7ES026



[Text translated by J. Jenkinson, November 1995]

# Information Sheet on Ramsar Wetlands

COUNTRY: SPAIN

**REF: 7ES026**

NAME OF WETLAND: RIA DE MUNDAKA-GUERNIKA

## 1. - PHYSICAL ENVIRONMENT

### 1.1. - GEOGRAPHICAL LOCATION. DELIMITATION

The wetlands of the Guernika estuary consist of 945 ha of reedbeds, rushbeds, partially flooded grazing land and, above all, intertidal mudflats and sands.

The area extends into the municipal districts of Mundaka, Sukarrieta, Busturia, Murueta, Forua, Guernika, Ajangiz, Kortezubi, Ibarrangelua and Gauzteguiz de Arteaga, all of which are situated in the province of Bizkaia.

### 1.2. - CLIMATOLOGY

The climate of the Biscay coast is mesothermal, of the temperate-wet type. There is no real dry season. Autumn and winter are the seasons of maximum rainfall.

Although winds from the north-west are not uncommon, the prevailing winds in winter are south-westerly. Northerly winds are dominant in summer.

The average annual radiation is estimated at 120 Kcal/cm$^2$ and annual sunshine at 1,750 hours.

Average monthly temperatures vary between 21°C in August and 9°C in January and February. The average maximum and absolute maximum temperatures in August are 24-25°C and about 40°C respectively, and the average minimum temperature in January and February is approximately 5°C. Frosts can occur from November to March.

The average annual rainfall in the Mundaka estuary is some 1,300 to 1,500 mm. December is the wettest month. The summer months are those with least rainfall, but there is no really dry month (minimum rainfall always above 30 mm/month).

### 1.3. - HYDROLOGICAL AND HYDROGRAPHICAL FEATURES

The wetland is located at the end of the Oca river valley, close to the point where the river discharges into the sea.

The area has various aquiferous materials, including:

- modern alluvial materials (Oca and Golako river) and Quaternary detritus (Guernika estuary) which make for rapid water penetration and zero drainage;

- calcareous aggregations with karstic features (caves, chasms), characterized by considerable subterranean water activity;

- [supra and infraurgonianic ?] materials and cemented and uncemented detrital materials; chalky-marly strata;

- Cenozoic basal and Mesozoic terminal materials, clays and detritus cemented by calcite, with very limited aquifers.

1.4. - GEOMORPHOLOGY

At its upper end, the estuary's bed consists of Quaternary materials that are more or less consolidated, whereas in the lower reaches these same materials are affected by the action of the sea (salt marsh partially affected by the sea's momentum).

On the shoreline, the bed of the estuary is overlaid by marine sediments which are affected by the movement of the tides.

In general, the soils of the area show little development, although there is considerable ['litológica' ?] variability, accentuated by the high level of precipitation.

1.5. - DESCRIPTION OF THE FLORA. PLANT COMMUNITIES

Attention must be drawn to the following vegetation types:

- Cantabrian evergreen-oak woods:

*Quercus ilex* and *Arbutus unedo* grow on poor, shallow soils on limestone rocks on the estuary's margins. In areas of deeper soil broadleaf trees such as *Castanea sativa* and *Quercus robur* are to be found. Shrubs and bushes include *Phillyrea mea, Ligustrum vulgare, Cornus sanguinea, Crataegus monogyna, Rosa sempervirens, Rubus spp.*, etc. A dense and impenetrable undergrowth is made up of shorter shrub species (e.g. *Ruscus aculeatus*), various species of heather (e.g. *Daboecia cantabrica* and *Erica vagans*), furzes (e.g. *Ulex europaeus*) and lianas (e.g. *Smilax aspera, Clematis vitalba*, etc.). The evergreen-oak woods have been disfigured by intensive exploitation.

- Coastal heathland:

This runs parallel to the coastal rocks in a more or less narrow strip depending on the level of human activity, which in many parts has caused it to vanish altogether. The strong marine influence (fierce winds and a salt-laden atmosphere) has produced stunted forms (ecotypes) of various hinterland species. Typical examples include *Genista hispanica* subsp. *occidentalis, Erica vagans, Daucus carota* subsp. *gummifer, Plantago maritima, Dianthus monspesulanum, Festuca dumentonum, Armeria euskadiensis, Ulex europaeus*, etc.

- Coastal rock plants:

Various species take root in the scant soil to be found in the fissures of rocks. Examples include *Asplenium marinum*, whose reach almost coincides with that of the waves, *Chrithmun maritimun, Plantago maritima, Armeria euskadiensis, Daucus carota* subsp. *gummifer, Silene vulgaris* subsp. *maritima*, etc.

- Hygrophilous plants:

Found in areas that are occasionally or frequently inundated by water of variable salinity, these plants form communities that differ according to the duration of flooding:

* Frequently flooded salt marshes. These include the salty mudflats which are contiguous to the estuary channels on both sides of the basin and are flooded at high tide. Of particular note are a strip of herbaceous plants consisting almost entirely of *Spartina maritima* and *Zoostera noltii* and an area close to the central line of the estuary (series of hollows in which water accumulates) populated by *Salicornia ramossisima, Halimione portulacoides* and *Suaeda maritima*.

* Occasionally flooded salt marsh. Occupying both sides of the estuary, this is covered for a short time by the spring tides. Its inner zone supports species such as *Triglochin maritima, Inula chrithmoides, Aster squematus, Juncus maritimus* and *Atriplex hastata*, which grow alongside the plants mentioned above. Its outer zone has a more sandy soil and is populated by species such as *Juncus maritimus, Juncus acutus, Limonium vulgare* subsp. *serotinum, Scirpus maritimus* and *Carex vulpina*.

- Reedbeds:

These occur in small clumps on the edges of sluggish watercourses or in deserted wet-meadow areas once drained by the salt marsh. Species include *Phragmites australis, Typha latifolia, Juncus conglumeratus, J. acutus, Cyperus eragrostis, Mentha aquatica* and *Baccharis halimifolia*.

- Coastal sand plants:

Typical beach species such as *Cakile maritima, Euphorbia paralias, Polygonum maritimun, Ammophilia arenaria, Eryngium maritimun* and *Medicago marina* are still in evidence.

1.6. - DESCRIPTION OF THE FAUNA. COMMUNITIES OF VERTEBRATES

The area teems with wildlife and has a relatively complex ecology.

The amphibians are not very well represented, at least in the marshes (hypersaline water). *Bufo calamita, Triturus marmoratus, T. helveticus, Hyla arborea* and *Rana perezi*, on the other hand, are well established on large stretches of less saline wetland on the estuary's margins.

As for the reptiles, *Natrix natrix* and *N. maura* are able to penetrate deep into areas of brackish water, while species such as *Lacerta schreiberi* and *L. vivipari* are to be found on the land skirting the salt marsh.

The Mundaka estuary is an important refuge for birds. The salt marsh itself is frequented by a variety of interesting species: *Phalacrocorax carbo, Melanitta nigra, Ardea cinerea, Egretta garzetta, Numenius arquata, Calidris alpina, Calidris minuta, Haematopus ostralegus, Tringa totanus*, etc. The wet-meadows flanking the marsh are a feeding ground for species such as *Vanellus vanellus, Gallinago gallinago, Anser anser*, etc.

In addition to these birds, which can be seen in winter or the migration period, an appreciable number of species use the salt marsh for nesting, e.g. *Gallinula chloropus, Charadrius dubius, Locustella naevia, Rallus aquaticus, Acrocephalus arundinaceus*, etc.

Herring gulls and black-headed gulls are noteworthy for their abundance and ubiquity.

As far as mammals are concerned, the salt marsh is home to three species of special interest: the European mink (*Mustela lutreola*), the polecat (*Putorius putorius*) and the water rat (*Arvicola sapidus*).

## 2. - LAND MANAGEMENT AND USE

### 2.1. - LAND USE

Although drainage of the salt marsh for cultivation and grazing purposes has become less common in recent years, small plots of land, particularly in the reedbed areas, continue to be targeted. In this respect, the dredging carried out by the Astilleros Murueta enterprise is having a very negative impact on the bird communities. Notwithstanding this drainage, the most important activity in the area has always been, and continues to be, the catching of shellfish. It has to be pointed out, however, that, in the absence of any control or management of the collection of molluscs (cockles, clams, etc.), crustaceans (shrimps, crabs, etc.) and annelids (worms for bait), there has been a substantial decline in the populations of these invertebrates. This may explain the low counts of species such as the oystercatcher, and it may even be having an adverse effect on other, rarer species such as the spoonbill.

Tourism in the area is very much on the increase. As there is no regulation or management, people are able to roam freely on the wetlands and their presence is often disturbing to the birds, particularly in the summer season.

The many pollutants of urban and industrial origin reaching the area (some heavy industries are located upstream) are a further cause for concern.

### 2.2. - LAND TENURE/OWNERSHIP

Almost the entire area is privately owned.

### 2.3. - CONSERVATION MEASURES

As far as the direct protection of the avifauna is concerned, hunting on the Guernika estuary has been prohibited since 1978. At present, an area of 2,000 ha is officially designated a wildlife refuge (closed to hunting).

In 1985, on a proposal from the Basque Government, UNESCO declared the entire Urdaibai valley (22,500 ha) a biosphere reserve. However, this has not entailed the promulgation of any special conservation measure, with the result that there is a management vacuum in which the wetland is liable gradually to deteriorate.

Recently, the Basque Government drew up a special plan for the

protection and regulation of the Urdaibai biosphere reserve (Plan Especial de Protección y Ordenación de la Reserva de la Biosfera de Urdaibai (Law 5 of 6 July 1989). Its implementation will mark an important step towards conserving the area's salt marshes, the immediate conservation of which should have been guaranteed already by strict compliance with the law applicable to coasts (Ley de Costas) of July 1988.

## 3. - INTERNATIONAL IMPORTANCE CRITERIA

### 3.1. - AQUATIC BIRDS

Although the figures for wintering species fail to meet the international importance criteria, the area is of interest for two reasons. In the first place, it is regularly frequented by species rarely found in Spain's wetlands, e.g. ['barnacla carinegra' = brent goose ?], eider-duck, ['negrón especulado' = species of scoter ?] and ['havelda' = ?]. Secondly, the presence of these and other northern species (whooper swan, mute swan, barnacle goose) is more likely during prolonged cold spells. Indeed, the Cantabrian estuaries are an important alternative refuge for wintering birds exposed to the rigours of harsh winters.

In the migration seasons (particularly autumn), large flocks of birds of many species, including some seldom seen in the area, congregate on the Cantabrian shores. Species to be found in small numbers on the salt marshes at these times include the purple heron, spoonbill, osprey, marsh harrier, little bustard, ['correlimos zarapitín' and 'correlimos de Temminck' = species of waders ?] and whiskered tern. Of the large groups of birds, the Ardeidae (grey heron and little egret) are well represented with more than 100 specimens, while flocks of cranes put in the occasional appearance (in November 1987, 500 specimens were in residence for several days).

Notwithstanding the above, the Guernika estuary's main claim to recognition as an area of special interest stems from the regular presence of the spoonbill on its salt marshes. These, together with the Santoña marshes, are more important than any other wetland in the Iberian Peninsula as a resting place and feeding ground for spoonbills migrating from the Netherlands. The record count of 120 specimens at Guernika is no mean statistic, as should be fully realized.

As far as nesting activity is concerned, it may be said that the area is of regional importance only. The species that nest in the reedbeds (water rail, moorhen, ['polluela chica' = a species of crake ?], reed bunting, ['carricero común'= ?] and ['tordal' = ?]) deserve mention, as does the small colony of little ringed plovers (4-5 pairs).

## 4. - UTILIZATION AND MANAGEMENT PLAN

As mentioned above, the Basque Government recently drew up a Plan Especial de Protección y Ordenación de la Reserva de la Biosfera de Urdaibai (Law 5 of 6 July 1989).