

# Economic assessment of the Ebro Water Transfer – ES

## 1. Policy Objective & Theme

- SUSTAINABLE ECONOMIC GROWTH: Balancing economic, social, cultural development whilst enhancing environment

## 2. Key Approaches

- Ecosystems based approach

## 3. Experiences that can be exchanged

The use of cost-benefit analysis to support policy development and decision-making.

## 4. Overview of the case

A National Hydrological Plan had been drawn up by the central administration following a consultation process. Implementation of the plan would have led to water from the Ebro river basin being transferred to four other river basins in the east of the country. A cost-benefit analysis, however, indicated that this approach would have a net negative value of over €3.5 billion. The Plan has subsequently been cancelled.

## 5. Context and Objectives

### a) Context

The Spanish National Hydrological Plan approved by the Spanish government in July 2001, consisted of an annual water transfer of 1,050 cubic hectometres (hm<sup>3</sup>) from the Lower Ebro River in the north of the country. The project was split into two large projects: the Northern Transfer, which would involve transferring 189hm<sup>3</sup>/yr to the metropolitan area of Barcelona for urban uses; and the Southern Transfer, which proposes to transfer 861hm<sup>3</sup>/yr to the Levante Region and South-east Spain for urban and agricultural uses. The Plan was meant to improve the status of water in the public domain; to manage water supply and to meet present and future water demands through rational, sustainable, balanced and fair exploitation of water. This would ensure a guaranteed sufficiency and quality of the resource for all uses, as well as long term protection of available water resources. It would also bring the availability of the resource into balance by protecting its quality and economising its use, in harmony with environment and other natural resources consideration. These considerations took precedence over concerns of the environmental effects of the Plan i.e. damage to the Ebro Delta (designated as a Natura 2000 zone and Ramsar site) and in the Pyrenees where new dams would have been needed to regulate the water flow.

### b) Objectives

A cost-benefit analysis was conducted to evaluate the economic advantages and disadvantages of the proposed transfers.

## 6. Implementation of the ICZM Approach (i.e. management, tools, resources)

### a) Management

The Spanish national government was responsible for drawing up the National Hydrological Plan. The cost benefit analysis was done at the behest of WWF.

## **b) ICZM tools**

A cost-benefit analysis of the Hydrological Plan was prepared by economists at the University of Zaragoza who had worked on Spanish water economics and the Plan for a number of years. Their study found that several costs had been significantly under-estimated viz. the costs of providing the water, the infrastructure required, the water treatment costs and the water loss in transportation. Taken together, the study found that the proposed Plan, rather than contributing to economic development, had a net negative value of over €3.5 billion. The cost-benefit analysis also drew a sharp distinction between the economic viability of the Northern and Southern transfer projects, arguing that they should be considered separately. In addition to the direct cost-benefit analysis, the study also evaluated alternative solutions to the water needs of the areas covered by the Plan. This showed that urban water supply for the Barcelona area could be satisfied through a combination of water-saving technologies and alternative water provision methods such as desalination, the reuse of waste water and improved use of ground water.

## **7. Cost and resources**

The budget in 2001 was € 6 billion.

## **8. Effectiveness (i.e. were the foreseen goals/objectives of the work reached?)**

It was felt that the economic arguments were crucial in terms of the Plan being changed carrying more weight than the purely environmental arguments. The results of the cost-benefit analysis were effective when they could be made relevant to people's own activities, for example the cost of the project per tax-payer – over €100 per Spanish tax-payer – or the relationship between tourism growth and the need for the transfer.

## **9. Success and Fail factors**

The cost-benefit analysis was greatly eased by the existence of previous studies, considerable data and existing expertise. Undertaking a cost-benefit analysis in the absence of these would have been expensive. Proposing and evaluating alternative options was crucial for acceptance of the need to change the Plan. Communicating the original economic study proved to be exceptionally difficult. The original report had been highly technical and economically complex. It was necessary to convert this into a summary document presenting the results of the study in such a way that could be accessed by a non-technical audience, and this took considerable work.

Aragón and Cataluña, two regions of the basin from which water was to be transferred, strongly opposed the Plan. While Aragón opposed it from the very beginning, Cataluña voted in favour of it in 2001, but later on, in 2003, joined Aragón against the Plan. Aragón argued that the National Hydrological Plan was conventional, supply-oriented and could not be justified on economic, environmental or social grounds. Furthermore, the water transfer was considered to be unnecessary if proper demand management practices were implemented in the water-importing regions.

Irrespective of the technical, economic, social and/or environmental issues related to the Plan, the role the different stakeholders played was crucial in the final outcome. On the analysis of the underlying political and economic forces supporting and challenging the transfer, initially, the main stakeholders were the previous political party in power at the central level who, with an absolute majority in the Parliament approved the Plan even with a very strong opposition in early 2001; other actors included the governments of Aragon, Catalonia, Valencia and Murcia, as well as the European Union. Non-governmental actors included national and international environmental groups, and the populations from the donor and receiving regions who always demonstrated publicly their views.

## **10. Unforeseen outcomes**

After the 2004 elections, it was the new political party which took the decision to cancel the water transfer, receiving

overwhelming support by the regions of the donor basin. However, the arguments for the water transfer are far from over. The Levante basins claim that the water from the Lower Ebro basin is the only alternative available for the further economic development of their region. On the other hand, a much-needed integrated management plan for the Ebro Delta is now under preparation by the exporting regions. This plan is expected to consider long-term water needs for all uses and users in the area (including the environment), and recommend policies, programmes and trade-offs for the survival and continued benefit of the delta and the population and the ecosystem that depend on it.

The plan for the Ebro Delta has now been incorporated into a new plan called “Actions for Water Management and Use”. This is now being implemented nationally and not only in the regions involved in the previous plan. It is concerned about improving water management and supply with a good quality, optimizing existing infrastructures, water treatment and reuse, and desalinization.

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## 13. Sources

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A technical review of the SNHP (198.09 KB)



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The Green Buck using economic tools (1.1 MB)



Water management in Spain (123.06 KB)



Water transfer from the Ebro River (53.68 KB)