

Spanish water policy: a hostage to politics

With drought on the rise, desalination under attack and water reuse still in its infancy, Spain has its work cut out to handle the rising demands of agricultural irrigation. Richard Weyndling reports

Desalination was the Socialist government's panacea for Spain's droughts and insatiable water demand from agriculture and tourism. But erratic energy prices and the collapse of tourism and construction have eroded its economic viability.

Spain's desalination boom is now over. Nearly 30 new projects were originally contemplated for the Mediterranean coast. A few have been quietly dropped and others are on hold. Desalination industry insiders predict some of the plants under construction or recently completed may never operate at full capacity because of insufficient demand.

According to Ramón Llamas of Madrid's Complutense University, the government has discovered "desalination plants cannot be financed through agriculture," which accounts for roughly 75% of water use in Spain.

"The problem," explains Guillermo Bravo, chief executive of desalination plant builder Befesa Agua, is the "price gulf" between the practically free water resources farmers have traditionally enjoyed and even the heavily subsidised €0.20 to €0.33 per cubic metre of the desalinated alternative.

TURNING TO REUSE

The government's response, last September, was to announce a national plan to increase wastewater reuse by 250%. According to Jesús Yagüe, responsible for reuse policy at the environment and agriculture ministry, "up to 1,000 cubic hectometres (hm³)/year of wastewater will be reusable by 2015" in agriculture and other sectors.

The ministry calculates that wastewater can be treated to sufficient quality for agricultural use for about €0.10/m³ while requiring only 25% of the energy input and producing only 25% of the CO₂ emissions of desalinated water.

The reuse plan has been welcomed by environmentalists and the construction industry. But, in a period of economic crisis, questions remain about financing new plants or add-on tertiary treatment capacity, particularly since the gush of European funding for Spanish infrastructure has slowed.

Industries that are obliged by law to create reuse capacity "are cutting back sharply on investment in the current period of austerity", reports Miguel Jurado, vice-president of one of Spain's largest water companies, Aqualia.

In affluent areas such as Madrid and Catalonia or in Murcia, where horticulturalists enjoy good margins, major investment is being put into expanding reuse capacity for golf courses or industry, to recharge depleted aquifers or to irrigate crops.

But in general "insufficient progress is being made", says Alberto Fernández of WWF Spain. "In Spain, where development has occurred on the basis of almost free water [and] margins for most farmers are slim," even recycled water is an unattractive proposition for irrigation.

Mr Yagüe says "farmers cannot be expected to pay more for reusable wastewater than what they are currently".

HOW TO TACKLE IRRIGATION

Under pressure from the powerful irrigation lobby, the government has promised to study a transfer of water from the river Tagus in Extremadura to Spain's thirsty south-eastern corner. Merely contemplating a major new water transfer is a radical u-turn for the Socialist government, which in 2004 scrapped a controversial plan to transfer Ebro river water to the south-east on environmental and economic grounds.

Factors such as "water quality, the time it would take to build and the projected cost (over €0.35/m³) make this scheme "objectively unworkable", says Alberto Fernández. But the mere fact it is being considered illustrates how "old ideas still hold sway in the [environment and agriculture] ministry".

Cristina Narbona, who headed the ministry from 2004 to 2008, earned farmers' hostility by advocating "a new water culture". She argued that the likely impact of climate change on future water resources (see figure 3) made managing demand through water saving, efficiency and 'user pays' principles contained in the water framework directive (WFD) crucial.

Though she promoted desalination and continued to build dams, in public, at least, Ms Narbona opposed the notion that ever more water resources can be created through infrastructure spending. She paid a high price. She was sacked from her post in April 2008 and her department was subsumed into the agriculture ministry, a bastion of

FIGURE 1 IRRIGATION ON THE RISE

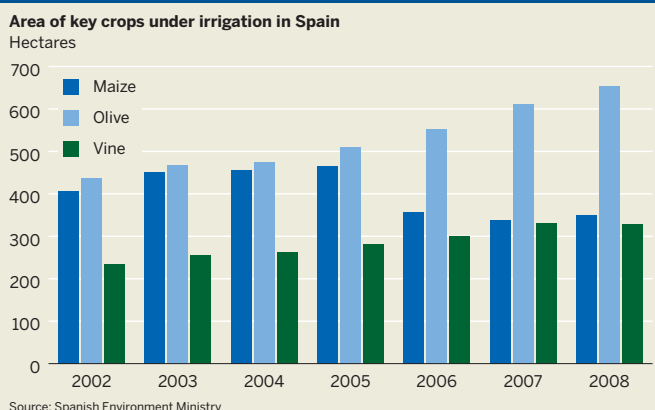
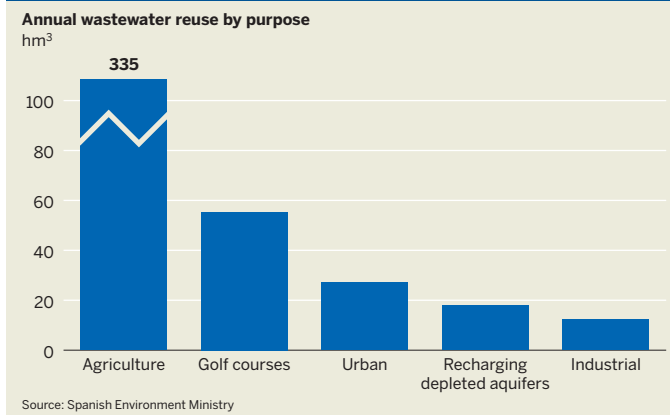


FIGURE 2 FARMING IS THE BIGGEST REUSER



traditional supply-side measures that had opposed Ms Narbona's efforts to apply WFD principles to water pricing.

One policy which environment and agriculture officials have pursued in harmony is the modernisation of irrigation technology. According to the National Statistics Institute, in 2006, 3.5 million out of 26 million hectares in agricultural use were under irrigation and used 17,473hm³ of water.

In the south, this represents 80% of total water use. Improved efficiency in irrigation therefore offers the quickest and most direct method of implementing the WFD's article 1 in Spain: "to promote sustainable water use based on a long-term protection of available water resources".

According to WWF Spain, "in 2001 a third of all irrigation was carried out using obsolete and inefficient methods and, even today, despite all the subsequent government effort to modernise, a million hectares is still flood-irrigated" – the most wasteful alternative.

In 2006, at the height of the most recent drought, the government approved an irrigation modernisation "shock plan". This targets 866,000 hectares, projects a saving of 1,162hm³ per year and is funded by €1.8bn from the EU and Madrid and about €500m from farmers.

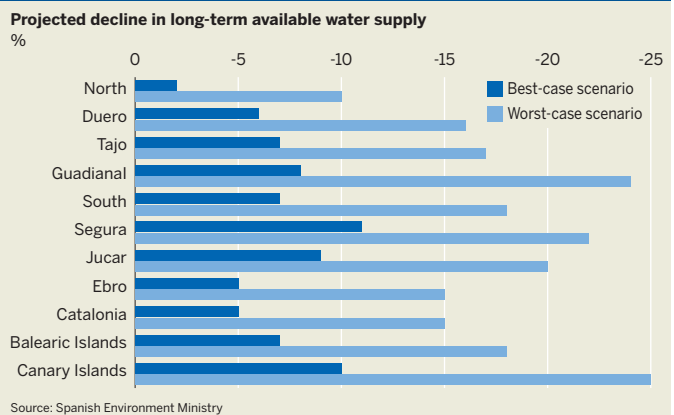
Modernisation is supported, in principle, by water experts and environmentalists. WWF's Celsa Peiteado disagrees: "The water saved by the investment is not, in reality, increasing drinking supply nor recharging aquifers and rivers but simply giving farmers more water with which to irrigate."

The scale of expansion is not easy to quantify. As Ramón Llamas of the Complutense University puts it: "There is great opacity of information and up-to-date figures are simply not available." But evidence from non-governmental sources gives a fair insight. A study published last year by the Spanish College of Geographers shows land area under irrigation in the Segura river basin expanded 25% in the decade to 2000, though the river basin authority actually reported a decrease.

Jesús Yagüe at the ministry insists modernisation "has produced significant savings" though he admits he has no data to show this. Following fruitless attempts to obtain such data from government departments, WWF Spain eventually asked the European Commission to take action.

Under pressure from the commission, the Spanish government agreed to include in its 2007 framework plan for rural development a statement saying "the objective of irrigation improvement is to achieve water saving [not]

FIGURE 3 WATER RESOURCES DWINDLING



an extension of irrigated area" and making flow meters obligatory, Celsa Peiteado says.

WWF is pressing the government to impose a moratorium on new irrigation until December 2009, when the river basin plans required by the WFD are due to be completed, thereby providing an accurate picture of available resources. It also wants irrigation water to be metered by volume and future modernisation subsidies to be tied to a reduction in use.

POLITICAL HURDLES TO A TOUGH STANCE

But the government's failure to tackle another political hot potato, the long-standing and widely acknowledged problem of illegal abstraction of groundwater, does not indicate much willingness to take a tough line with the irrigation lobby.

Alberto Fernández says: "Water is a super-political issue. Things need to change but the political cost is too high." Ramón Llamas complains "water is an issue used directly to win votes, and it has worked". He believes the People's Party entrenched itself in power in Murcia by proposing the Ebro river transfer and the Socialist Party took control in Aragón by opposing it.

Mr Llamas is convinced that, while politicians are failing to introduce reforms necessary to ensure sustainable water use, market forces can provide a big part of the solution "if the use of farm subsidies as a political weapon" does not get in the way.

"We have enough water in Spain but are using it on the wrong things. It is better to buy in high-water consumption crops such as wheat and maize from northern Europe and produce high-value, low-water crops here," he says. "Twenty-five thousand hectares [of intensive horticulture] in the Campo de Dalías area of Almería produces more cash than 5 million hectares of arable land. The change is happening," he adds.

WWF agrees there is a shift in cropping patterns brought about by market forces and changes to Common Agricultural Policy subsidy rules but doubts this is always in the direction of greater economic and environmental sustainability.

Celsa Peiteado points to the growth in southern Spain of irrigated olive and vine cultivation which is only marginally more profitable than neighbouring non-irrigated cultivation of the same crops.

"In the ministry there is no interest in the issue of adapting crops to the climate in a sustainable way," says Alberto Fernández. "The only priority is building an ever more industrialised agricultural sector." ■