

# Zaragoza, Spain

Zaragoza (Caesaraugusta) was founded by the Roman Empire in the year 14 BC at the middle valley of the river Ebro, in a place with ideal characteristics: a strategic location, confluence of three rivers (Ebro, Gállego and Huerva), and fertile lands.

Currently, Zaragoza is the capital of the Autonomous Community of Aragon, one of the 17 Autonomous Communities of Spain, bordering to the North with France and split up by the Pyrenees.

The city of Zaragoza has a surface of 967 km<sup>2</sup> and a population of 666,129 inhabitants (2008), in other words, a 2% of Aragon surface with the 50% of its population.

It has a continental semi-desert Mediterranean climate. The average rainfall per year is 315 mm, mainly in spring.

Water supply is guaranteed by its location on the banks of the river Ebro (the largest of Spain) through the Canal Imperial de Aragón which takes in water from the Ebro, 80 km upstream from the city.

Zaragoza is at the centre of the North-east of Spain, about 300 km from big cities such as Madrid, Barcelona, Valencia, Bilbao and Toulouse (France).

The economy of the city is based on its commercial, logistics and industrial activity. The commercial activity is grounded on a large amount of shopping centers. With reference to logistics, Zaragoza relies on the biggest platform of the South of Europe. The industrial activity is very diversified, although metal light industry predominates due to the presence of an Opel factory in the province.



## ADDITIONAL INFORMATION:

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### Universidad de Zaragoza - Grupo de Investigación en Economía Pública

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Web SWITCH: [www.switchurbanwater.eu](http://www.switchurbanwater.eu)

Web SWITCH Zaragoza: [www.zaragoza.es/ciudad/medioambiente/switch](http://www.zaragoza.es/ciudad/medioambiente/switch)



UNIVERSIDAD de ZARAGOZA



## Zaragoza, Demo City Towards Sustainable Development



# SWITCH Project

## Sustainable Water Management

SWITCH is a project for promoting an efficient use and management of water among the citizens. It is included in the 6<sup>th</sup> Framework Programme of the European Union and headed by UNESCO-IHE (Institute for Water Education).

The objective of this project is the development, application and demonstration of solutions that can contribute to the implementation of projects for a sustainable and efficient management of water in the “city of the future”. SWITCH will be developed from 2006 to 2011 with a European funding of 14.75 million euros.

SWITCH Project (Managing Water for the City of the Future) groups 32 institutions of 4 continents for developing new proposals in the management of water. The demo cities are: Zaragoza, Spain; Hamburg, Germany; Birmingham, United Kingdom; Lodz, Poland; Tel-Aviv, Israel; Alexandria, Egypt; Accra, Ghana; Beijing and Chongqing, China; and Belo Horizonte, Brazil. The participation of Zaragoza focuses on the field of the management of water demand in cities.

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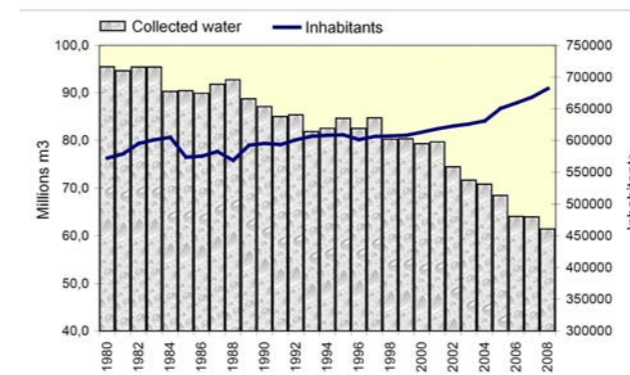
The departments of Infrastructures and Taxes as well as the University of Zaragoza have joined also the Agency of Environment and Sustainability (Agencia de Medio Ambiente y Sostenibilidad) for Zaragoza’s SWITCH Project.

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## Demo city



Zaragoza is renowned for its different policies for water saving and also the collaboration of its citizens. As the following graphic shows and despite population increase, a gradual reduction of the water collected for city supply has been reached:



The consumption in 2008 for household uses was 106 litres by inhabitant and day, one of the lowest in Spain, country where the average consumption is 160 litres by inhabitant and day.

The objective is to reduce by 2015 the distribution of drinking water to 58 million m<sup>3</sup> by

year, and to attain a household consumption not over 90 litres per inhabitant and day.

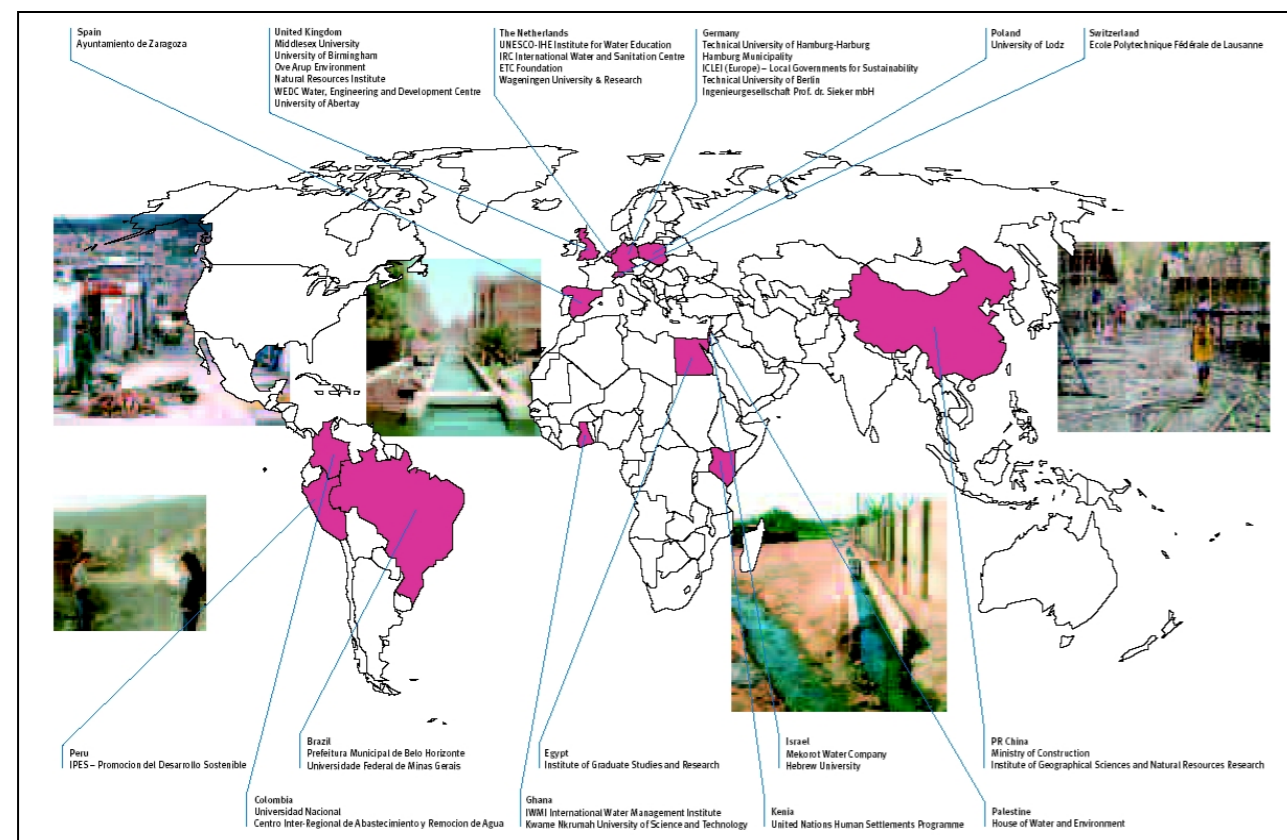
To get it, a group of actions divided in four lines are implemented:

- Distribution network, with the development of a leak detection system in the network
- Residents, to reduce losses in private connections
- Households, with the analysis of water consumption and individual behaviour
- Learning alliances, to spread knowledge

The results obtained will serve to establish new lines and models for more efficient and sustainable water management.

The target area is the ACTUR-Rey Fernando, a district with different factors to make a comprehensive intervention:

- District size (around 58,000 inhabitants)
- Characteristics of the water distribution system that make possible the division of the target area into sectors.
- The homogenous distribution of public services that will provide us with conclusions on water consumption



SWITCH Project – participating countries