

Behavioural change initiative

Zaragoza, Spain

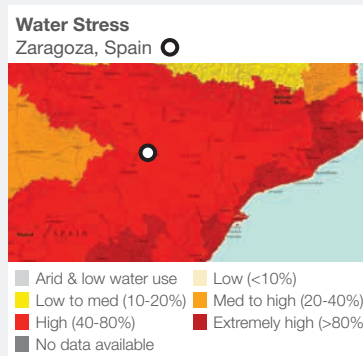
water scarcity impact

Reduced withdrawal	●
Reduced consumption	
Improved water quality	
Increased productivity	●
Net basin benefit	

volumetric impact
1 176 000m³/yr

capital cost
not available

estimated unit cost of water
not available



Water Stress Map:
Gassert, F., M. Landis, M. Luck, P. Reig, and T. Shiao. 2013. "Aqueduct Global Maps 2.0."

Confidence level
● Low ● Medium ● High

Water Scarcity Impact Key
● Main ● Minor

Credits
We wish to acknowledge the input of Marisa Fernández Soler of ZINNAE-Zaragoza Innova en Agua y Energía in the preparation of this case study.

Project Overview

In 1995, nearly 11 million people felt the effects of water scarcity in a wide-scale Spanish drought. This highlighted the need for a change in water useage. Zaragoza, located in Northern Spain, launched its Water Saving City project in early 1997 with the aim of changing the wasteful water behaviour and increasing efficient use. An ambitious target of saving 1 000 000m³ of domestic water consumption in one year was set and achieved. The project has shown that it is possible to deal with a shortage of water in an urban domestic setting, using a cost efficient, quick, ecological and contention free approach.

The project used a partnership approach, with funding coming through multiple sources. The European LIFE programme provided 46% of the funding. The rest was provided by the Zaragoza City Council (17%), the Aragon Regional Government (17%), Ibercaja (12%), the Four Companies (6%) and the Fundacion Ecologia y Desarrollo (2%).

Key Elements

- Engagement with the general public through various media.
- Educating the public through campaigns and a practical handbook on efficient water use in the home.
- Targeted influencing of the younger generation through education schemes within schools.
- Engagement with businesses selling domestic water products.
- Development of the '50 Good Practices' guide, covering water use in gardens, parks and buildings of public and industrial use.

Key Outcomes

- Between 1997 and 2008 the population of Zaragoza increased by over 12%, yet daily water use reduced from 84 8000m³ to 61 5000m³ in the same period.
- Per capita use reduced from 150 litres/day in 1997 to 99 litres/day in 2012.



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Intervention Features

- Subsidies for the purchase of domestic water saving appliances
- Stakeholder engagement

Project Levers

(1) Advertising Campaign:

A wide media campaign was run using media such as; TV, radio, press, leaflets, posters and advertising on buses. The campaign was effective in ensuring that all residents of Zaragoza were aware of the forthcoming Water Saving City project.

(2) Education:

The approach to education was two-fold. Initially the focus was on helping users to make changes in their own dwelling through adopting water efficient practices and technologies. The initiative was then extended to schools to ensure that children were actively engaged with the concept of cutting water wastage.

(3) Financial Incentive:

Discounts of 20-25% were offered by the regional government to those purchasing water efficient products. In 2002 the City Council of Zaragoza offered economic incentives to households that reduced their water consumption. If households reduce their consumption by at least 40% in the first year of joining the scheme, they were entitled to a 10% bill discount. In subsequent years they were expected to reduce consumption by 10% per year in order to benefit from a similar rebate.

(4) Consumer Options:

The Water Saving City campaign engaged with commercial sellers of water products, for example bathroom or kitchen suppliers. These businesses were encouraged to stock a wider range of water saving alternatives, therefore allowing the newly educated consumer to have the option to choose a more water efficient product.

(5) Business Engagement:

As part of the second stage of the Water Saving City project, a '50 Good Practices' guide was developed. This evaluated the use of water technology and behaviours in gardens, parks, buildings and industry. It provided businesses with a reference model for identifying effective methods of improving water efficiency.

Outcomes and Challenges

There were multiple reasons for the success of the project, but engagement with the consumer to facilitate a behaviour change was of paramount importance.

Outcomes of the project in Zaragoza included:

- Per capita consumption in Zaragoza was reduced from around 150 litres in 1997 to 99 litres 2012.
- 168 educational establishments, 428 teachers and 70 000 students directly participated in the campaign's educational programme.
- Over 140 establishments selling products related to domestic water consumption were involved with the campaign. This helped increase the sales of water efficient fixtures; with one bathroom retailer reported a 58% rise in sales of automatic taps.
- All the garden nurseries in the city participated through the '50 Good Practices' stage. As part of the project they agreed to identify and promote low water consumption.
- The water savings delivered through the project have been sustained and have created a genuine water saving culture.



Above: Zaragoza, Spain (© Anibal Trejo | Dreamstime.com)