



## Presentation of El Hondo Study Site

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## Brief characterisation of El Hondo study site

In ancient times (Roman Period), this space was a large sea bay in which two rivers flowed: the Segura and the Vinalopó. The sediments carried out by the two rivers progressively filled the bay, creating a coastal lagoon separated from the sea by a coastal sand barrier. Specially, the interior delta of Vinalopó river is easily recognisable in aerial photographs, delimiting El Hondo and the salines of Santa pola northwards. Archaeological, sedimentological and palaeobiological data coincide in pointing that the coastal lagoon, covering the area between Guardamar and Santa Pola, remained since at least Medieval times. Afterwards (16<sup>o</sup> - 18<sup>o</sup> centuries), the area has remained more or less swampy, and the true lagoon was reduced to the area south of Santa Pola (more or less the area presently occupied by the salines o Santa Pola).

In the 18<sup>o</sup> century, the Cardinal Belluga initiated drainage works trying to extend the historical irrigated space of the Segura Lower Valley to these swampy areas peripheral to the remaining lagoon of Elche. Contemporarily, the Marquis of Elche constructed a network of azarbes (drainage canals). The efforts of Cardinal Belluga resulted in the creation of three villages: Dolores, San Fulgencio and San Felipe Neri. Those of the Marquis of Elche resulted in the creation of the area of Carrizales.

The final phase of this long-history temptative of total drainage of the ancient Elche lagoon has taken place during the post-war years, under the Franquism, with the drainage of the last remnants of saltmarshes and the foundation of two villages: San Isidro and El Realengo, westwards of El Hondo. Guided by the same ideology as the Italian fascism, this last wave of land reclamation efforts merits a comparison with the ideologically related Mussolinian colonization of the Italian Maremma.

These last reclamation works resulted in a relative economic failure. Compared with the scarce agricultural revenues obtained from reclaimed lands, cynegetic and fishing activities in remaining wetlands provided much greater economic gains. Thus, some private owners of lands surrounding El Hondo have flooded again their lands in order to transform them in ponds where hunting or fishing could be practised. These more or less artificial ponds are now inegrated in the Natural Park.

Riegos de Levante was founded as a private company in 1922. Its objective was to take water from the mouth of the Segura and pumping it to the Elche countryside. The irrigated area was progressively incresead during the next years. It is considered the greatest work of irrigation in Spain, with 39296 irrigated ha (a half of the total irrigable lands in the province of Alicante).

The initiative of Riegos de levante had an antecedent in the company Nuevos Riegos El Progreso, founded in 1906. They continue to pump water from the drainage canals of the Segura lower valley to the agricultural areas of Elche.

In the 1940s, Riegos de Levante built two large reservoirs in the area locally known as El hondo for keeping the water: Levante (Eastern) and Poniente (Western) reservoirs, which respectively take up 450 and 650 ha. The capacity of the Levante reservoir is five million cubic metres and that of the Poniente reservoir is eleven million cubic metres.

The conservation interest began around 1970, mainly due to the first scientific observation of the richness of bird fauna. But it was not declared protected area since its declaration as “Paraje Natural” (Natural Reserve) in 1988, The present Natural Park covers 2387 ha.

Park management corresponds to Regional Environmental administration, which designs the Director of the Parks and maintains its staff. Participation of stakeholders is formally channeled through the *Junta Rectora* (consulting participative Committee), which holds periodical meetings.

The composition of this Junta Rectora is:

- One representative of the Town Council of Elche.
- One representative of the Town Council of Crevillente.
- One representative of the Conselleria de Medio Ambiente (presently Conselleria de Territori i Habitatge).
- One representative of the Conselleria de Agricultura, Pesca y Alimentación.
- One representative of the Conselleria de Obras Públicas, Urbanismo y Transportes.
- One representative of the Conselleria de Economía y Hacienda.
- One representative of the Diputación de Alicante.
- One representative of the Confederación Hidrográfica del Segura.
- One representative of the Comunidad de Riegos de Levante.
- One representative of the Comunidad de Riegos de San Felipe de Neri.
- One representative of the other (private) hunting reserves included in the protected area.
- One representative of the conservationist organizations.
- One representative of the Universities of the Valencian Region.
- The Director of the Natural Park (secretary of the meeting)

Present state of El Hondo is not understandable without some reference to the changes suffered by the Segura river basin since the second half of the 20<sup>th</sup> c. So, we will give here an elementary picture of these changes.

The Segura basin is considered now as the most regulated (in the engineering sense) water basin in Spain. Dams have been built in almost all tributary rivers, especially on those which have been traditionally the most important water donors to the Segura. One of them, the Taibilla is especially important because it supplies drinking water to a great part of the Murcia and Alicante provinces (a total of 76 municipalities) including the big cities of Alicante, Elche, Murcia, Cartagena and the coastal touristic zones. The Mancomunidad de los Canales del Taibilla is dependent on the Ministry of Public Works. Its history began in 1945 with the supply of drinking water to the city of Cartagena, some 200 km. far from the Taibilla river. Afterwards, The Canal del Taibilla obtained 110 hm<sup>3</sup> from the Tajo-Segura transfer, which is now the main water supplier of drinking water for the area covered by this water organism.

The Tajo-Segura water transfer first plans dated back to 1933, but they were not materialized until 1968 (works finished in 1979) from the Bolarque dam (Entrepeñas-Buendía system, upper course of Tajo River) to the Talave dam in the Segura river.

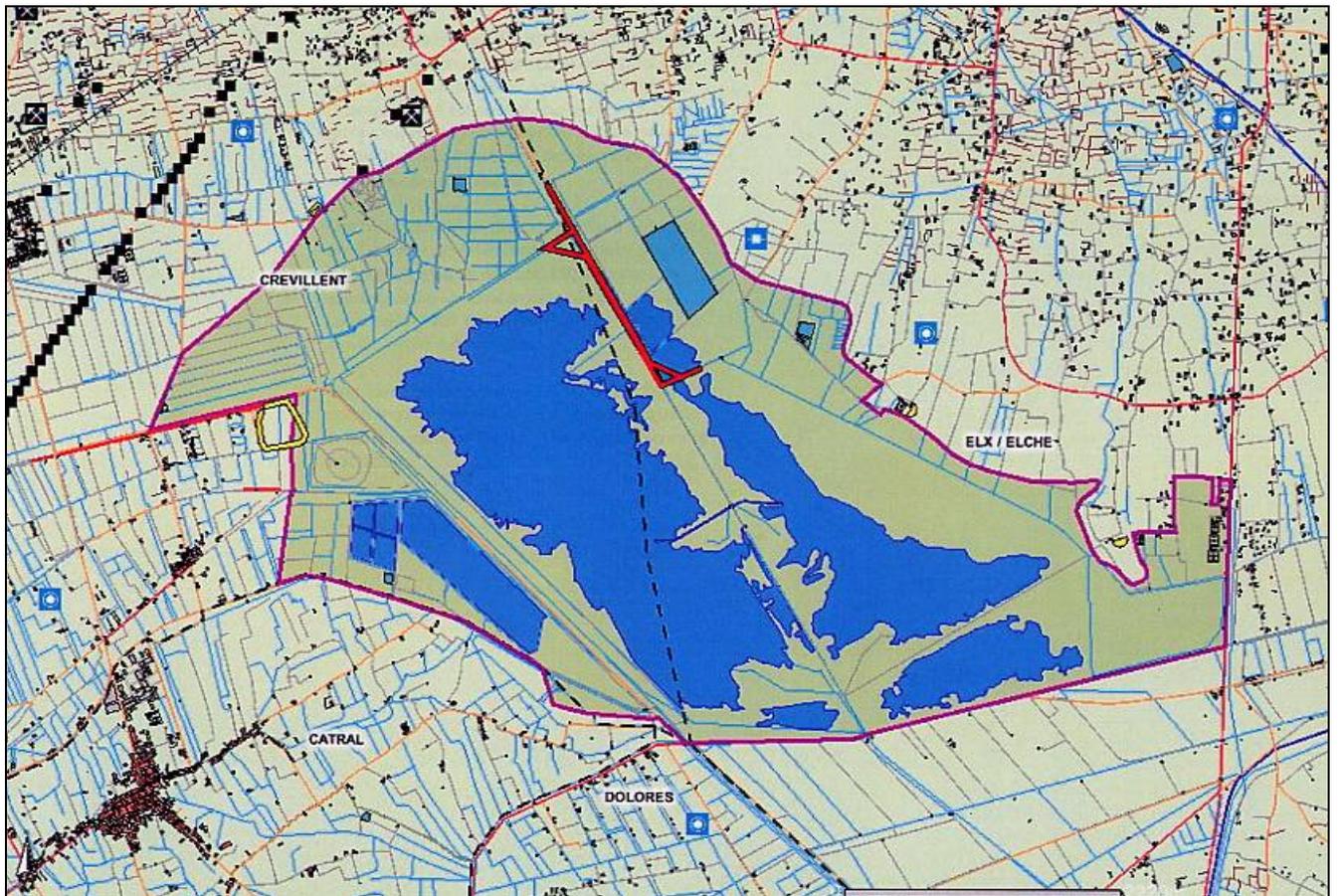
Many people and experts think that the transfer is at the origin of the present bad state of Segura basin, because it created such expectations that irrigated areas grew enormously on former drylands, without any control from the administration, to the point of creating a deficitary balance even with the new transfers from the Tajo river.

As user of the Segura water, *Riegos de Levante (MI)* were benefited with a concession of 97,5 hm<sup>3</sup>/year. Of course, this quantity has never been obtained, but the trasfers obtained from the Tajo river have become a very relevant factor in the activities of Riegos de levante. These waters, which are of a good quality are dammed up in a reservoir built near Crevillent (never in El Hondo), and they are never into El Hondo reservoirs, whose waters (coming from the Lower Segura) are of a very poor quality. Presently, the main business of Riegos de Levante is to sell water from the Tajo-Segura transfer to farmers, whereas the water from El Hondo has a very low importance due to its inadequacy for most agricultural uses.

More information (including videos, brochures, satellite images and cartography) can be loaded from the web page of the Natural Parks of Valencia Region:

<http://parquesnaturales.gva.es> (versions in Spanish, Valencian and English)

El Hondo Natural Park and its surroundings.



## Delimitation of the study area

We could define three concentric areas for the understanding of El Hondo processes and problems, and thus for WADI studies.

A) The Natural Park and its immediate surroundings, as affected by environmental protection measures (incl. San Felipe Neri, Carrizales).

B) The areas covered by the irrigation systems of the area, i.e., *Riegos de Levante – Left Bank, Nuevos Riegos El Progreso, Riegos El Porvenir*, and traditional irrigation systems of the Left Bank of River Segura and Elche (Vinalopó River).

C) The Segura River Basin.

It is perhaps important to give some cultural-linguistic information, since the local populations in study site are bilingual. The Natural Park is placed in two municipalities speak Valencian (a regional form of the Catalan language). Broadly speaking, the people inhabiting the Northern and Eastern parts of El Hondo (Elche and Crevillent countrysides) speak Valencian, whereas people inhabiting the Southern and Western parts (the Segura valley region) speak Castilian (Spanish). Accordingly, there is a duality in traditional terminology and toponimy. However, this linguistic richness has not been formally studied to the moment.

In this document, we have normally used the Castilian (Spanish) version of toponims. However it should be noted than in the Northern part of El Hondo area, the Valencian names are the traditional (and frequently, also the official) ones.

Hondo (Spanish) or Fondo (Valencian), the official names of the Natural Park, means, to the local people, a lowland area more or less subjected to periodical flooding.

## Identification of stakeholders

### **Environmental Administration**

The *Conselleria de Territori i Habitatge* of the *Generalitat Valenciana* (Valencian Autonomous Government) is equivalent to a Ministry of Environment, since all environmental competences in the Region of Valencia (to which Alicante province belongs), corresponds to the Regional Government, with only a few exceptions. That means that the Spanish State Ministry of Environment has no direct competence on the management of El Hondo Natural Park (although its competencies at a National level in Water Policy, as we shall see below, have a great indirect influence in its sustainability).

It has the responsibility of environmental management in the Natural Park (also in the N.P. of the Salines of Santa Pola), and the other Protected Wetlands surrounding the Park (mainly the area of Carrizales, and those of the Lower Course of the river Segura).

### **Waterbasin Administration**

The *Confederacion Hidrografica del Segura* (CHS), dependent on the Ministry of Environment (National Government), has the responsibility of water management in

the Segura river basin. It should also be noted that the *Confederación Hidrográfica del Júcar* has apparently competencies on the Eastern part of El Hondo reservoirs (seemingly included in its territory), and, clearly, on a great part of the lands irrigated by Riegos de Levante eastwards of El Hondo. However the CHJ has never accepted any role with regard to El Hondo.

The water transfers from the Tajo river to the Segura basin are approved and managed by the *Comisión de Explotación del Trasvase Tajo-Segura*, also dependent on the Ministry of Environment.

### **Local administrations**

Its main role is through their urbanistic competencies, including the declaration of Protected non—urbanisable lands. However, in the case of Natural Parks, Regional normatives are considered higher in level. Municipal competencies are, thus, especially important with regard to the areas surrounding El Hondo.

**Town Councils of Elche and Crevillent** are the main stakeholders because El Hondo is placed in these two municipalities. They are represented in the Consulting Committee (*Junta Rectora*) of the Park.

**Other municipalities** are San Isidro, Catral, Dolores and San Fulgencio. It should be added Santa Pola (due to the natural connections of El Hondo and the Salines of Santa Pola), and Guardamar, in the mouth of the River Segura, from which water is taken. Indirectly, other municipalities from the Segura Valley have (water) relationships with the water system of El Hondo and surroundings.

The great rate of urban developments which are taking place in the area an important pressing factor in the functionalism of the area. It creates new water demands and introduces disequilibria and alterations due to the fast and enormous economic earnings it furnishes to land owners (for example, peasants) and town councils. So, there is a clear temptation to the abandonment of agricultural or conservation uses of the territory. Many areas of the El Hondo surrounding lands have been already affected by large urban-touristic developments, not only in the coast, but also in traditional agricultural landscapes. One possible future scenario is that of El Hondo and the other protected areas surrounded by a continuum of urban-tourism zones, with no agro-landscapes nor peasantry. So, land planning policies of the several municipalities (land uses planning and urbanism are largely a competence of municipalities, with some control from the Conselleria de Territori i Habitatge) will determine the evolution of the area and the sustainability of the system.

Municipalities have also competencies on the protection of cultural and historical heritage. Some of the towns have municipal historical-ethnological museums or cultural heritage technicians. An important activity in this field is carried out by the Municipal Cultural Institute (*Cultura d'Elx*) of the municipality of Elche. Elche has also created a Municipal Patronate of the Historical Palm-tree Orchards, recently declared UNESCO World Heritage, and very ligated to the traditional irrigation system of the Vinalopó river.

### **Private owners**

The constructors and owners of El Hondo water reservoirs: *Comunidad General de Regantes Riegos de Levante* (CRL), created as a private company with the aim of

selling water to farmers in an extensive area covering from the surroundings of Alicante city to the Segura valley which created the reservoirs in the former. Now, due to changes in Water Law, it has been constituted as a Community of users.

Included in the Park, and in its immediate surroundings, there are other private owners of ponds in the protected area and their surroundings, mainly dedicated to hunting and fishing. Many of these properties present an enormous ecological value.

### **Farmers (irrigators) communities**

A special interest have the community of **Carrizales**, in the municipality of Elche, which forms the South-eastern limits of the Park, and is now considered a protected area as Protected Wetland Zone. It has been the peasant community that has been most affected by environmental dispositions, due to its closeness to El Hondo and its official declaration as Protected Wetland Zone. It is crossed by the final portion of the majority of the *azarbes* (drainage canals) that, by taking off water, have historically allowed agriculture and human colonization in the swampy area to the south of El Hondo.

**San Felipe Neri** is a small village, very close to the Western and South-western limits of the Park, now included in the municipality of Crevillent, but whose history and cultural characteristics (it is a 18<sup>o</sup> century foundation of the Cardinal Belluga) are very different from those of Crevillent. It is Castilian-speaking community with more affinities with the Segura Valley region. As that of Carrizales, they have been the main opponents to environmental administration. They frequently complain about not having been consulted nor informed at the moment of the declaration of El Hondo as Protected Area.

The village of **El Realengo** also belonging to the Crevillent municipality, is located a little further to the west, and, like San Felipe Neri it is a Castilian-speaking community, culturally adscribable to the Segura valley region. As San Isidro, it is a recent (1950s) foundation of the INC (National Colonization Institute).

To the north of El Hondo, in the municipality of Elche, there are the associations of irrigators users of the Vinalopó: the *Sèquia Major* (Main Canal), and the Marchena Canal. To the south, in the Segura valley, there are many local associations related to the traditional irrigation systems of this river.

Farmers unions present in the area are the *Comunidad de Labradores y Ganaderos de Elche* and the local groups of *ASAJA* (Association of Young Farmers).

### **Environmentalist groups**

**Sociedad Española de Ornitología (SEO)/Birdlife** is a association especially dedicated to the study and protection of birds. It has carried out many activities and mobilizations in El Hondo area. Presently is the representative of environmentalists in the Junta Rectora of the Park.

<http://www.seo.org>

**Ecologistas en Acción** is a Federation of more than 300 environmentalist associations from all Spain. Members of the Alicante local groups have been very active in El Hondo area. It published the journal *El Ecologista*.

<http://www.ecologistasenaccion.org>

**Asociación de Amigos de los Humedales del Sur de Alicante(AHSA)** was founded in 1995, and has 200 associates. It published the informative bulletin *La Matruca*, which frequently contains articles on El Hondo, its ecological values and its environmental problems.

<http://www.geocities.com/rainforest/3249/ahsa.html>

**Segura Limpio** is a civic platform which integrates local associations and administrations from the area of the Lower Segura. Its is dedicated to the promotion of a better state of the river.

<http://rsanchezpa.eresmas.net/rio.htm>

**Pro-Río** is another local collective which carry out frequent activities in defense of the river Segura

<http://www.pro-río.org>

## Other “non-conscious” stakeholders

### Environmental education

In the area of El Hondo (Elche, Crevillent, Santa Pola, Guardamar and the Lower Segura), environmental education activities are carried out mainly by school and college (*institutos de bachillerato*) teachers.

The CEFIREs (Professors Centres) are organisms dedicated to the formation of the primary and Secondary professors (school and college teachers). They depend on the Conselleria d'Educació i Ciència. There are local CEFIREs in Alicante, Elche and Orihuela.

In the area, private initiatives related to environmental education or interpretation are not abundant.

### Researchers-University professors

Mainly from the Universities of Alicante and Elche, but also from other Universities or Research Centres. Outside our area, research groups from the Universities of Murcia and Valencia and the CSIC (National Research Centre) have a certain relationship with El Hondo through several research projects.

We also think that **University students** should be considered a stakeholder group due to the importance that natural parks have (or should have) in their formation.

### Rural women

Associative movements among rural women are not yet active. AMFAR, a national organization dedicated specifically to the promotion of rural women, has a delegation in Elche. Each village or rural area has normally an Asociación de Amas de Casa (Housewife association).