

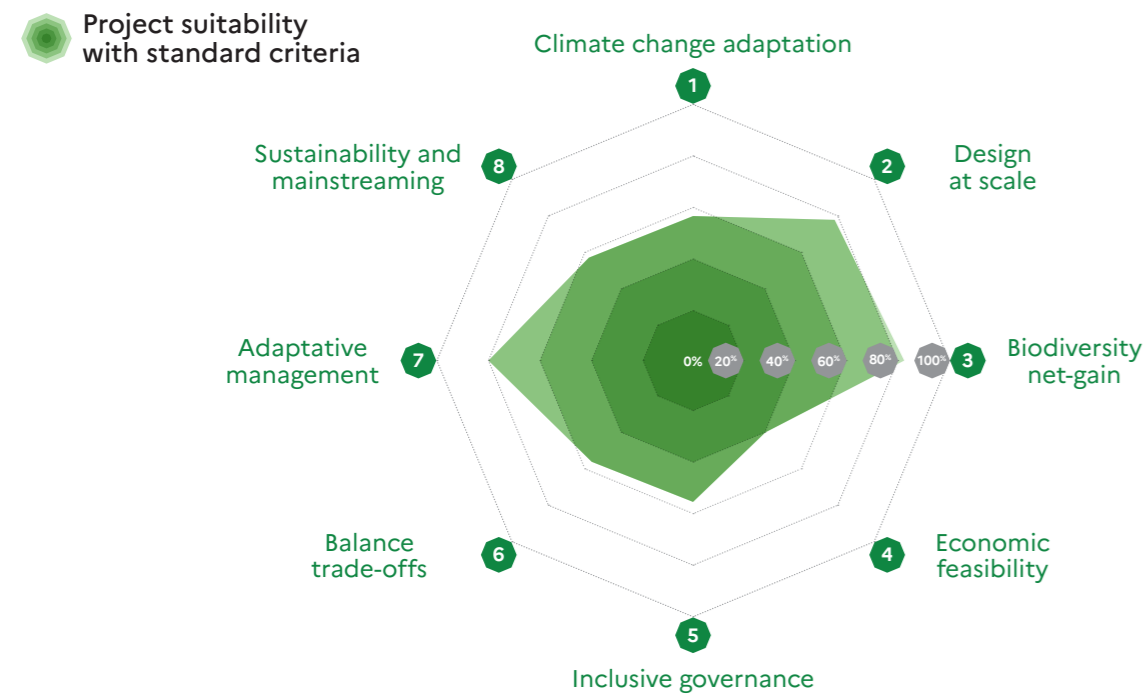
LEVERS FOR SUCCESS

- **Communication:** several concertation documents were produced to encourage the inhabitants of Salin-de-Giraud to take the project onboard.
- **Partnership:** the tripartite management system combining a local authority grouping, a national association and a private foundation proved to be an appropriate initiative, enabling the sharing of technical, nature observation, scientific and political advocacy tasks in function of the expertise and capacities of each organisation.

RECOMMENDATIONS

- Enhance capacities for monitoring, quantifying and envisaging possible futures for a rapidly evolving site
- Facilitate the involvement of local stakeholders in the development of the perceptions of local residents.

ASSESSMENT ACCORDING TO THE IUCN GLOBAL STANDARD FOR NATURE BASED SOLUTIONS



FOR FURTHER INFORMATION

- https://www.conservatoire-du-littoral.fr/siteLittoral/483/28-etangs-et-marais-des-salins-de-camargue-13_bouches-du-rhone.htm
- <https://tourduvalat.org/actions/gestion-adaptative-etangs-marais-salins-de-camargue/>
- https://climate-adapt.eea.europa.eu/en/metadata/case-studies/adaptive-restoration-of-the-former-saltworks-in-camargue-southern-france/camargue_doc-1.pdf

PROJECT LEADER

- **Marc Thibault**
Tour du valat
thibault@tourduvalat.org

DATE

July 2022

FACT FILE EDITOR

Justine Delangue

www.secondregard.fr - Coordination: Communications Department - November 2022

RESTORATION OF THE LAGOONS AND MARSHES OF THE FORMER CAMARGUE SALTWORKS 2011 - PRESENT



IDENTITY CARD

GEOGRAPHICAL LOCATION
Camargue, Bouches-du-Rhône

TARGET ADAPTATION ISSUE(S)

- Erosion
- Submersion

HABITAT(S) CONCERNED
Coastal and wetland habitats

TYPE(S) OF NBAS
Ecosystem restoration

PROJECT LEADER(S) AND ASSOCIATED PARTNER(S)

- Conservatoire du littoral (owner),
- Camargue Regional Natural Park (management coordinator),
- Tour du Valat
- National Nature Protection Society (joint management organisation)
- WWF

FUNDERS AND BUDGET

- MAVA (66 000 €),
- European Union (LIFE funding: 460 000 €),
- Conservatoire du littoral (291 700 €),
- Total Foundation (140 000 €),
- Fondation de France (40 000 €),
- WWF France (689 000 €)
- Rhône- Mediterranean-Corsica Water Agency (657 960 €)
- Provence-Alpes-Côte d'Azur Region (147 550 €)
- Ministry of Ecological Transition and Territorial Cohesion (139 000 €)

Total budget: 2 631 218 € TTC



Before Panoramic Martelière Versadou 2013
© Jean Roché

PROJECT OBJECTIVES

- **For adapting to climate change**
Set up an adaptive management system for dealing with rising sea levels by means of progressive, controlled shifting of the shoreline in sites subject to erosion; partial decompartmentalization of the lagoons to control the spreading of the water during submersion events.
- **For biodiversity**
Hydrobiological reconnection of the former saltworks with the Vaccarès hydrosystem (13 000 ha of lagoon habitats), reestablishment of nurseries and a migration route for migratory marine fish, restoration of coastal habitats, and maintenance and restoration of conditions favourable to the breeding of Greater Flamingo and colonial seabirds.

CONTEXT AND ISSUES

The lagoons and marshes of the Camargue Saltworks (6500 ha) consist of land reclaimed from the sea relatively recently in the history of the Rhône Delta and which served as saltworks for 50 years, with completely artificialized water circulation. The Conservatoire du littoral (coastal protection agency) purchased the site in 2012.

Mainly made up of freshwater and saltwater lagoons and sansouire meadows (coastal habitats dominated by salicornia species), the site is particularly exposed to coastal dynamics and rising sea levels.

The project consists in assisting the evolution of habitats through controlled, progressive, shifting of the shoreline in sectors being eroded and hydrobiological reconnection of the lagoons with each other, and also with the sea and surrounding catchments.

CONTEXTE RÉGLEMENTAIRE DU PROJET

- Classified and listed site
- Natura 2000 site
- Core zone of the Camargue Biosphere Reserve
- Prefectural biotope protection decree for the Beauduc headland

ACTIONS IMPLEMENTED

In order to define the actions to be implemented, firstly a survey was carried out to assess the system's hydraulic functioning, biodiversity and landscapes together with the socioeconomic context and prospects for development.

The actions consisted in restoring and creating hydraulic infrastructure and islets for breeding waterbird colonies, and dismantling pumping stations to enhance gravitational water exchange and therefore a more natural hydrological regime.

With regard to the erosion impacting part of the coast, the decision was taken not to maintain or reconstruct the seafront dyke, whose maintenance had become untenable, resulting in a natural beach starting to reform behind breaches in the dyke. The dune cordons are protected from destruction by vehicles and tourist activities through the setting up of a biotope protection decree and a beach-use management plan (including carparks at the entrances to the beaches, regulated traffic flows and user information).

SCHEDULE

PROJECT LIFESPAN	
2010	Designation of the site management bodies by the Conservatoire du Littoral with joint definition of the main management objectives
2013	<ul style="list-style-type: none"> • Three diagnostic surveys carried out (hydrology, biodiversity and socioeconomics) • Agreements established with users and right-holders • Management guidelines drawn up and environmental monitoring implemented • Predictive modelling based on hydrological monitoring and a bathymetric study to propose a new hydrological regime according to various management scenarios
2015	Consultation with the inhabitants of Salin-de-Giraud to identify initial possibilities for the socioeconomic development of the site
2015-2019	Implementation of hydrological restoration works and arrangements in favour of colonial waterbirds, in the framework of the EU LIFE+ project "MC-SALT", the "Camargue" Delta Contract and a partnership with WWF-France
2017	Workshops bringing together managers and scientists to orient interdisciplinary research in a framework based on adaptive and prospective management
2021-2022	Drawing up of the site management plan

GOVERNANCE ADOPTED

Setting up of a joint functional governance system by the owner (Conservatoire du Littoral), coordinating management body (Camargue Regional Natural Park), the two associated managing bodies (the Tour du Valat Foundation and the National Nature Protection Society) and the two municipalities (Arles and Les-Saintes-Maries-de-la-Mer).

Management and conservation issues were included in all the user agreements signed concerning the site (hunting, fishing, extensive bull and horse raising, tourism).

Workshops were organised bringing together managers and scientists to orient research on adaptive and prospective management.

BENEFITS AND CONTRIBUTIONS OF THE PROJECT



BENEFITS REGARDING TARGET ADAPTATION ISSUES

- Erosion and submersion: reestablishment of a buffer zone function on part of the site, enabling water to spread through the lagoons during marine submersion events.



BENEFITS FOR BIODIVERSITY

- Functionality: gain in the quality, diversity and naturalness of landscapes due to spatial and temporal heterogeneity of water levels and salinity.
- Species: gain in halophilic scrub, annual salicornia vegetation, wintering ducks, the nursery and migration route function for migratory marine fish, return of seabird colonies.

OTHER BENEFITS

- Multifunctionality: diversification of site uses: ecotourism, fishing, hunting, grazing, etc.



MONITORING INDICATORS

Adapting to climate change

- Erosion/submersion: monitoring of the shoreline and the topography of the sandy beach (Tour du Valat), monitoring of water levels and salinity in the lagoons (Camargue RNP and Tour du Valat)

Biodiversity

- Biodiversity: monitoring of aquatic vegetation, benthic fauna and the effectiveness of reconnections for fish (Tour du Valat), monitoring of waterbirds (Tour du Valat and Camargue PNR)

Other

- Uses and frequentation: monitoring of visitor numbers (Camargue PNR)

AFTER Panoramic Martelière Versadou 2019
© Jean Roché

