GUADIANA RIVER IWRMS: ENHANCING FLOOD AND DROUGHT RISK AWARENESS AND RESPONSE

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The Guadiana River Basin Authority was inadequately prepared to meet the threat of natural disasters incurred through flooding drought event, principally through a lack of timely information that would enable appropriate countermeasures to be taken.

The same lack of information also hampered long term planning and optimal management of the basin's resources.

ADASA'S SOLUTION

To achieve the client's twofold goal, Adasa designed and built an Integrated Water Resource Management System that collects and transmits in real-time, the current levels and flows in reservoirs, rivers and tributaries, and a series of meteorological parameters measured all over the basin.

Comprised of **215 online gauge stations and a private digital radio network**, the system transmits, processes, stores and archives thousands of data points every day.



Adasa has designed an integrated water resources management system consisting of 200 measuring stations.

The data **is also fed to a decision-making support tool available to all staff that enables** an early forecasting and optimal water management, both in ordinary and extraordinary situations of flood or drought.

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Case Study





The result of Adasa's intervention has included an increase in the available data on the hydrological and hydraulic conditions of the Guadiana.

RESULT

The new Integrated Water Resource Management System has increased the available hydrological data about hydraulic conditions in the Guadiana river basin, giving the Basin Authority the power to guarantee the optimal and efficient management of scarce resources, especially as droughts become more severe.

The timely access to data and decision support tool provides early warning to flood events and so empowers the Authority to mitigate the damage caused, ensuring the protection of the public and improving the safety of water infrastructure, with a dramatic improvement in the risk of incurring costs.

In addition, the system has improved water planning and operation, ensuring the optimal exploitation of water resources and optimizing the water supply served to other network users.

CLIENT

The Guadiana River Basin Authority manages the 55,000 km2 Guadiana basin, the fourth largest basin in Spain. It manages more than 8 GL (8,361 hm3) across three regional governments of Andalusia, Castilla-La Mancha and Extremadura.

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