to nineteenth centuries):** they can be found along the entire delta plain. In some areas these towers have barely managed to survive the ravages of time, and, of the three known to have existed, only the one dedicated to Saint John has survived. However, along the old coastline, at Camarles and L'Aldea, there are still some watchtowers from the same period.
- **Salt marshes:** one of the first uses made of the delta was salt extraction. The park contains La Trinitat Salt Marshes, at La Punta de la Banya, and Sant Antoni Salt Marshes, at La Tancada, which were the first to enter into production.
- **Traditional fishing methods:** L'Encanyissada Lagoon conserves Catalonia's oldest professional fishing method, hoop nets, which dates back to the middle ages.
- **Lighthouses:** the fact that it was very difficult to access the natural ports of El Fangar and Els Alfacs meant that this area was one of the points that most need illumination. Three lighthouses were constructed: on Buda Island, at la Punta de la Banya and at La Punta del Fangar, which were selected because they are the most representative geographic points delimiting the lands of the delta.

Economic activities

The socio-economic aspects oriented to ecotourism activities have a central importance in developing this Action Plan as it is a protected area located within inhabited areas, and it is subject to complex relationships between the quest for conservation and the various economic activities that are carried out there. Moreover, much of its biodiversity is actually based on the existence of long-term human activities.

The transformation, caused by man, of the wetlands and of the original salt marshes, started in the late nineteenth century with the introduction of rice cultivation. The natural environments in the delta currently occupy 8,000 ha, while rice farming occupies some 20,000 ha.

The area's agriculture is based, therefore, on rice growing, which thanks to its need for permanent flooding has transformed the area into an extremely important habitat for many waterfowl species. The transformation engendered by the cultivation of rice in the delta is not limited solely to strictly agricultural land. The irrigation infrastructure required by this crop and interconnection with contiguous habitats have had a direct influence on natural areas, affecting their various ecosystems. The hydrological system of the coastal lagoons used to be marked by periods of abundant fresh water and periods of hypersalinity during much of the year. Following the transformation of the delta into rice paddies, the process reversed and the

saline concentration of the lagoons diminished, gradually changing the composition of the plant life and therefore its ecosystems.

Beaches and tourism

The Ebro Delta includes 74 km of sandy beaches, the most demanded product by the visitors, mainly in summer but also in other seasons due to the increasing of outdoor activities such fishing, aquatic sports (sailing, kitesurfing...) and touring with motor homes. But these beaches hold incredible natural values that needs to be protected.



The problems in the beaches are the following:

- Most beaches can be reached by different arrival points, most of them have neither parking spaces nor minimal services, and the signaling is minimal. At times of the year, especially in summer, these places are chaotic and the people are distributed in a disorderly manner, which creates a lot of pressure on the flora and fauna communities of the area and the quality of the visit is very negative.
- This ease of motorized access to the beaches and the lack of resources and instruments to order and drive accessibility mean that vehicles access the beach directly. This causes the proliferation of roads and car parks in the beach that has a major impact on plant communities.
- Many of the beach users arrive by boat from anywhere on the coast. This free and open access all over the coast without predetermined and signposted access areas can create conflicts of interest among users (noise, danger with swimmers, people who practice water sports ...).
- As natural beaches without services, garbage collection and beach cleaning is non-existent or minimal. This causes that any waste, which the visitors do not collect, is accumulated indefinitely with the environmental and visual impact that it causes.
- Visitors, especially the ecotourists, are looking for the prestige and attractiveness of beaches that promise a unique experience, because of its non-urban and natural character. Although this demand is lower than that of the more urbanized beaches, the particular characteristics of this space produce a series of specific beneficial impacts.

The **Regional Action Plan for the Ebro Delta** (Catalonia) following the basis set by the Land-Sea Interreg Europe project focuses on the following strategic objectives:

Objective 1. Improve the coordination and participation of the agents involved in the planning and management of ecotourism in the Ebro Delta, especially in the scope of the Natural Park.

Objective 2. Preserve and recover the heritage of the delta, paying special attention to resources with ecotourism value.

Objective 3. Improve the quality and sustainability of the Ebro Delta's facilities, particularly ecotourism facilities.

Objective 4. Adopt an innovative approach to the creation of ecotourism experiences and their promotion.

Objective 5. Improve the training and awareness of professionals related to the ecotourism sector in order to favour the sustainability and competitiveness of the tourism sector.

Beyond these strategic goals, a cross-cutting and integrated approach should be implemented to:

- Conserve and improve habitats and species of interest in the Ebro Delta.
- Guarantee the infrastructure that is intrinsically necessary for the conservation and enjoyment of natural heritage.
- Improve the natural appearance of the landscape.
- Foster scientific research.
- Establish the relational framework for all the public and private bodies acting in the Ebro Delta.
- Adapt, monitor and improve the legislative scope.
- Foster public use in a rational manner that respects the conservation of the natural area.
- Foster environmental education.
- Disseminate natural and cultural heritage.
- Foster public participation in the park's activities.
- Contribute to the sustainable socioeconomic development of the local population.

The **Action Plan for the Ebro Delta** coastal areas is able to provide a proper development strategy that encompasses ecotourism purposes with the environmental objectives imposed at national and EU level. This Action Plan is not theoretical but actually practical and relevant being related to the true economic feasibility of the Regional development. Specifically, that Action Plan impacts directly to regional development policy instruments such as the **European Regional Development Fund (ERDF) Operational Programme 2014-2020 for Catalonia**, Axis 6: Environmental preservation and protection and efficient resources promotion. Measure 6.3.1. Promote the protection, promotion and development of cultural heritage. Measure 6.3.2.

Protection, development and promotion of natural areas, particularly those of tourist interest. Indeed Catalan Region, with the Action Plan of the Ebro Delta in the framework of the Land-Sea project, has improved the implementation of the *Program for the Promotion of Nature-based Tourism in Natural Protected Areas in Catalonia (NATURCAT2020)*, through proactive measures for the development of regional growth interventions in the sector of ecotourism. This plan includes actions for its recovery on the coast of Catalonia, also integrating protected coastal areas.

Beyond that development aspects addressed, this Action Plan has been developed taking into account several key International and European Directives related to Biodiversity and Integrated Coastal Zone Management:

1. Habitats Directive (92/43/EEC): Member states are legally bound to promote the maintenance of biodiversity by requiring measures to maintain or restore habitats and species listed on the Annexes at a favourable conservation status and introducing robust protection for those while taking in account economic, social and cultural requirements. Designated Natura 2000 sites serve for conservation and restoration of habitats in a good conservation status. The HD together with the BD [10] are the “cornerstones” of the EU’s nature conservation policy.
2. Birds Directive (2009/147/EC): The BD is one of the most important nature legislation pieces, creating a comprehensive scheme of protection for wild bird species naturally occurring in the EU.
3. Water Framework Directive (2000/60/EC): The WFD defines quality by using biological elements together with physical-chemical elements to access good ecological status at the ecosystem level. The achievement of “Good Chemical and Good Ecological Status” or in case of Heavily Modified Water bodies “Good Chemical Status” and “Good Ecological Potential” of inland surface waters (rivers and lakes), transitional waters (estuaries), coastal waters and groundwater is intended.
4. Marine Strategy Framework Directive (2008/56/EC): The MSFD is an integrated framework for the management of marine spaces. The MSFD aims at achieving or maintaining a good environmental status for community waters by 2020 at the latest and contains the explicit regulatory objective that “biodiversity is maintained by 2020” as the cornerstone for achieving Good Environmental Status.
5. Flood Risk Management Directive (2007/60/EC): The FRMD aims to reduce and manage the risks that flooding poses to human, environment, cultural heritage and economics. All inland and coastal waters must be assessed regarding the flooding risk and adequate measures to reduce this flood risk have to be taken. The FRMD needs to be implemented in coordination with the WFD.

Part I – General information

Project: **Sustainability of the Land Sea System for Ecotourism Strategies**

Partner organisation: Direcció General de Turisme (Generalitat de Catalunya)

Other partner organisations involved (if relevant): Agència d'Ecologia Urbana de Barcelona, Parc Natural del Delta de l'Ebre

Country: Spain

NUTS2 region: Delta de l'Ebre (Ebro Delta)

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Part II – Policy context

The Action Plan aims to impact:

- ☐ Investment for Growth and Jobs programme
- ☐ European Territorial Cooperation programme
- ☒ Other regional development policy instrument

Name of the policy instrument addressed: European Regional Development Fund (ERDF) Operational Programme 2014-2020 for Catalonia. Axis 6: Environmental preservation and protection and efficient resources promotion. Measure 6.3.1. Promote the protection, promotion and development of cultural heritage. Measure 6.3.2. Protection, development and promotion of natural areas, particularly those of tourist interest.

One of the specific actions of axis 6 of the ERDF program for Catalonia, is the *Program for the Promotion of Nature-based Tourism in Natural Protected Areas in Catalonia (NATURCAT2020)*, through proactive measures for the development of regional growth interventions in the sector addressed of ecotourism. This plan includes actions for its recovery on the coast of Catalonia, also integrating protected coastal areas.

Using the framework of the Land-Sea Interreg Europe project associated with NATURCAT2020 program, this Action Plan addresses the following strategic objectives:

- Objective 1. Improve the coordination and participation of the agents.
- Objective 2. Preservation and valorisation of the deltaic heritage
- Objective 3. Improve the quality and sustainability of the ecotourism facilities of the Ebro Delta.
- Objective 4. Creation of ecotourism experiences and promotion.
- Objective 5. Training and awareness for sustainable tourism.

Part III – Details of the actions envisaged

ACTION 1 – Innovative coordination and governance improvement of ecotourism sector: ENS | Ecotourism, Nature and Sustainability Forum for ecotourism professionals in the Ebro Delta

1. The background

The professional sector of ecotourism in Catalonia is broad and diverse. The *Program for the Promotion of Nature-based Tourism in Natural Protected Areas in Catalonia (NATURCAT2020)*, defined in 2015 the basis to consolidate this sector, particularly in land-sea and rural areas, throughout collaborative governance, so the first action proposed was to establish the “*Catalan Ecotourism Board*”. Regarding its potential, one of the referential sites for ecotourism activities in Catalonia is the Ebro Delta, despite its complex political and social structure cause a high governance complexity, when managing land-sea resources and local development strategies. From the experiences acquired in the study visits and workshops of Land-Sea project in Varna, Hamburg and the Molise Region arose a common learning about different approaches to good governance in complex socio-ecological systems. Was particularly inspiring the case of Hamburg and management governance of its national park “Hamburgisches Wattenmeer”, also Declared UNESCO Biosphere Reserve, and the links among tourism sector, fishermen, countrymen, cattle ranchers and conservation technicians. Also the experience in the Molise Region currently involved in a participatory process to define a Regional Strategic Plan for the Tourism development of Molise Region.

To transfer this inspiration in a practical manner inside the Ebro Delta coastal territory this Action focuses on the organization of a professional Forum, a participative meeting on the Ebro Delta to debate and propose innovative ways to coordinate stakeholders in Catalonia (and particularly in the Ebro Delta) to improve governance at local level. Departing from the *Catalan Ecotourism Board*, and under the claim “*All-year-round ecotourism*” it is expected a 2-days meeting with round-tables, workshops and field-trips to strengthen links, visions and proposal, throughout land-sea ecotourism stakeholders.

2. Action

This Action will be implemented developing the following activities:

- To define topics of common interest (around Ecotourism, Nature and Sustainability) for stakeholders and the ecotourism professional sector with the impulse of the *Catalan Ecotourism Board*, the participative platform of ecotourism in Catalonia.
- To design an innovative and participative event (Forum), with framework conferences and debates to inspire and reflect on the status of the sector, and present and future challenges in order to improve engaging and collaborative work.
- To develop a productive and outcomes-oriented event (Forum), reinforcing links among relevant stakeholders, presenting innovative initiatives for common work (Eg. *Pecha kucha presentation*

techniques for public-private partnerships), and creative workshops (Eg. Cross-sectoral ecotourism experiences).

- To implement a local “Ebro Delta Ecotourism Board”, a cross-sectoral participative platform to improve local governance of ecotourism on the Ebro Delta region, and other proposals as a result of the Forum ENS.

3. **Players involved**

The players involved in the development and implementation of this Action are:

- Catalan Ecotourism Board
- Catalan Public Institutions: General Directorate of Tourism in Catalonia, Natural Protected Areas Service, Tourism Promotion Agencies, Municipalities, etc.
- SMEs (ecotourism sector);
- Professionals (ecotourism sector);
- Tourism operators;
- Conservation NGO and Foundations;
- Universities and Research Centres
- Ecotourism experts and facilitators

4. **Timeframe**

Two years, from 2019 to 2020 to develop the process in parallel to the framework of the Land-Sea project:

- To define topics of common interest (around Ecotourism, Nature and Sustainability) for stakeholders and the ecotourism professional sector during the first three months.
- To design an innovative and participative event (Forum), with framework conferences and debates to inspire and reflect on the status of the sector, and present and future challenges in order to improve engaging and collaborative work, during six months after the definition of topics.
- To develop a productive and outcomes-oriented event (Forum), during the last trimester of 2019.
- To implement a local “Ebro Delta Ecotourism Board”, a cross-sectoral participative platform to improve local governance of ecotourism on the Ebro Delta region, and other proposals as a result of the Forum ENS, during 2020.

All these activities, particularly the ENS Forum and the implementation of the outcomes obtained have to last on the long term to improve participation and governance in the Ebro Delta, but also in the whole Catalan Region.

5. Costs

85.000€.

6. Funding sources:

ROP ERDF/ESF 2014/2020 of Catalunya Region. Axis 6: Environmental preservation and protection and efficient resources promotion. Measure 6.3.1. Promote the protection, promotion and development of cultural heritage

ACTION 2 – Diagnosis and planning of ecotourism activities along the natural beaches of the Ebro Delta

1. The background

The Ebro Delta receives more than 630,000 visitors a year, which increases anthropic pressure on this natural space, year by year. For this reason, it is absolutely necessary, to develop a proposal (planning) of zonification and management, in order to combine human activities, especially recreational and tourist ones, with the conservation of these natural areas. This is particularly relevant in natural beaches, a priority habitat at European level which is a very fragile and dynamic ecosystem, and very scarce in the Mediterranean coast, also threaten by climate change impacts (increase of tides, winter storms, etc.). The idea for this action was inspired from the participation in the Land-Sea project, especially regarding the lessons learnt from the staff exchange in Molise Region and the field visit to Hamburg, particularly the island of Neuwerk.

Regarding the staff exchange in Molise Region, the similarity with the conditions encountered in the study visit to the dunes of Petacciato to explore results of LIFE+ MAESTRALE evidenced how this model could be used to enhance the Ebro Delta zonification and planning. The preservation of dune habitats and humid brackish areas, as well as the protection of flora and fauna species in the coastal habitats of Molise where some of the best practices learnt. We highlight some actions oriented to protect bat community, like monitoring bat species, and settling bat refugees, but also the re-establishment of the original wetland and the natural flow of water from a drainage channel. The zonification and improvement of public use of these fragile areas, throughout sign-posting and public ecotourism facilities (such as trails and hides) to avoid spread of users (with the degradation of dune and wetland areas), and the promotion of ecotourism on this coastal stripe were also some of the inspiring examples from Molise Region.

On the other hand, the field visit to the island of Neuwerk (Hamburg), in the context of Land-Sea project, allowed to enrich the proposal of this Action for the Ebro Delta, with a new perspective of adaptation to

climate change with the use of soft-engineering infrastructures (*green infrastructures*). This 3 km² tidal island in the Wadden Sea on the German North Sea coast, is encircled by a *naturalised dike*, which is at the same a hiking platform to walk around the island with privileged views over both the North Sea, and the Neuwerk island, an ingenious way to combine flood protection (and climate change adaptation), with recreational uses. Also the mode of transport to reach the island through the low-tide mud flat, was inspiring. It was a Wattwagen, a horse-drawn mud flat coach, from Cuxhaven, a very useful and sustainable decarbonised mode of transport.

2. Action

The aim of this Action is to make a diagnosis and a proposal of zonification for natural beaches of the Ebro Delta, focusing on management and ecotourism activities, in order to make possible to combine the conservation of coastal habitat, bird nesting areas and natural vegetation with recreational respectful and sustainable uses.

This proposal should serve as a model for ecotourism management and use, applicable not only to the Delta but also to other coastal areas with natural beaches in Catalonia, departing from the lessons learned from Land-Sea experiences.

The diagnosis will take into account some concrete practices, inspired by the experience learned through the visit to Hamburg and Molise. The planning of the ecotourism activities has to be based on protecting the territory with green infrastructures like the ones made up in the island of Neuwerk and dunes in Molise. In the Ebro Delta, it is proposed to have protections with dunes to prevent erosion, as a green barrier that will protect the sand and prevent its loss by the entry of water from both the river and the sea, and other natural, non-invasive barriers in the sea. The essence of ecotourism is the promotion of natural values while guaranteeing their protection, and the chosen way to apply in the Ebro Delta is the adoption of green infrastructures and sustainable modes of travel.

The use, as well as the perception of the environment by the visitors, must be reoriented.

This Action will be implemented developing the following **activities**:

- Diagnostic report on the current state of the beaches and the problems associated with tourist uses at different times of the year, both at the level of the environmental impact and in relation to the quality of the ecotourism experience, in particular over frequentation and access roads and access to beaches to prevent motorized circulation within the masses of vegetation on the beach.

We'll study where and how to restore the dunes to act as a natural barrier, either to avoid the loss of sand or to naturalize the spaces. They are fragile areas that must recover their most naturalistic side and minimize the access of vehicles.

Drafting of the Ecotourism Management Plan: A proposal must be made for the arrangement of natural beaches for ecotourism uses in the Ebro Delta, based on detailed mapping and specific sheets for each space, including among other aspects such as mobility / accessibility, the zoning of uses by type

(restricted areas, tourist use areas, etc.), and the necessary facilities and services (control barriers or limitation of access, parking areas, hiking paths, signposting (informative, directional, interpretative, etc.).

In certain areas where the Delta has generated spaces and small islands, to which, as in the case of the island of Neuwerk (Hamburg), access is prohibited to any type of vehicle, we also think about an alternative transport, promoting ecotourism companies.

- Proposal of communication and environmental education campaign: Propose the actions of communication and environmental education to be undertaken (inside the Ebro Delta, but also outside, both for the local population and the visitors).
- Conducting three participation workshops with users of the area and organizations with management responsibilities. The purpose of these workshops will initially be to capture the interests and sensitivities regarding the study proposal, sharing the initial planning proposal to make contributions or modifications to the document and finally present the final document. This action must clearly define the basis for the subsequent execution of the executive project.
- Implementing Ecotourism Management Plan measures (Executive Project): An Executive Project with prioritised actions to arrange mobility/accessibility to natural beaches in the Ebro Delta, zonification, and improvement of facilities and services (control barriers or limitation of access, parking areas, hiking paths, signposting, etc.). The executive model will include measures of regenerating spaces, with natural barriers that make them more naturalized, following the example of Neuwerk Island.

3. Players involved

The players involved in the development and implementation of this Action are:

- Natural Park of Ebro Delta
- General Directorate of Tourism in Catalonia
- Other managers related to mobility, etc.
- Coastal Municipalities
- SMEs (ecotourism sector, local producers, etc.);
- Interested professionals and individuals
- Conservation NGO and Foundations;
- Universities and Research Centres
- Ecotourism experts and facilitators

4. Timeframe

2019-2021.

- Launching and implementation of the public tender during second semester of 2019.

- Diagnostic report on the current state of the beaches and the problems associated with tourist uses during second semester of 2019, and first semester 2020.
- Drafting of the Ecotourism Management Plan during first semester 2020
- Proposal of communication and environmental education campaign during first semester 2020
- Conducting three participation workshops with users of the area during last trimester of 2019 and first semester 2020
- Implementing Ecotourism Management Plan measures (Executive Project) during last semester of 2020 and 2021.

5. Costs

450.000 €. For the specific activities to be identified in the implementation of the public tender.

6. Funding sources (if relevant):

ROP ERDF/ESF 2014/2020 of Catalunya Region. Axis 6: Environmental preservation and protection and efficient resources promotion. Measure 6.3.1. Promote the protection, promotion and development of cultural heritage. Measure 6.3.2. Protection, development and promotion of natural areas, particularly those of tourist interest.

ACTION 3 - Improvement of the quality and sustainability of the ecotourism facilities of the Ebro Delta with emphasis of the bicycle as a sustainable mean of transport

The background

The bicycle has always been the traditional means of transport in the Ebro Delta and it continues to be so for the elderly, as well as a model for the young and, above all, for adults who use cars even for very short trips. Due to its lack of relief, the delta is an ideal location for cycling, and therefore for the dissemination of its numerous social, environmental, health and commercial benefits. To enhance the development of sustainable and responsible coastal and maritime tourism in the Mediterranean area cycling tourism, as specific niche of ecotourism has been defined in the Ebro Delta as a perfect tool. This because it is one of the most sustainable forms of tourism, in environmental terms (e.g. low CO2 emissions during holidays by bike and less emissions to reach the destinations using public transport etc.); in economic terms (e.g. longer stays, more spending, more local products and services consumed etc.); and in social terms (e.g. dilute the impact of concentrated tourism flows, more interaction with the local population, more open tourists etc.).

Departing from Land-Sea experiences, examples that come from Hamburg, Varna, and Molise Region and the Thematic Papers elaborated can be used to improve the use of bicycles on the Ebro Delta. For instance, from the staff exchange in Molise Region we learnt innovative ways to support sustainable means of transport such as bicycles, recovering traditional cattle trails (*tratturi*) which are extended across the southeaster part of Italy, crossing Molise Region. These are magnificent rural facilities preserved until the

present days, as important ecotouristic resources into the region that link the Molise region with their neighbours regions (Abruzzo and Puglia). There are several projects, with technological support (such as Smartphone Apps), to promote these rural resources, strongly related to landscape, traditional activities, and shepherds. In Campomarino Lido (Molise) there are also some existing “*Percorso Natura*”, hiking and cycling trails that starts from the seafront and arrives to the temporary ponds passing through the Pinewood, a good model to share in the Ebro Delta area.

Action

This Action will be implemented developing the following activities:

- To identify weaknesses and strengths in the Ebro Delta to improve the quality of cycling facilities and management systems to favour the use of bicycle as a sustainable mean of transport.
- To settle a pilot action on cycling promotion involving tourism sector (accommodation, bike rental companies, ecotourism activities companies, municipalities, Ebro Delta Natural Park, etc.) to increase the “last mile” bike trips.
- To improve cycling facilities (cycling paths, signposting, parking facilities, etc.) in the Ebro Delta to facilitate the accessibility to natural beach areas and to other points of interest with this mode of transport.

Players involved

- Local administrations in the Ebro Delta (Municipalities such as Deltebre, Amposta, Sant Carles de la Ràpita, La Ampolla, Sant Jaume d’Enveja; *Consells Comarcals*, etc.)
- General Directorate of Tourism in Catalonia
- Natural Park of Ebro Delta
- General Directorate of Mobility.
- SMEs (accommodation, bike rental companies, ecotourism activities companies);
- Sustainable Mobility and Cycling Associations;
- Universities and Research Centres

Timeframe

Two years from 2019 to 2020 to develop the process in the framework of the Land-sea project:

- To identify weaknesses and strengths in the Ebro Delta to improve the quality of cycling facilities during second semester of 2019 and first trimester of 2020
- To settle a pilot action on cycling promotion involving tourism sector during second semester of 2019.
- To improve cycling facilities (cycling paths, signposting, parking facilities, etc.) in the Ebro Delta during second semester of 2019 and 2020.

All these activities have to last on the long term and have the objective of becoming an operative framework according also to the NaturCAT2020 Strategic Plan on Ecotourism of the Catalan Region.

Costs

350.000 Eur. For the specific activities to be identified in the implementation of the public tender.

Funding sources (if relevant):

ROP ERDF/ESF 2014/2020 of Catalunya Region. Axis 6: Environmental preservation and protection and efficient resources promotion. Measure 6.3.1. Promote the protection, promotion and development of cultural heritage. Measure 6.3.2. Protection, development and promotion of natural areas, particularly those of tourist interest.

ACTION 4 – Identification of visitors profile and development of ecotourism experiences in the Ebro Delta**1. The background**

The Ebro Delta Natural Park that is one of the NPA granted by The *European Charter for Sustainable Tourism (ECST)*. ECST is a practical management tool that enables Protected Areas to develop tourism sustainably. It was set up in 1995 by EUROPARC Federation, working in partnership with all relevant local stakeholders to develop a common sustainable tourism strategy and an action plan. The aim of all Charter projects and activities is the protection of the natural and cultural heritage and the continuous improvement of tourism in the Protected Area in terms of the environment, local population and businesses as well as visitors. The European Charter for Sustainable Tourism in Protected Areas is awarded by the EUROPARC Federation through an independent verification process that recognises not just a commitment to sustainable tourism but also the implementation of practical sustainable actions by public and private partners. On this context, the identification of visitor's profile (issuing markets, interests, behaviour trends, etc.) and the development of ecotourism experiences (relevant cross-sectoral proposals) are key issues to be developed.

In this context, much progress has been made in terms of knowledge of actual demand in the Ebro Delta thanks to the efforts of various bodies:

- The Foundation of the Science and Technology Park for Tourism and Leisure of Catalonia (PCTTO) has a statistical information system for tourism in the Tarragona regions that feeds the Observatory.
- The Tourist Board of Tarragona-Les Terres de l'Ebre Provincial Council has commissioned the PCTTO to conduct an annual study on the characterisation of tourism demand in the summer months.

- The tourism offices of the town councils compile data about their visitors and supply them to the Government of Catalonia's application.

However, there continues to be a lack of coordination in these efforts, and in the processing and dissemination of their results. It is agreed that it is essential to have periodic, detailed information about tourism demand in the Ebro Delta and to analyse the possibility of carrying out other specific studies.

Despite there were no other partners in Land-Sea project with Natural Protected Areas granted with ECST we obtained valuable experiences from Hamburg and Molise Region in the context of ecotourism experiences. The ecotourism experience of visiting the island of Neuwerk (Hamburg), a UNESCO Biosphere Reserve located 13 km northwest of Cuxhaven, between the Weser and Elbe estuaries was an inspiring all-day experience. We reached the island in the morning on a Wattwagen, a horse carriage-ride, from Cuxhaven. A row of poles on the mud flats marks the way. The ride took 70 minutes to approach the destination. Time e.g. for nature observation and chatting with the local coachman. Eight persons found place in a coach. Fourteen Neuwerk coaches and 44 coaches are stationed on the mainland serving for guest transportation during the season from March to October. The attractive landscape and calm of the island, promotes the interest of visitors that visit it with sustainable transports such as horse carriage-ride, or by foot. Once on the island we walk around the dikes that encircle the island. Salt marshes lie outside the dikes and provide a hatchery for birds such as oystercatchers, scrays, sandwich terns, black-headed gulls, herring gulls, and others ecotouristic attractions for visitors. Horses were formerly used in agriculture. Today they serve as coach horses and contribute to landscape maintenance (extensive grassland conservation). Up to 120 000 day time guests are visiting the island per year. Over-night stays are less frequent. The local people are offering accommodation (200 beds on the island, e.g. including a hay hotel and a youth/group hostel) and food (10 restaurants and/or guesthouses). We were allowed to try the regional food from local fishery for diner (e.g. the *Nordsee-Platte* comprising plaice). We came back in the afternoon at high tide with the vessel MS Flipper to the Cuxhaven port. It is a good example about how an integrated coastal zone management approach, regarding protection of natural values, but also risk reduction and water flooding protection, can be combined in a sustainable way with sustainable tourism and ecotourism activities.

2. Action

This Action will be implemented developing the following activities:

- To prepare a report on ecotourism demand in the Ebro Delta unifying the survey and the statistics on the visitors of the Delta del Ebre Natural Park with the surveys of the Tourist Offices of the Ebro Delta.
- To carry out participative workshops on cross-sectoral ecotourism experiences to identify priority requirements when designing ecotourism experiences (requirements from touroperators, from accommodations, from activities companies, from NPA managers, etc.)
- The knowledge of the demand will allow us to work with other types of tourism that we want

to implement and improve also the offer needed to get it.

- To design ecotourism experiences in the Ebro Delta integrating products and service related to culture, nature, and local gastronomy. We've seen through the experience with the Land Sea how that the conservation and maintenance of certain traditions and professions can be a tourist experience in itself. On the island of Neuwerk (Hamburg), as we have described in the introduction, there is a balance in this regard. This island not only offers natural value, but also cultural and historical value with the preservation of its traditions. The promotion of these values allows the identification of a type of visitor who alternatively seeks natural and cultural value in a sustainable environment. The Delta del Ebro has the capacity to diversify its offer throughout the year and in each season offer experiences related to their traditions, conserving agriculture and livestock, without destabilizing the area. And complementing that, how we have learned to add income from some of the economic activities.
- To elaborate a catalogue of ecotourism experiences all-year-round (for low and high season) in the Ebro Delta following regional and international experiences, and being promoted in international ecotourism platforms.

3. Players involved

- Delta del Ebre Natural Park
- Tourist Offices of the Ebro Delta
- Foundation of the Science and Technology Park for Tourism and Leisure of Catalonia
- EURECAT (Research & Innovation Center)
- Ecotourism SME (touroperators, accommodations, activities companies, etc.)
- Ecotourism facilitators

4. Timeframe

Two years from 2019 to 2020 to develop the process in the framework of the Land-sea project:

- To prepare a report on ecotourism demand in the Ebro Delta during the second semester of 2019.
- To carry out a participative workshop on cross-sectoral ecotourism experiences to identify priority requirements when designing ecotourism experiences during the second semester of 2019.
- To design ecotourism experiences in the Ebro Delta integrating products and service during the first semester of 2020.
- To elaborate a catalogue of ecotourism experiences all-year-round (for low and high season) in the Ebro Delta during 2020.

All these activities have to last on the long term and have the objective of becoming an operative

framework according also to the *NaturCAT2020 Strategic Plan on Ecotourism of the Catalan Region*, and the *Ebro Delta ECST Action Plan*.

5. Costs

230.000 €. For the specific activities to be identified in the implementation of the public tender.

6. Funding sources:

ROP ERDF/ESF 2014/2020 of Catalunya Region. Axis 6: Environmental preservation and protection and efficient resources promotion. Measure 6.3.1. Promote the protection, promotion and development of cultural heritage.

ACTION 5 - Training and awareness for sustainable tourism in the Ebro Delta

1. The background

From 2012 to 2018 in the Ebro Delta numerous courses and training days were developed for the private and public sectors related to sustainable tourism and ecotourism, concluding that it is necessary to continue working on them as a long-life-learning strategy. Considering the Natural Protected Areas (NPA) of Catalonia, in 2016 started the harmonisation of guides courses and since then, progress has been made on the design of a harmonised NPA Guide Training and Accreditation System, promoted by NPA Service from the Catalan Government, with a core element and a specific part for each NPA, which is known as '*Park Expert Course*' applied to the Natural Parks of Catalonia. It is an initiative highly requested by the sector and by the NPA managers to improve guide services in those areas and to be able to distinguish those professionals that best meet their conservation and management objectives. This training is complemented by frequent courses specific on ecotourism, promoted by the Catalan Agency of Tourism, oriented to the design of ecotourism experiences and their promotion.

From the experiences acquired in the study visits of Land-Sea project in Varna, Hamburg and Molise, and especially during the staff exchange in Molise Region participated during the implementation of the project also emerged the key idea that life-long-training strategy is the basis to consolidate a reinforced public and private ecotourism sector. And this training and stakeholder's awareness must be properly planned and oriented to acquired specific capacities, in the case of the Ebro Delta tourism sector (public and private).

Specifically, it is important to raise awareness and knowledge among the different stakeholders to assume a broad perspective related to complex dynamics, territorial processes and ecosystem services, beyond development and socio-economic context, as we learnt in Hamburg. There we learnt how to link natural risks, climate change mitigation and adaptation and sustainable tourism strategies. In Varna we know other knowledge such as geological and geomorphological risks, applied to sustainable tourism sector, and

in Molise, we saw a cross-cutting perspective with the Molise Region Office dealing with the Environmental Protection and assessment service, in planning and strategic environmental approach to the quality of land-sea ecosystems (riverine habitats, marine ecosystems, air pollution, drinking-water quality, etc.) also related to local population and visitors.

To select relevant and updated contents to increase awareness and capacities of the stakeholders it is not an easy task, mainly when we are working with ecotourism, by definition a cross-cutting sector that requires a holistic vision and approach, but at the same time concrete capacity building to increase competitiveness of professionals and companies.

This action is especially important after the problems caused by the recent great storms in most vulnerable areas such as the Delta. The link with climate change is evident. There is no single way to sensitize and train, but it is necessary to implement an action like the one proposed. In all the meetings held, the need to delimit risks and implement actions for their mitigation has been a present factor.

1. Action

This action will be implemented developing the following activities:

- To update the awareness and training/contents needs in the ecotourism sector in the Ebro Delta, highlighting those priority and key topics.
- To coordinate the organisation and dissemination of the training actions for the tourism sector that is conducted in the territory, preparing an annual list of training actions and communicating it broadly and on time.
- To incorporate in every training programme a transversal socio-environmental awareness component linked to the fragility of the region to understand the complexity of the Delta and the exposure to irreversible changes and risks (climate change, geomorphological dynamics, ecological consequences of invasive species, etc.).
- To schedule flexible ecotourism training programs based on specific needs, and adapted to the audience including theoretical and practical techniques.
- To course frequent calls of the 'Delta de l'Ebre Natural Park Expert' course, for people, professionals, or managers whose develop or want to develop their professional activity in the protected natural area.

2. Players involved

- Catalan Ecotourism Board
- Catalan Tourism Agency
- Delta del Ebre Natural Park
- EURECAT (Research & Innovation Center)
- Ecotourism SME (touroperators, accommodations, activities companies, etc.)
- Technicians and Managers related to NPA and Ecotourism
- Ecotourism experts, teachers and facilitators

3. Timeframe

Two years from 2019 to 2020 to develop the process in the framework of the Land-sea project:

- Second semester 2019: To update the awareness and training/contents needs in the ecotourism sector in the Ebro Delta, highlighting those priority and key topics.
- First semester 2020: To coordinate the organisation and dissemination of the training actions for the tourism sector and to incorporate in every training programme a transversal socio-environmental awareness component.
- Second semester 2020: To schedule flexible ecotourism training programs based on specific needs, and course a call of the '*Delta de l'Ebre Natural Park Expert*' course.

All these activities have to last on the long term and have the objective of becoming an operative framework according also to the *NaturCAT2020 Strategic Plan on Ecotourism of the Catalan Region*, and the *Ebro Delta ECST Action Plan*.

4. Costs

54.000 €. For the specific activities to be identified in the implementation of the public tender.

5. Funding sources:

ROP ERDF/ESF 2014/2020 of Catalunya Region. Axis 6: Environmental preservation and protection and efficient resources promotion. Measure 6.3.1. Promote the protection, promotion and development of cultural heritage.

Signature: _____

Stamp of the organisation (if available): _____