



ENTE DI GESTIONE
PER I PARCHI E LA BIODIVERSITA'
DELTA DEL PO

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United Nations
Educational, Scientific and
Cultural Organization



Man and the
Biosphere
Programme



Biosfera Delta Po
uomo e natura insieme



Organizzazione
delle Nazioni Unite
per l'Educazione
la Scienza e la Cultura



Ferrara, città del
Rinascimento
e il suo Delta del Po

Delta del Po Emilia- Romagna Natural Park





PARCO DELTA DEL PO
EMILIA-ROMAGNA

The Po Delta Natural Park

54.000 hectares (540 Km²)

75 km of coastline

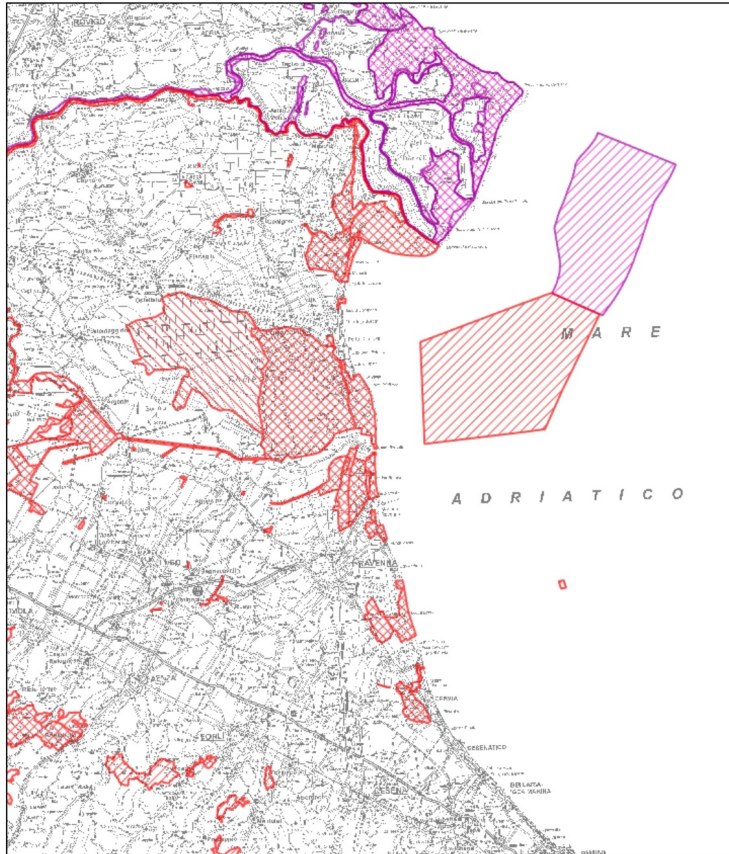
The largest natural park in Emilia-Romagna, one of the most important protected areas in Italy and Europe

9 Municipalities: Alfonsine, Argenta, Cervia, Codigoro, Comacchio, Goro, Mesola, Ostellato, Ravenna

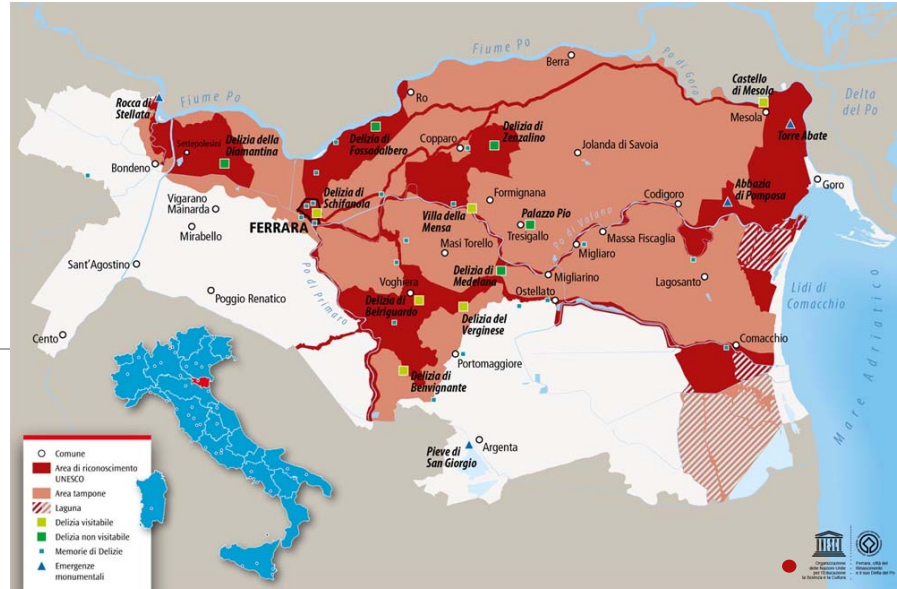
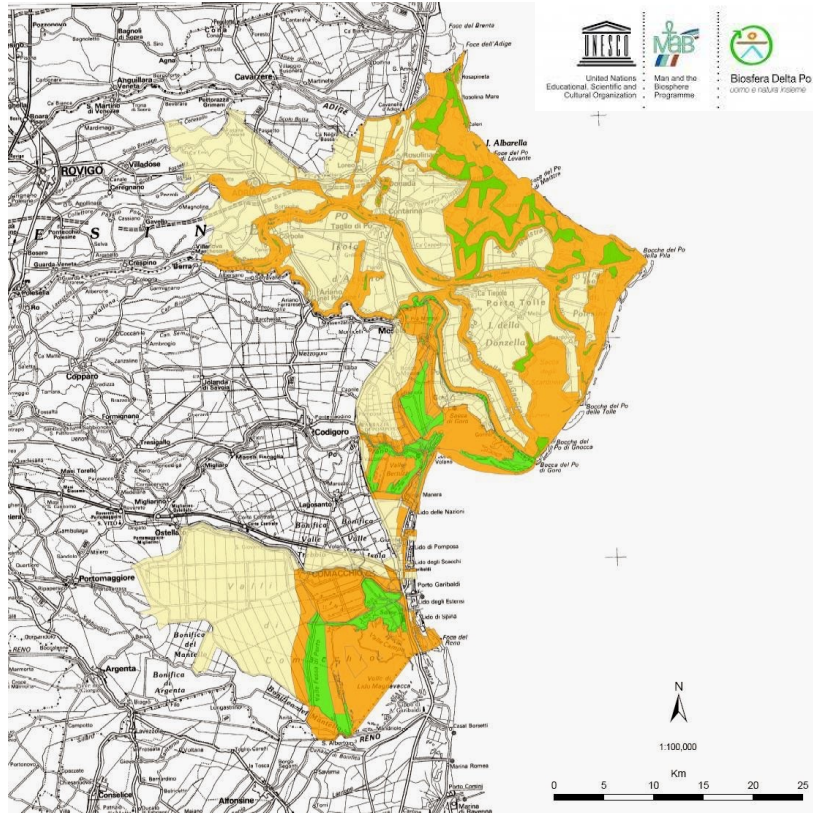


Not only a regional park, but also a network of Natura 2000 sites and of wetland of international importance (Ramsar convention)

Parchi, Aree Protette e Natura 2000



... a UNESCO Biosphere Reserve and two UNESCO World Heritage Sites





Unique and fascinating landscapes



Nature in the Po Delta Park

The territory of the Po Delta Park has a remarkable heritage of natural areas, with almost 30,000 hectares of woods, wetlands and dunes.

The brackish lagoons cover an area of 20,000 hectares; the woods cover about 5,000 hectares; the freshwater marshes 2,500 hectares; the dunes and natural beaches 300 hectares.





The dunes and natural beaches

Area: 300 hectares



The Kentish plover, an endangered species that has become a symbol of the Park's natural beaches



The brackish wetlands

Area: 20.000 hectares



The greater flamingo nesting colony in the Valli di Comacchio: 3.500 pairs. In the lagoons there are also large waders, gulls and terns nesting colonies on scattered islets

Coastal conservation problems

Coastal erosion

Subsidence, sea level rise, extreme weather phenomena are seriously increasing the problem of coastal erosion, which causes the loss of hectares and hectares of precious habitats, such as those of the dunes and puts coastal lagoons and the brackish valleys at risk.

Some shorelines have retreated by about 200 meters in the last 20 years.

The problem is accentuated by the strenuous defense of tourist beaches, which puts natural beaches, left without coastal defenses, at greater risk.



Coastal conservation problems

Beaches wilderness

90% of the beaches in Emilia-Romagna are "populated" by umbrellas and tourists.

It is absolutely necessary and fundamental that the total absence of anthropic disturbance be guaranteed in 10% (about 18 km) of protected beaches: beaches are natural environments like any other (even if we are not used to experiencing them this way).

The "cleaning" of the beaches from the materials deposited by the sea with heavy tractors weakens the natural coastal defenses (trunks are the skeleton of the new dunes), engraves the base of the dunes and flattens the inclination of the beach, which would dampen the force of the waves.



Coastal conservation problems

Lagoon degradation

Subsidence, rising sea level, erosion, simplification caused by man for production reasons (basins for intensive fish farming) threaten islets and sandbanks, essential for the nesting of many species of seabirds.

Drought and rising sea levels cause salinization of coastal marshes and simplification of habitats, the difficulty of maintaining adequate water levels and problems of water flowing and water exchange (causing eutrophy, increased turbidity and lack of oxygen).



Coastal enhancement experiences



Delta Lady

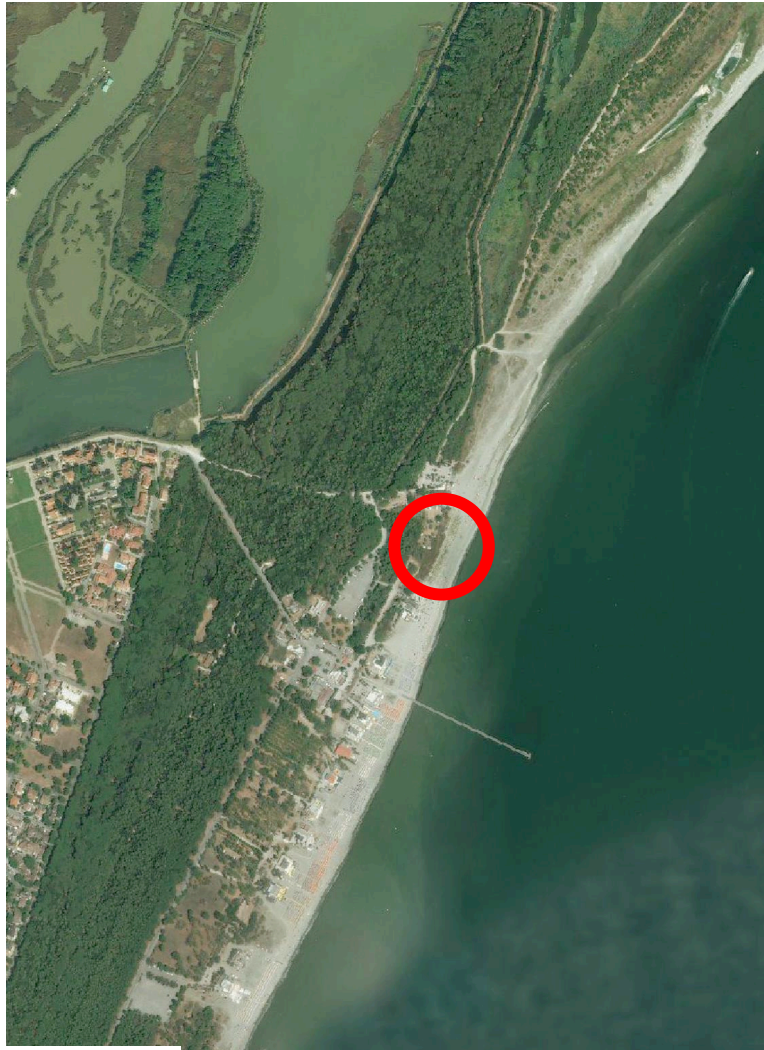
The project focused on river deltas in Europe and their potential to develop innovative activities aiming at utilization of local natural and cultural heritage. The aim was to improve the regional policy instruments that foster the capabilities of using ecosystem services in river deltas to strengthen regional economy.

The delta regions are rich in biodiversity but poor financially.

Involved deltas: Rijn (NL), Danube (RO), Camargue (FR), Albufera (ES), Po (IT) Blackwater (IE).


Delta Lady
Interreg Europe

Coastal restoration experiences



HORIZON2020 OPERANDUM OPEEn-airlaboRAtories for Nature based solUtions to Manage hydro-meteo risks

The aim of the project is to test solutions based on naturalistic engineering techniques capable of mitigating events such as floods, landslides, coastal erosion and drought.

The restored artificial dune in the Po Delta has given excellent results, even during heavy storm surges and at high tide, such as during the extraordinary storm of November 22, 2022.



OPERANDUM

Coastal restoration experiences



HORIZON2020 LAND4CLIMATE

The excellent results of the OPERANDUM project have led to the submission and obtaining of funding for another similar project, with which another dune will be built to defend another stretch of natural beach in erosion.



Coastal restoration experiences



LIFE Agree

The project used the dynamism of the Sacca di Goro lagoon and the constant deposition of sand close to the sandbar that separates it from the sea.

To maintain water circulation and lagoon habitat, sand was moved to create bumps for nesting birds and to improve clam *Ruditapes filippinarum* breeding habitat.

The same project has favored the conservation of nature and of a locally very important economical activity.



Coastal restoration experiences



LIFE Transfer

The objective is to improve the state of conservation of the lagoon1150 habitat through the reconstitution of marine phanerogams with transplantation of nuclei capable of producing high quantities of seeds and which will represent a diffusion center for large-scale progressive colonization.

Marine phanerogams, in addition to being fundamental elements for the coastal and lagoon habitats, have an important role in preventing erosion.



Coastal restoration experiences



LIFE Natureeef

Innovative project, recently funded and not yet launched, which involves testing natural barriers (living reefs) for coastal defense in areas with natural beaches and dunes.

The It involves the construction of a reef of oysters and polychaetes in front of one of the most important stretches of natural beaches in the entire Po Delta, which is currently undergoing strong erosion.



Coastal restoration experiences

Mouth of the channel Bellocchio-Gobbino

The canal connects the Valli di Comacchio to the sea; the scarce exit of water from the lagoon determined the constant burial of the mouth. The resulting blockage of incoming water was a major problem for the lagoon.

A natural bank protection and a small barrier on one bank, which causes controlled erosion at the mouth, allow the maintenance of the opening and the connection between the sea and the lagoon.



Coastal restoration experiences



Defense of the dune at the mouth of the Bevano stream

Due to some illegal constructions (later demolished) close to a natural mouth, the course of the river had deviated towards the north, going behind the natural dunes and destroying them.

With a naturalistic engineering intervention, the mouth was brought back to its original position and the dunes partially rebuilt. After about 20 years the situation is now consolidated.



Coastal restoration experiences



The rules for the protection of the beaches at the mouth of the Bevano stream

The beaches at the mouth of the Bevano are the best-preserved stretch (6 km) of dunes in the Po Delta; the use of the seaside compromised its naturalness.

A regulation issued by the Park has made it possible to regulate use, allowing entry to two external one km stretches all year round, opening up to tourism from 15 July to 15 March another two intermediate one km stretches and leaving the central core of two km in complete protection (absolute prohibition of access).

Beach cleaning has been prohibited on this entire beach and on all natural beaches with dunes.

See you in the Po Delta...

Massimiliano Costa

