



## Results overview for the Guadiana River Basin (Spain)

This fact sheet summarises the results of the Water and Wetland Index for the Guadiana River Basin (Spain). Information about the project and the different issues presented in this fact sheet can be found in the WWF Report “Water and Wetland Index - Critical issues in water policy across Europe” (2003).

### Water Resources in the Guadiana River Basin (Spain)

The Guadiana river basin is shared by Spain and Portugal and is the river basin with the largest surface on the Iberian Peninsula with 55.220 km<sup>2</sup> (83%) inside the Spanish territory. In Spain, the Guadiana river runs over 550 km in two stretches and through three autonomous regions (Castilla-La Mancha, Extremadura and Andalusia). The main problems within the river basin are the overexploitation of the aquifers in the Upper River Basin through the large extractions for agricultural use, the agricultural contamination and the fragmentation by dams. The severe drying-out of the upper river and associated wetlands, such as the Tablas de Daimiel National Park, has not led to better water management inside the river basin. The current solution is a water transfer from the Tagus river basin for “environmental reasons”, which has provoked the introduction of a number of alien species that endanger the local and endemic fish species in the Guadiana. Far from solving the water problems, the River Basin Authority is drafting with the farmers - and excluding other stakeholders - an “Upper Guadiana Plan”. Regarding dams there are 86 major dams (with a storage capacity bigger than 1 Hm<sup>3</sup>) that are able to regulate about 150% of the average annual rainfalls. As fish species are of important environmental value to the whole basin, it is relevant to know that there is only one fish ladder in the whole river basin and that it works irregularly.



## Application of Integrated River Basin Management principles

### Public participation in water management

#### Information provision

Although a specific website is set up, this contains mainly general information. The access to technical documents is especially difficult regarding socially conflictive projects. It is hardly possible to have access to relevant background documents that are considered “internal”. Pro-active information provision is only given to some privileged interest groups.

Existence of arrangements<sup>1</sup>

Adequacy<sup>2</sup>

#### Public consultation

Public consultation opportunities are strictly limited to those established by the law. In general, there is no consultation of draft documents and only very final documents are submitted to advisory boards and published in the Public Bulletin. Additionally, only some stakeholders participate in the drafting (e.g. the Regional authorities have not participated in the Upper Guadiana Plan drafting from the beginning). Usually, there is not sufficient time period to allow effective consultation and consultation processes are often developed over the summer holiday periods.

Existence of arrangements

Adequacy

#### Active involvement

The main instrument for active involvement of stakeholders is the River Basin Water Council. This body is an advisory body without powers to truly influence decisions. Meetings are very irregular and the representation of the different stakeholder sectors is unbalanced.

Existence of arrangements

Adequacy

<sup>1</sup> This assesses the existence of arrangements (e.g. the celebration of information days, the existence of public consultation procedures, the existence of water management plans, etc).

<sup>2</sup> This assesses the adequacy of the existing arrangements and their implementation on the ground. It is based on the opinion of WWF, partner NGOs and other water stakeholders.

## Integrated management of water resources

### Transboundary cooperation

The relationship between Spain and Portugal is regulated by an International agreement that considers a number of aspects of water management. However, the transparency on the level of fulfilment of this agreement is poor and measures are needed to improve the information exchange on biodiversity.

Existence of arrangements	
Adequacy	

### Integration of competencies in water management

Formally, the River Basin Authority (*Confederación Hidrográfica*), belonging to the Ministry of Environment, is the main body responsible for all water management in the river basin. In practice, however, there is a competing relationship with the Regional Authorities that are driving agriculture development, which is the main water user. These Regional Authorities are also the responsible authorities for urban wastewater treatment.

Existence of arrangements	
Adequacy	

### Integration of water policy with sector policies

The River Basin Management Plan - drafted exclusively by the River Basin Authority - considers all the water-consuming sectors. However, it strongly favours consumptive water uses and neglects non-consumptive aspects (environment, fisheries, tourism). The Plan contradicts other strategies of the Ministry for the Environment (e.g. the Biodiversity Strategy) despite the fact that the Authority is hosted by the Ministry.

Existence of arrangements	
Adequacy	

The activities of the Management Plan are proposed as a simple listing without priorities, timeline or budgets.

## Wetland management

### Integration of wetlands into water management

Due to their focus on increasing water supply, water management plans and initiatives often go against wetland conservation. The existing legal measures (such as the control of public riverine domain and water abstraction), formally valuable, are ineffective due to their poor enforcement. The River Basin Management Plan includes a list of protected areas, but does not analyse any positive wetland functions for river management.

Existence of arrangements	
Adequacy	

### Wetland protection policy

There are inventories and assessments of the state of wetlands in the river basin. Nevertheless, a specific plan for wetland protection or restoration is still missing.

Existence of arrangements	
Adequacy	

### Wetland restoration policy

Restoration initiatives are isolated and uncoordinated. To be really effective, they should be integrated into an overarching plan including a schedule, assignment of responsibilities, specific budgets and follow-up measures.

Existence of arrangements	
Adequacy	

## Response to key pressures and impacts on freshwater ecosystems

### Water quantity problems (agriculture)

#### Approach to the problem

Water abstraction for irrigation is the main cause of aquifer over-exploitation. Although the authorities are well aware of the problem, they are not able to give an effective solution, both for lack of political will and because of the huge economic and social interests linked to irrigation in the area.

Adequacy



#### Legal & regulatory instruments

There is a positive set of existing legal instruments (water permits, obligation to measure water consumption), but they are very ineffective due to the laxity of their enforcement, which leads to a high level of law breaching. It is estimated that about 49% of the boreholes existing in the river basin are illegal.illegal boreholes, and in the Upper Basin, which faces severe groundwater and environmental problems, there might be more than 15,000 illegal boreholes.

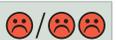
Adequacy



#### Financial & economic instruments

There is an insufficient number of economic and financial instruments (water use charges, subsidies to reduce water consumption) and their effectiveness is reduced by competing with existing subsidies to increase the surface of irrigated land and the huge illegal water use. Finally, charges on water use do not consider water consumption as a basis, instead charging for irrigated area and they do not stimulate water consumption reduction.

Adequacy



#### Information & voluntary instruments

The Autonomous Communities (regions) have established some advisory services and promoted pilot projects, but their number and reach is insufficient to have an effect on water use patterns.

Adequacy



## Water quality problems (agriculture)

### Approach to the problem

Although the diffuse pollution is recognised in the River Basin Management Plan, pollution generated by agriculture is tackled in a systematic way in Nitrate Sensitive Zones only. Stakeholders do not participate in problem or solution analysis, which are only driven by the River Basin Authority.

Adequacy 😊

### Legal & regulatory instruments

Legal instruments (emission permits, quality standards for emissions, training for staff managing pesticides) are reasonably good but their effectiveness is strongly limited by their poor enforcement on the ground and the lack of legal liability for environmental damage due to diffuse agricultural pollution.

Adequacy 😊/😞

### Financial & economic instruments

Economic and financial instruments are scarce and not very effective. EU subsidies promote irrigation agriculture, and water is paid per hectare and not per consumption.

Adequacy 😞/😞😞

### Information & voluntary instruments

Information and voluntary instruments are mainly applied in Nitrate Vulnerable Zones only. There is only some advice on best practice that is difficult to find, as more administrations are involved. There are no pilot or research projects on pollution.

Adequacy 😞/😞😞

## River fragmentation due to infrastructure

Although dams affect most of the river basin (especially the middle and lower basin), no adequate measures have been applied so far to mitigate their negative impact on the environment: fish passes/ladders are almost nonexistent, the minimum ecological flow is calculated based on questionable criteria and no alternatives are given to manage the environmentally unsustainable water demand in the river basin.

River fragmentation and dams 😞😞

#### Legend:

Good



Fair



Poor



Very poor



**Note:** In 'Adequacy', where there is a double score, the face on the left of the slash represents the assessment of the adequacy of the instruments themselves, while the face on the right represents the assessment of the implementation of the instruments 'on the ground'. Where no double score is specified, it means that the two aspects got the same score.

#### Further information

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