An Infeasible Transfer: The Spanish National Hydrologic Plan

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"An Infeasible Transfer": with this title, the recently elected socialist government in Spain has issued a document denouncing the Spanish National Hydrologic Plan, while presenting a set of alternative measures to cover water demand in the coastal basins of eastern Spain. The national plan was originally proposed by the socialist party prior to 1996, at which time the conservative party, led by José María Aznar, took over and pushed the project unilaterally. When the socialist party regained power in March 2004 with the election of Jose Luis Rodriguez Zapatero as president, the plan was discredited by the same party that first proposed it.

The backbone of the project was a 600-mile water transfer of 1,050 cubic hectometers (hm^3) (851,200 acre-feet) each year from the Ebro River in the wet northern portion of Spain to Barcelona and semi-arid southeastern regions. The undertaking would involve 11 pumping stations and 60 miles of tunnels. Spain being the country with the highest number of dams per capita and per surface area in the world – about 1,200 in total – the plan also included some 889 water infrastructure works, of which 120 were to be new large dams.

Technology Questioned

In the last few years the project raised intense criticism from environmental organizations and academia, which categorized it as a project from the last century. According to Dr. Ramon Llamas, hydrological expert from Madrid University, "the transfer is overrun by technology." The attitude of the previous Aznar administration – basically "we'll do it come hell or high water"– didn't help in the controversy.

Besides potential environmental impacts in the Ebro Delta – which many, including the Ramsar Convention on Wetlands (an international organization and treaty that promotes conservation and wise use of wetlands) judged to be severe and not properly evaluated – the water to be transferred is of very poor quality, exceeding European standards for pre-treatable waters in salinity and sulfate concentrations.

Location of the proposed water transfer.

Costs Questioned

The Aznar administration had estimated the cost of transferred water would be 0.31 €/m^3 ($382 per acre-foot), spreading a cost of €4.2 billion over 50 years. However, a socioeconomic study made by the University of Zaragoza for the World Wildlife Fund argued that the real price of the water, accounting for full costs, would be at least 0.84 €/m^3 ($1,036/af). Zapatero's new Ministry of Environment recently issued a study concluding that the real cost of transferred water would be close to 1€/m^3 ($1,233/af), double the price of seawater desalination. Furthermore, the Aznar accounting is misleading: it ignores the opportunity costs of water in the different regions and presents an average cost to justify the entire transfer. No cost-benefit analyses were made to compare alternative solutions. Furthermore, even the water demand estimations of the project have been disputed.

Spain enjoys some of the lowest water prices and highest water consumption per capita in Europe, while rainfall averages only 24 inches per year. Consequently, experts say much could be done to improve Spain's efficiency in water use practices. The Spanish National Hydrologic Plan, they argue, would make water demand skyrocket and create a false sense of water abundance, as happened previously with the Tajo-Segura transfer. Initiated in 1979 to transfer water from the Tajo Basin in central Spain to the Segura Basin in the south, this project has a transfer allowance of 600 hm^3 (490,000 af) of water per year, but for its first 28 years was able to transfer only an average of 263 hm^3 (213,200 af), far less than the new demands that had arisen from the project's high expectations.

Indeed, the Environment Committee of the European Union expressed concern over the national hydrologic plan in one of its consultation papers, stating that it was "deeply worried …as they do not address the issue of sustainable water use through pricing mechanisms and other water conservation measures."

The new socialist administration, whose party initially proposed the idea of the transfer more than ten years ago, drew a lesson from the controversy and campaigned for alternative solutions. New proposals combine improved land management practices, water conservation strategies, water reuse, increased irrigation efficiencies, better local resources management, and seawater desalination, all while seeking regional consensus.

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