



wetlands
**la Janda-
el Águila**

AGROECOLOGICAL RESERVE



Proposal for the constitution and management of the agroecological reserve Laguna de la Janda - el Águila

Barbate, June 2022



a project by:



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Antecedents

LA LAGUNA DE LA JANDA Y LA LAGUNA DEL ÁGUILA

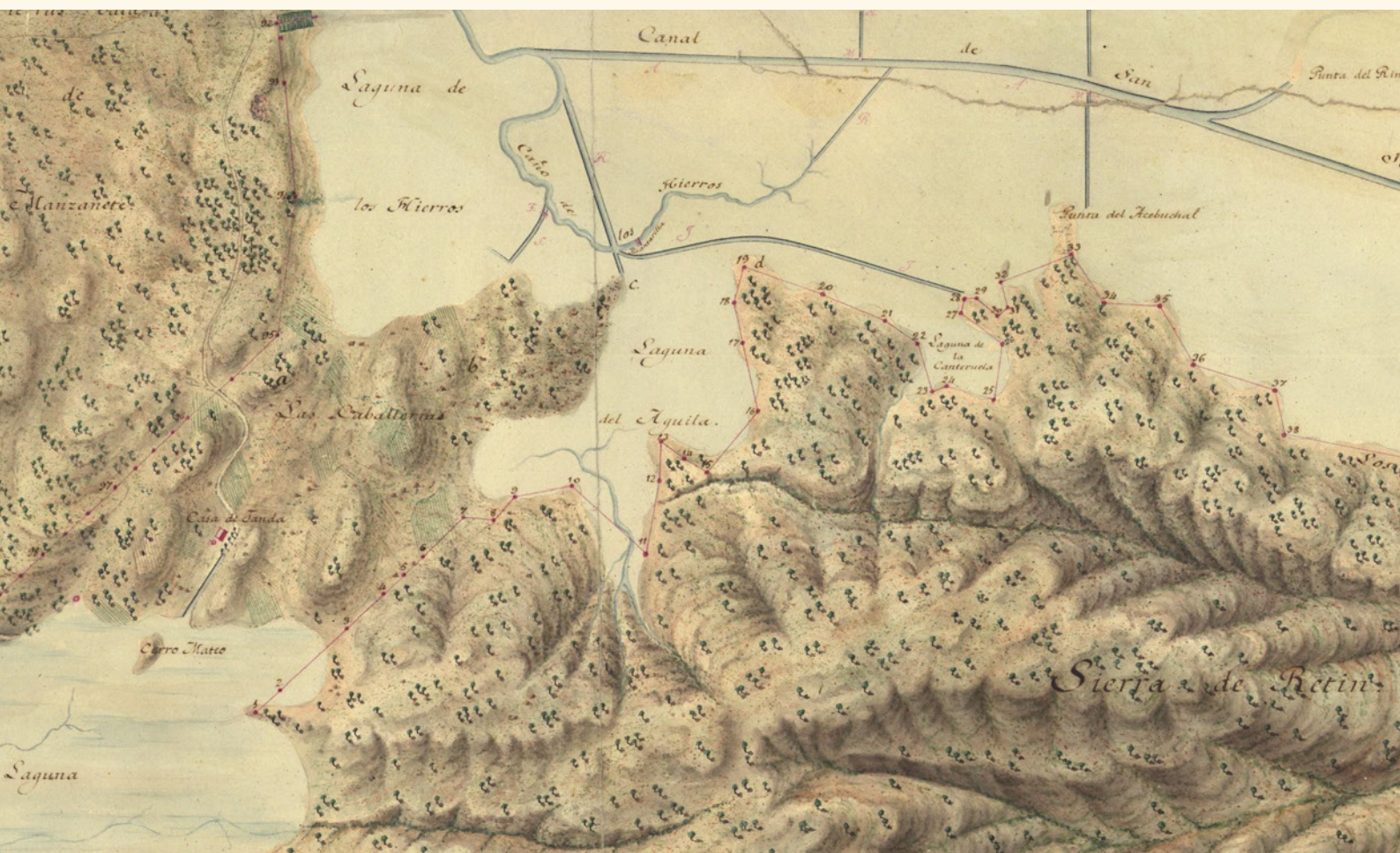
For many years the Laguna de La Janda was the most extensive wetland in Spain and one of those of greatest ecological importance in Europe. The great biodiversity of this shallow, fresh water, seasonal wetland was because of two factors: The dense vegetation cover and its strategic situation in the extreme south of Europe, close to the African continent. These two factors converted it into a necessary resting area on the migration route of the millions of birds that cross the Strait of Gibraltar twice a year.



→ Topographical map of the Laguna de La Janda before its drainage (Juan de Lobo, 1821)
The red circle shows the site of the Laguna del Águila.



In the periods of maximum flooding after periods of intense rain, the Laguna de La Janda may have near to 7.000 hectares inundated. As the summer progresses the flooded area decreases and splits into a series of smaller lagoons. The biggest of these was that of La Janda with a surface area of some 4.000 has. in the deepest area and was never totally dry. Some of the peripheral zones were isolated and were only seasonally flooded, creating small lagoons known by the features of their surroundings. This was the case of the Laguna del Águila in the southwestern zone of the La Janda depression and received its name from Arroyo del Águila which fed it with water from the nearby Sierra de Retín and allowed it to be flooded for a large part of the year.



→ (Map of the drainage works of the laguna de La Janda (Juan de Larramendi, 1829).

The Laguna del Águila was no more than a part of the southwestern sector of the Laguna de La Janda which was isolated during the summer.

Successive attempts to drain and cultivate La Janda finished in the 1960s and supposed a huge loss of its ecological values and biodiversity. Nevertheless, its strategic position and relict wetlands in the drainage canals, later supplemented by the extensive rice paddies which require seasonal flooding, have enabled La Janda to continue to hold an exceptionally rich avifauna. Indeed, it continues to be a key wetland for the migration of birds in the western Mediterranean and includes many species catalogued as being of especial conservation interest and importance.

LAS HAZAS DE SUERTE COMMON LANDS OF BARBATE

The sector of the Laguna de La Janda formerly known as the Laguna del Águila is in the southern zone and surrounded by rolling land which has been dedicated to cattle and naturally watered crops since time immemorial. These lands form part of the so-called Hazas de Suerte which have belonged to the neighbours of Barbate since this town separated from Vejer de la Frontera in 1938.

The origin of the Hazas de Suerte dates back to the Castillian reconquest of these lands in the 13th century. By law they are considered to be communal property and their administration is in the hands of a group of elected citizens and these, together with the Municipal Corporation of Barbate, form the *Junta* (committee) *de Hazas*. By regulation, the Junta must adjudicate the farming rights of the different hazas (parcels of land) by lottery every four years. Once adjudicated, the *asentados* (winners) must pay part of their annual profits for the exploitation of the *haza*.





Proposal for the constitution of the agroecological reserve of Laguna de la Janda - el Águila

OBJETIVES

By the application of article 32 of the law 8/2003 concerning Flora y Fauna Silvestre de Andalucía (Natural Flora and Fauna of Andalusia) the creation of an Ecological Reserve with two objectives is proposed:

- 1 Carry out, applying ecological criteria, the partial restoration of the Laguna de La Janda by the recuperation of natural and semi-natural wetlands in the area formerly occupied by the Laguna del Águila. To favour the conservation of wild species and biodiversity and the installation of aids to these in the area of the former Laguna de la Janda.
- 2 To develop a demonstration project to show the usefulness of ecological farming, taking as bases the values of native varieties of plants and animals, counting on the highly preferable direct participation of farmers in the area. To establish a management model which will contribute towards improving the economy and quality of life in the local communities and the development of biodiversity. It will also show the value of the natural and cultural the patrimony of the former lake as a touristic resource.

LAND TYPES INVOLVED IN THE AGRO-ECOLOGICAL RESERVE

The reserve will consist of the wetlands and around its borders restored woodland as a protective barrier against the lands which will continue to be developed for agricultural benefit but in an ecological production regime.

The total area of the agro-ecological reserve will be 406.37 has. and will be composed of 249.89 has. of pasture and farmland belonging to the Manzanete and Navalvorsilla sectors of the Hazas de Suerte of Barbate and 156.48 has. of irrigated land (rice paddies) under private ownership which are actually for sale.

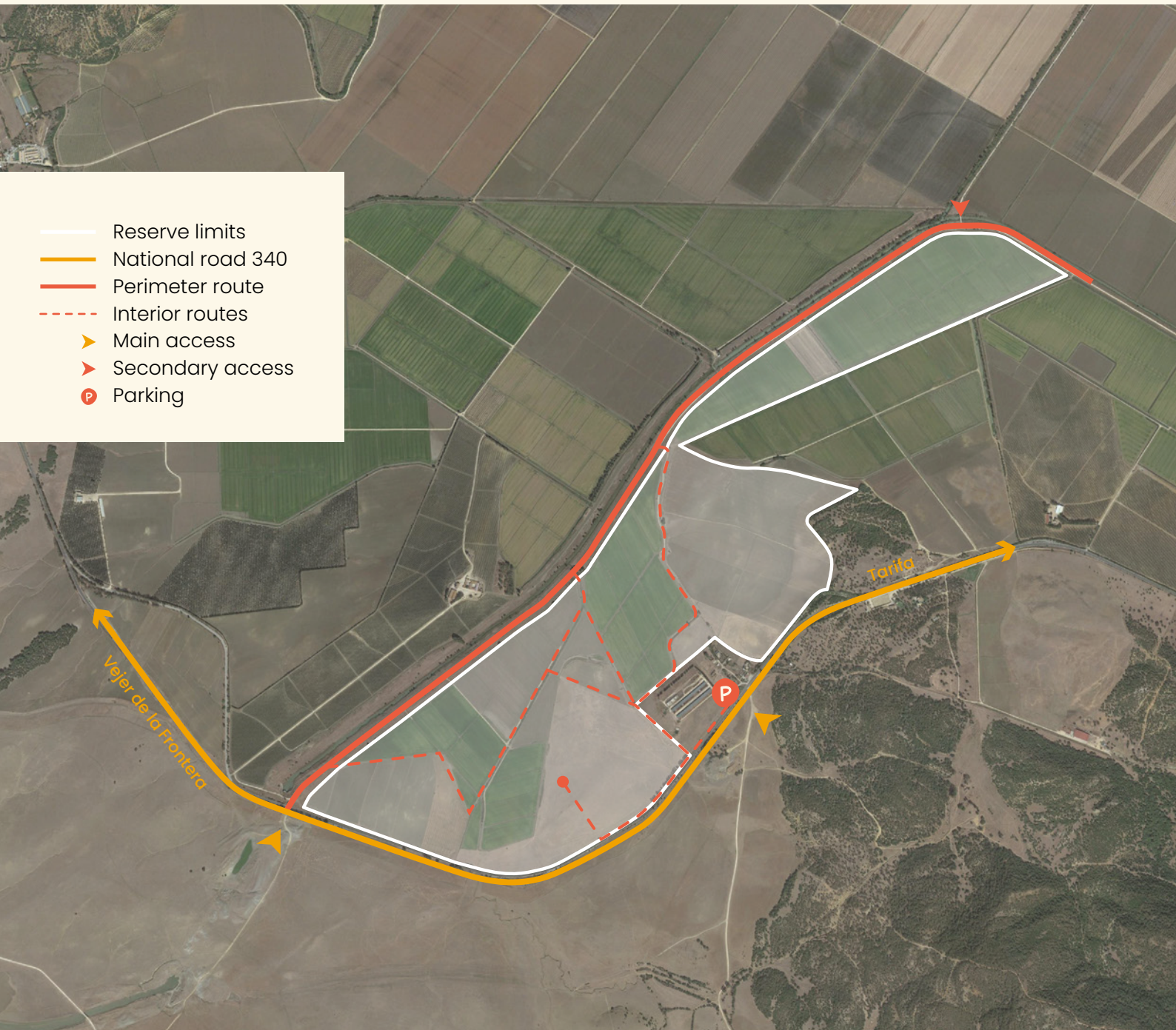
For the constitution of the reserve it will be necessary to buy those lands which are privately owned. These actually belong to a single proprietor and have a market value of between 2.00 and 2.500 euros/ha.

The agro-ecological management of the lands belonging to the Junta de Hazas de Suerte of Barbate and their integration in the ecological reserve is guaranteed by the signing of an Agreement of Land Custody (*Convenio de Custodio del Territorio*) between the Junta de Hazas and the

Association known as the 'Alliance of Friends of the Pericón' (*Alianza Amigos del Pericón*) under the aegis of article 76 of the law 42/2007 of *Patrimonio Natural y la Biodiversidad* (National Patrimony and Biodiversity Law).

SITE AND ACCESS

The majority of the reserve falls within the city limits of Barbate although 46.84 ha. of the rice paddies in the extreme north-east are within the city limits of Vejer de la Frontera. Access to the various farms within the reserve is directly from the N-340 road between Vejer de Frontera and Tarifa and also along the service road of the Canal Colector del Este (see map).



- Reserve limits
- National road 340
- Perimeter route
- Interior routes
- Main access
- Secondary access
- P Parking



Custodial body: the Amigos del Pericón Alliance

The body which has formulated the constitution of the Ecological Reserve and which will be charged with its custody is the association known as the 'ALIANZA AMIGOS DEL PERICÓN', itself integrated by the following five bodies:



ASOCIACIÓN AMIGOS DE LA LAGUNA DE LA JANDA

→ www.lagunalajanda.org

The Association of Friends of the Laguna de La Janda is a non-governmental organisation legally constituted in 1994 by a group of residents in the general area of the Laguna de La Janda. These had enjoyed the privilege of knowing this exceptional wetland before its definitive drainage at the end of the 1970s.

The founding objectives of the Association were and continue to be the restoration of a representative part of the former wetland, the conservation of its flora, fauna and natural habitats, and the communication of its ecological, historical and cultural values.

In its more than 25 years of existence the Association has worked with the local, regional and national administrations to achieve the restoration and protection of the wetland, has taken part in the censuses and studies of birds, held courses, workshops and exhibitions, given talks and reclamatory actions. It has collaborated in publications and mass communications, media and social network media, thus contributing to the keeping alive the objective of recuperating the Laguna de La Janda and its immense natural and cultural patrimony for all.

The Association is the soliciting body for the allotting of the lands and will coordinate the participation of the other bodies in this project, using its knowledge of the area and collaborating in the voluntary work and publicity.

BIOPARC DOUÈ LA FONTAINE

→ www.bioparc-zoo.fr

The Bioparc is a zoological park in the French locality Doué la Fontaine which collaborates in the protection of biodiversity by supporting what they denominate as 'Nature Projects' (*Proyectos de Naturaleza*). Supported by local organisations, the Nature Projects supply and satisfy the needs of the ecosystems and the inhabitants to promote a positive and sustainable cohabitation. The





Bioparc participates in such projects through the direct participation of its human team, the supplying of examples of fauna specimens and through donations to its 'Donations for Nature Fund' (*Fondo de Dotación para la Conservación*).

In some of the projects in which Bioparc participates a direct link is created between animals born in the Bioparc and the wild populations into which these are introduced. This is the case with the reintroduction programme of the Bald Ibis in Andalusia (*Proyecto Eremita*). Here Bioparc has provided many of the Bald Ibises which have been released in the area of La Janda and which has permitted the establishment of a wild population of this species with breeding colonies in the city limits of Barbate, Conil and Vejer.

The end aim of Bioparc with its Projects is to preserve wildlife within natural habitats and which at the same time is beneficial to the people that live close to them and from which they might obtain the benefits so generated.

FUNDACIÓN SAVIA POR EL COMPROMISO Y LOS VALORES

→ www.fundacionsavia.org

The Savia Foundation is born of a vocation of service and compromise to the defence of values in the rural environments, promoting and cooperating in social, economic, patrimonial, cultural and countryside development, thus encouraging the progress and defence of the ecology of a region.

Equally, it encourages the maintenance of sustainable farming and agriculture within the environment, jointly helping to maintain the region, its biodiversity, auto-sufficiency and permanence and so avoiding the depopulation of rural areas. In this way it will contribute towards an intelligent population growth which will overcome the demographic imbalance and the deficiencies of services and infrastructures by reinforcing a cultural identity, an interconnection of knowledge, local wisdom and the self-esteem of a rural society.

The Foundation is a nationwide non-profit organization within Spain whose main objective is to show rural values. Since 2014 its 46 patrons and network of collaborators have been participating and bringing into being various initiatives to show the need for an active rural world. At a time when the Spanish and world population continues migrating to the cities and coasts, it is vital to maintain the continuance of the population in small inland villages, to maintain traditional farming and livestock activities, their culture, history and the biodiversity of the countryside.

The Savia Foundation will bring to the project its experience and advice in the management of sustainable agricultural activities and the promotion of traditional knowledge and culture of the rural world.

SOCIEDAD GADITANA DE HISTORIA NATURAL

→ www.sociedadgaditanahistorianatural.com

The Society is a non-profit association founded in 1996 that was born of a meeting of those interested in all branches of nature. Its aims are the exchange of knowledge and experiences, collaboration and coordination of common projects, the diffusion of knowledge and the defence of the natural patrimony within the ambit of Cádiz province.

Amongst its activities the Society carries out different projects concerning the study and conservation of the flora and fauna within the province. These include inventories of biodiversity, the organization of specialised talks, courses and workshop and the periodic publishing of its journal, *Revista de la Sociedad Gaditana de Historia Natural* and the digital *Boletín El Corzo*.

CONTRAPUNTO VERDE

The association is made up of a group of people who have been carrying out nature conservation work since 1980. Most of these works have been carried out under the seal of commercial companies and from now on they intend to do it under the umbrella of a non-profit association. Those limited companies are: DAMA, PLEGADIS, BOSCA'S AND CINLCLUS. Their partners and collaborators have created CONTRAPUNTO VERDE to continue with the work carried out by their companies, although in an altruistic way, and without skimping on the professional side.

The restoration of ecosystems, mainly wetlands, is one of their main goals. The restoration of areas degraded by industrial activities and the reconciliation of industrial activity with care for natural capital is another. Rural development based on the rational use of resources, awareness, participation, communication and environmental education. The rigorous denunciation of all that affects spaces and species, natural processes, is its most important goal.

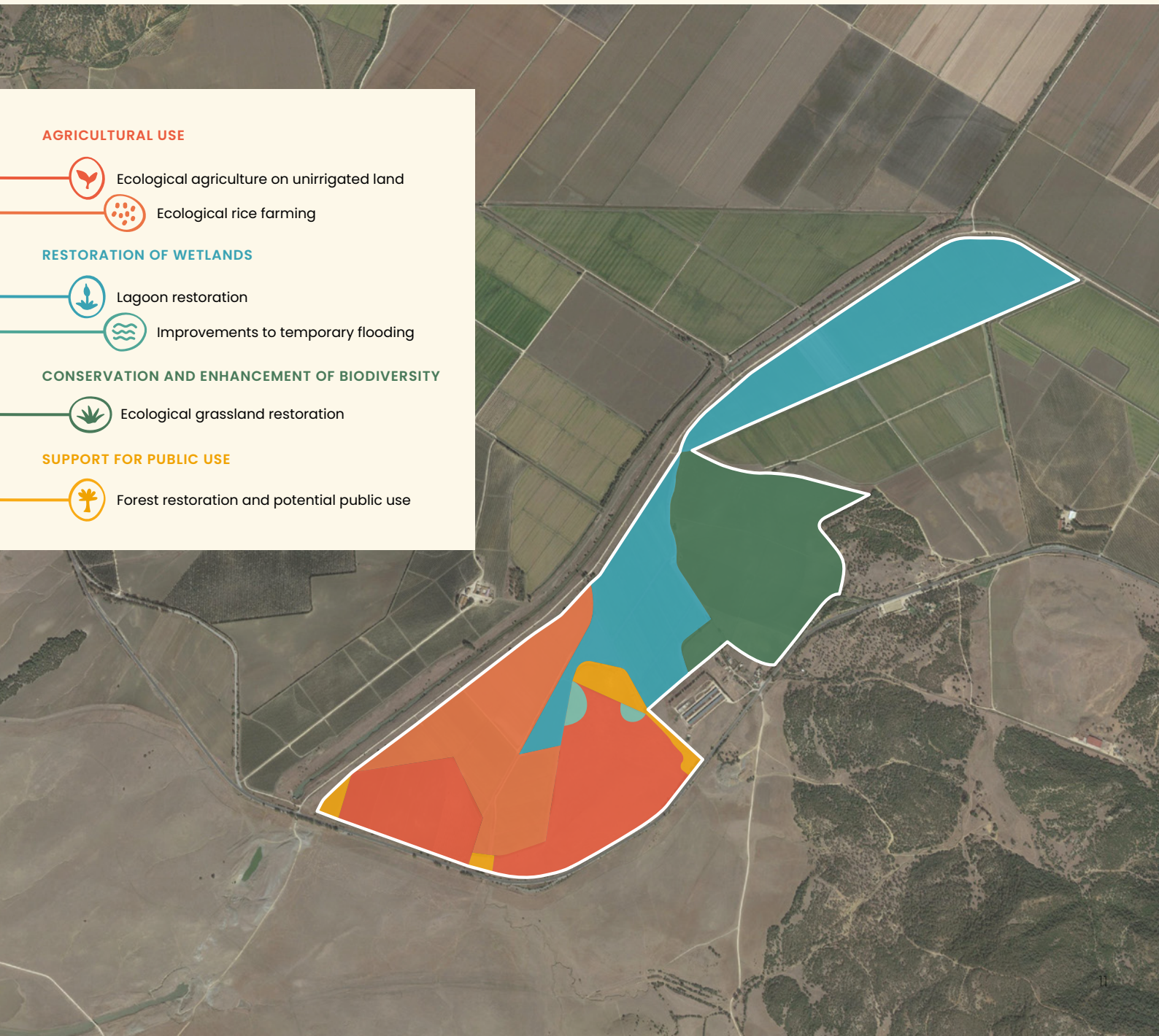
The people who make up the association have been working together for many years. They have carried out projects. The realization of big events for their diffusion is one of their specialties.



Proposal for the management of the agroecological reserve

INTRODUCTION

As has been noted previously, the agro-ecological nature of this Reserve is founded with a double purpose: to contribute to the conservation of its biodiversity by the restoration of a part of the former Laguna de La Janda and the development of ecological farming within its area. At the same time this will contribute to improving the economy and quality of life within the local communities. With these aims, it is hoped to carry out the following actions.



AGRICULTURAL USE



Ecological agriculture on unirrigated land



Ecological rice farming

RESTORATION OF WETLANDS



Lagoon restoration



Improvements to temporary flooding

CONSERVATION AND ENHANCEMENT OF BIODIVERSITY



Ecological grassland restoration


SUPPORT FOR PUBLIC USE



Forest restoration and potential public use

RESTORATION OF WETLANDS

 The restoration is envisaged of a wetland by natural or semi-natural flooding on an area of approximately 94 has. which is actually occupied by rice paddies. It will be destined for the conservation of the biodiversity and an aid to the ecosystems. For this it will be necessary to alter the topography which will include some earth movement and eliminate the dykes and drainage channels constructed for the rice fields.

 The approximately 1.49 has. of the temporally flooded lands of the Haza de Suerte which border the actual rice paddies constitute the last unploughed area of the former Laguna de La Janda. This temporal flooding, along with other small flooded areas on the fringes of the Hazas and the Arroyo del Águila, sums another 0.75 has. which will be protected in order to avoid their sedimentation and thus favour their flooding. Furthermore, their protection will favour the restoration of natural vegetation along their perimeter.

AGRICULTURAL USE

Ecological rice farming

Part of the actual rice paddy, approximately 41.5 has., will be maintained as such but using ecological standards of production following a model similar to the production and commercialization established in the Riet Vell Natural Reserve managed by SEO/BirdLife in the Ebro Delta.

The economic benefits generated by the production and commercialization of this rice will produce the financial resources needed for the management and maintenance of the Reserve. The maintenance of agricultural practices on lands included in the Irrigated Area of Barbate is an indispensable requisite in order allow integration in the irrigated lands community and therefore give the right to use water which will allow flooding of the rice paddies and the restored wetlands.





Ecological agriculture on unirrigated land

Through the Custody Agreement with the Friends of the Pericón Alliance it is intended to carry out activities on approximately 104 ha.. These activities will be respectful of the environment and generate ecological products of a high added value. Priority will be given to the cultivation and growth of native varieties suited to the climate and land using low work load techniques. Ploughing of the land will follow contours to allow filtration of rainfall and minimize land loss. Fertilisers will be organic and the rotation of cereals and leguminous crops will favour the fixing of nitrogen in the soil along with the return of agricultural remains to the soil and the biological struggle against plagues and plant infirmities.

Priority will be given to the existence of mosaics of vegetation through the long term cycle of alternating of crops of legumes and cereal varieties to minimize the effects on steppe birds along with fallow lands compatible with the use of stubble by animals.

The temporary flooded zones will be kept and edges of the temporary streams and water courses with riverine vegetation will be encouraged. This will also apply to the borders between crops and will encourage the presence of fauna and vegetation which in turn will encourage the biodiversity and contribute to the biological control of plagues and crop infirmities.

At the same time it is intended to carry out the formalities necessary for the certification of agricultural products generated by the Reserve by the Andalusian Committee for Ecological Agriculture (*Comité Andaluz de Agricultura Ecológica*). Equal attention will be paid to recent agreements on the farm-to-table strategies within the new Common Agricultural Policy and on biodiversity coming from the European Green Deal Pact.

Following examples such as those developed by the Global Nature Foundation for the production and commercialization of legumes or SEO/BirdLife in the production of ecological rice, a commercial brand will be created which will serve to distinguish and thus increase the value of products in the market. Furthermore, being ecological these products will contribute directly to the improvement of the biodiversity and local economy. Agreements will be sought with local businesses and restaurants within the area to allow a commercial outlet for the products.



Livestock usage

The presence of livestock will be permitted on the restored wetlands in periods when there will be no interference with breeding waterbirds. The preference for use will be given to indigenous races and animals reared in an ecological manner. This usage will allow avoid the sedimentation and blocking of wetlands through the excessive accumulation of vegetable matter and will also encourage the opening of spaces in the halophytic vegetation and assure the presence of open water which in turn will favour the greater specific diversity of birds.

At the same time, the presence of livestock on both pasture and stubble will be permitted, the grazing levels being such that they will help to avoid the degradation of vegetation erosion as well as the compacting of ground and interference within the breeding cycles of wildlife present.





OTHER ACTIVITIES FOR THE CONSERVATION AND PROMOTION OF BIODIVERSITY

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The lands of the Haza de Suerte will be fully respected and maintained without ploughing the existing temporary flooded areas. The use of these lands by livestock will be limited to being compatible with the conservation of hygrophytic vegetation and the reproduction and food resources of wildlife linked to these wetlands.
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At the same time all artificial drainage systems that reduce flooding will be eliminated and priority will be given to natural water courses which use the geography of the land.
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Riverine vegetation will be encouraged, not only in the areas of flooding and the natural drainage channels but by leaving an unploughed strip approximately 5m. wide along their margins. The planting of native plant species will also take place and these must be adequately protected to avoid being grazed or being flattened by animals or farm machinery.
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The borders of the Hazas with the N-340 will be planted with trees and shrubs of the greatest possible variety of native species in order to create a visual screen which will serve as a refuge and resting place for wildlife. At the same time, repopulation with native scrub and bushes will take place on the steeper, non-arable slopes.
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The existing well and watering points for livestock in the area of the Arroyo del Águila will be given a pumping system fed by a photovoltaic panel. This will ensure the permanent availability of water and will be accessible for both wildlife and livestock which are able to graze pasture and stubble. The two existing watering points will be fitted with small ramps which will facilitate the accessibility of terrestrial wildlife and amphibians and also the exit of animals which may have fallen in and thus avoid their drowning.
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Nesting boxes and perches for birds of different species will be installed to favour further biodiversity and also their control of populations of rodents and insects which could frequently cause harm to crops or the mosquitos which might negatively affect both tourism and public health.
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Refuges and hives for bees and other pollinating insects will be installed as the presence of these insects will contribute to the fruiting of crops and the native, wild flora.
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Efforts will be made to use methods and agricultural techniques which will allow the complete development of the breeding cycles of steppe birds and the maintenance of fallow land and stubble will allow food supplies for wildlife once the farming and harvest period has finished.
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The marking or elimination of those elements along the perimeter which represent a risk of collision by birds will take place.
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The biodiversity will be monitored in detail by volunteers from the Sociedad Gaditana de Historia Natural in order to analyse the evolution of the different communities of flora and fauna and by these means propose changes in management or actions which will lead to an increase in the biodiversity.









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 At the same time the use of platforms of citizen science will be encouraged in order to facilitate the collection of data concerning the biodiversity of the area and its application to conservation. This will also give increased public visibility to the project.
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 The suitability of the site for the development of projects involving reintroduction or the reinforcement of existing populations of the flora and fauna will also be studied.

ACTIONS FAVOURING PUBLIC USAGE

With the objective of permitting public use with the aims of information, education, leisure and tourism it will be necessary to provide the Agro-ecological Reserve with a minimal infrastructure from its very beginning. This could be complemented with new installations in the future.

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 As a first step the installation of informative display boards is proposed. These will show information concerning the aims and works necessary to develop the Reserve.
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 To construct an observatory or lookout on the high ground of one of the mounds in the Hazas de Suerte. The observatory will overlook a major part of the Reserve and will also serve as a reception and information point to attend to organised visits. In its interior there will be information panels about the history and patrimonial value of the Hazas de Suerte, the Laguna de La Janda and the management carried out within the Reserve. For the construction of the observatory/lookout there is already a design, shown in the following image. This is the work of the artist and designer Javier Ayarza and will be constructed mainly of wood. It simulates a huge bird's nest and will integrate perfectly in the countryside and will allow a panoramic 360 degree view which will allow a view of most of the Reserve as well as the lands, sierras and villages around. In sum, it will allow the observatory and lookout to give privileged views of the countryside and wildlife around it.



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 Given the clay nature of the ground and flooded areas in the wet periods, access to the observatory/lookout will be extremely difficult for which reason it will be necessary to construct a pathway which may be used all year round. This will be achieved by the construction of a raised walkway over the ditch and the addition of compacting material in the muddy areas.
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 On the other hand, in order to encourage and exploit the important resource of ornithological tourism, the construction is envisaged of a raised ornithological observatory on the edge of the wetland to be restored.





EDUCATIONAL, PUBLICITY AND PROMOTIONAL ACTIVITIES



In order to publicise the benefits that this project will bring to local society, the following actions are foreseen:

- Guided visits for schools, agricultural collectives, farmers, business people and other groups within the area.
- Participation in talks, workshops and congresses.
- Participation in local and regional fairs and meetings within the agriculture and farming communities.
- Publicity through social networks and communications media both written and visual.
- Promotion of ornithological and wildlife tourism.
- Encourage the exchange of experiences with other projects of similar objectives.
- To request the status of 'Ecological Reserve' (*Reserva Ecológica*) through the Department of Agriculture, Livestock, Fisheries and Sustainable Development (*Consejería de Agricultura, Ganadería, Pesca y Desarrollo Sostenible*) of the Andalusian regional government.
- The creation of a brand name or commercial label and marketing activity to give an added value to ecological products from native varieties and to be obtained after its declaration as an Ecological Reserve.
- The signing of agreements with local businesses and well known restaurants in the area to give outlets to certified ecological produce.





Actions


AGRICULTURAL USE

-  Ecological agriculture on unirrigated land
-  Ecological rice farming


RESTORATION OF WETLANDS

-  Lagoon restoration
-  Improvements to temporary flooding

CONSERVATION AND ENHANCEMENT OF BIODIVERSITY

-  Ecological grassland restoration

SUPPORT FOR PUBLIC USE

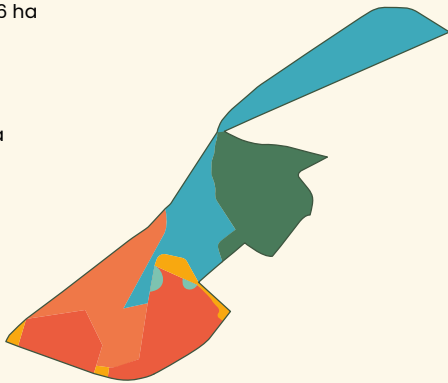
-  Forest restoration and potential public use

-  Actions in wells and troughs
-  Livestock usage
-  Temporary streams
-  Unique remaining pristine area of original lagoon
-  Nest boxes and perches
-  Amphibian recovery
-  Hives and shelters for pollinating insects
-  Observatory/ viewpoint and information center
-  Informative poster
-  Photographic hides
-  Ornithological observatory







Surfaces

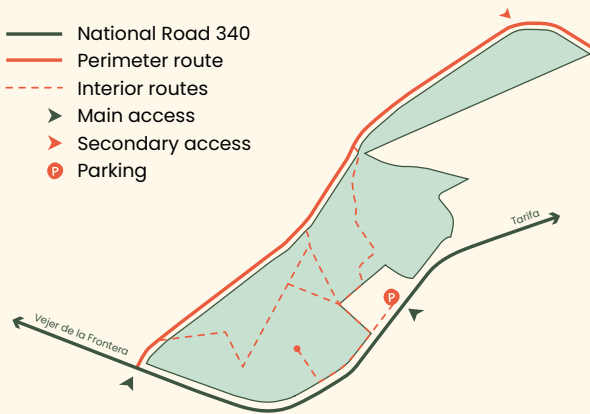
TOTAL 406 ha

-  54 ha
-  44 ha
-  100 ha
-  2 ha
-  61 ha
-  7 ha



Accessibility

-  National Road 340
-  Perimeter route
-  Interior routes
-  Main access
-  Secondary access
-  Parking





REVIVING LA JANDA

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