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**BUENAS PRÁCTICAS**  
**Operaciones Cofinanciadas**

**INSTALLATION OF SENSORS  
AND COMPUTER APPLICATION  
FOR REMOTE MANAGEMENT OF  
WATERING SYSTEM FOR GREEN  
PUBLIC AREAS**

**EDUSI ALCOBENDAS  
ALCOBENDAS CITY COUNCIL**

**Programa Operativo  
Plurirregional de España**

**Fondo Europeo de Desarrollo Regional**

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# INSTALLATION OF SENSORS AND COMPUTER APPLICATION FOR REMOTE MANAGEMENT OF WATERING SYSTEM FOR GREEN PUBLIC AREAS

The Good Practice has consisted in the installation of a remote management system for the irrigation of green zones in Valdela Fuentes' housing development and in three public parks inside the Central District: Cataluña, Víctimas del Terrorismo and Navarra. It has the goal of achieving an important saving in the annual water consumption, which is estimated to reach 45%.

The same technological equipment had already been installed in several public parks previously renovated by the Alcobendas city council. Some of them are Asturias-Cantabria, Canarias and Salamanca parks.

This remote management watering system provides full control of the hydraulic elements of the network in a certain green zone via Internet and it also brings several advantages added to water saving. These advantages include the remote reading of the meters in the event of a breakage or overconsumption, such as a leak. It includes the capacity to close the network partially or completely in a matter of minutes if it is expected to rain or to go through reprogramming, saving maintenance tasks.

This operation has a budget of €174583.30, having 50% of the operation financed by Alcobendas' city council and the European Regional Development Fund (FEDER), via EDUSI Alcobendas.

The criteria used for the identification and selection of The Good Practice are the following:

## 1. The operation has been conveniently transmitted.



The news about the implementation of this remote management irrigation system in municipal green zones has been transmitted through plaques placed in the parks where this system has been installed. From the municipal website a press note has been spread informing about this operation, which has had big coverage in local newspapers as well as news agencies such as EFE and digital newspapers like Cadenaser.com. In the Edusi Alcobendas portal all the news seen in local and digital press about this system installed in the four parks can be found.

MEDIO AMBIENTE | Este sistema se ha instalado recientemente en cuatro parques más

### Alcobendas riega con telegestión siete parques ahorrando un 45% de agua



El Ayuntamiento de Alcobendas ha instalado recientemente el sistema de telegestión en cuatro parques públicos más de la ciudad: las zonas verdes de Valdela Fuentes y los parques de Cataluña, Víctimas del Terrorismo y Navarra. Esta ampliación de esta red ha supuesto una inversión de 174.583,30 euros, cofinanciados al 50% entre el Ayuntamiento y el fondo europeo Feder, dentro de las actuaciones de la Estrategia de Desarrollo Urbano Sostenible e Integrado (EDUSI) de Alcobendas. "Es un sistema totalmente tecnológico e innovador, que va a suponer un 45% de ahorro en el sistema de riego. Queremos que Alcobendas sea una ciudad mucho más sostenible. Es una tecnología 100% española,

totalmente nueva", subraya el alcalde de Alcobendas, Aitor Retolaza (CA). La telegestión del riego ya se había instalado anteriormente en los parques públicos que se habían remodelado recientemente en la ciudad: Asturias-Cantabria, Canarias y Salamanca.

Control vía Internet Este sostenible sistema de riego se basa en una serie de equipos electrónicos instalados en la vía pública y en los jardines de los parques. "Estas herramientas abren y cierran a demanda los sistemas de riego de las zonas verdes y permiten cerrar o reprogramar el sistema si hay previsión de lluvias -evitando el derroche de agua- o en caso de viento excesivo, para evitar

accidentes", explica la concejala de Medio Ambiente, Cristina Martínez (PSOE). Además del ahorro de agua, otras ventajas de este sistema que aprovecha la comunicación remota mediante internet son la monitorización total de la red, tanto de consumo como de posibles fugas, un menor mantenimiento, la facilidad de corte automático en caso de avería o sobrecosumo, la facilidad de reprogramación en apenas minutos y la lectura remota de los diferentes contadores de agua.



### de agua con un sistema de riego de icos

1 los parques de Valdela Fuentes, Cataluña, Víctimas superior a 174.000 euros



### RIEGO MUNICIPIOS

#### Alcobendas regará con telegestión cuatro parques más para ahorrar 45% de agua

Alcobendas, 14 oct (EFE).- El Ayuntamiento de Alcobendas estrena un sistema de telegestión en cuatro parques públicos de la ciudad, que se suman a otros tres donde ya estaba implantado, con el fin de que la localidad ahorre un 45 por ciento de agua en sus tareas de irrigación.

En concreto, este nuevo sistema se encuentra en las zonas verdes de Valdela Fuentes y los parques de Cataluña, Víctimas del Terrorismo y Navarra; y ha costado casi 175.000 euros, cofinanciados al 50 por ciento entre el Ayuntamiento y el fondo europeo Feder, dentro de las actuaciones de la Estrategia de Desarrollo Urbano Sostenible e Integrado (Edusi) de Alcobendas. Este sistema se basa en una serie de equipos electrónicos instalados en la vía pública y en los jardines de los parques, que abren y cierran a demanda los sistemas de riego de las zonas verdes, según recoge el Consistorio en una nota.

Además, permite cerrar o reprogramar el sistema si hay previsión de lluvias, evitando el derroche de agua, o en caso de viento excesivo, para prevenir accidentes, explica la concejala de Medio Ambiente, Cristina Martínez. Por su parte, el alcalde, Aitor Retolaza, pone en valor que se trata de un sistema "totalmente tecnológico e innovador", fabricado en España, con el que Alcobendas persigue "ser una ciudad mucho más sostenible".

La telegestión del riego ya se había instalado anteriormente en los parques públicos que se habían remodelado recientemente en la ciudad, como son los de Asturias-Cantabria, Canarias y Salamanca.

Además del ahorro de agua, otras ventajas de estos sistemas es que aprovechan la comunicación remota mediante internet con la monitorización total de la red, tanto de consumo como de posibles fugas; un menor mantenimiento, la facilidad de corte automático en caso de avería o sobrecosumo, y la facilidad de reprogramación "en apenas minutos".

Also, in municipal newspaper SietedíaS, which is delivered to more than 40.000 houses in the city, our program

has been the main theme through the beginning of the operation as well as the end of it.

This Good Practice has also been shared through the official Alcobendas profiles, in social networks such as Twitter or Facebook.



In order to spread the news about the The Good Practice a video about this technologic system has been made and can be found in the municipal website at Edusi Alcobendas space as well as in the Environment and Sustainability space.

This video has also been published in social media and in the municipal Youtube channel.



This news' spreading has been completed with some mentions in local radio stations, such as Cadena SER Norte Madrid and Onda Cero Norte Madrid and also with advertising actions on local media, including digital newspapers.



## 2. The action involves some innovative elements.

The main innovative factor for this Good Practice is definitely the use of appicated remote management towards watering systems in green zones. This system is based on the installation of a set of electronic equipment in public parks, mainly in watering systems, which makes the closing and opening of the irrigation elements much easier by working on demand from the technicians. It also contains a set of meteorological sensors as well as indispensable communication tools that the system precises in order to provide a better range for the system's signals. Communication between these technologic elements is made by radiofrequencies and at the same time they communicate with the Cloud through 4G. Having mentioned that, we could say this is a hybrid communications system with the goal of reducing the connectivity costs that characterize the main phone calling companies.

The municipal technicians control this system through a management software placed in a web server which you can access through a secure https connection from any device capable of connecting to Internet and going into a browser. You need to introduce a username and password so we could say it's a secure access.

This is a two-way system and any communication from the sender has its corresponding answer from the receiver. This way you have the certainty that the information has been correctly received and the quality of this service is guaranteed.



Green zones in Valde las Fuentes' housing development

### **3. The results meet the established objectives.**

The main goal of this Good Practice is to reduce the irrigation water consumption. Global warming has shown that this resource is quite short in our world. Public local administrations need to serve as an example in efficiency and natural resources saving. This remote management system reaches 45% in annual consumption saving for public parks.

This system's benefits are even bigger than the water consumption saving. From his office, the municipal technician can adapt the irrigation to certain meteorologic circumstances. In case of rain, the net can pause or cancel the irrigation in situations of strong wind or extreme cold, which might be dangerous for pedestrians.

This system works through remote management, so it supposes human and material saving in opening and closing tasks of the irrigation net. This is possible because it's not necessary the movement of technicians to those green zones and public parks.

### **4. The action solves a problem or weakness in this territory.**

This remote management irrigation system implies the compliance of Objective 6 -to guarantee the availability of water and its sustainable management – of the 17 Objectives for Sustainable Development (OSD) approved by United Nations. In the regional field, the local entities must contribute to the efficient water saving to comply the global objectives established by the OSD and they have to be a clear example for citizens in a matter as important as water.

Without this remote management irrigation system, a citizen could see water irrigators activated even when it's raining or when there are strong winds that water the sidewalk, which may cause falls for citizens. Another problem solved by this Good Practice is the human resources and materials saving, which can be used in different gardening tasks.

#### **5. The operation covers its target people at a very high level.**

The implementation of this remote management irrigation system in four new public parks makes possible that 47 users can now have access to the software that controls the opening and closing of the electronic irrigation valves from their posts or even from a tablet connected to Internet in any spot of the city.

This important advantage in terms of daily maintenance of parks and green zones of the city improves the life quality of the Alcobendas' citizens. Three out of every four use and enjoy municipal public parks as recent studies show. In the last Quality of Life survey of the city made at the end of 2020, a great number of green zones was rated with an 8.2. It is assumed around 15 square metres per citizen.

#### **6. The action considers horizontal criteria for equal opportunities and environmental sustainability**

This Good Practice has been implemented granting equality between women and men, avoiding any kind of discrimination. The technologic platform that controls the remote management system has been designed attending to the use of a non-sexist vocabulary.

On the other hand, water is a renewable resource and every day it gets more difficult to obtain it, so it's essential to make a rational and sustainable use of this resource from Public Administrations, which may get to an environmental improvement for our nearest areas. This system contributes to a digital and efficient management of the irrigation, helping reach a more rational and efficient use of hydric resources by municipal public services.

#### **7. The operation includes some synergies with other strategies or instruments of public intervention.**

This Good Practice is linked to other strategic objectives from Edusi Alcobendas, promoting an intelligent and efficient management of resources and municipal services through new technologic tools.

Alcobendas Local Government has a Director Plan called 'Alcobendas Intelligent City' that Powers actions related to technologic innovation with new projects to get an efficient and sustainable management of the urban environment. It also includes future projects to reach to the urban development objectives defined by the regional and urban development policy of the European Union.

Also, this system has important synergies with the compliance of the Sustainable Development Objectives of the United Nations. Some of them are ODS 6- an improvement in water management-ODS 11 – a new policy for an efficient use of resources and adaptation to climate change-, ODS 12- a sustainable management of natural resources- and ODS 13-relative measures towards climate change-.