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Castilla-La Mancha



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BUENAS PRÁCTICAS Actuaciones Cofinanciadas

Implementation of selective collection of bio-waste,
construction of a composting plant and modernisation of the
Toledo Ecopark facilities

**Programa Operativo
de Castilla la Mancha**

Año 2022

Fondo Europeo de Desarrollo Regional

"Implementation of selective collection of bio-waste, construction of a composting plant and modernisation of the Toledo Ecopark facilities".

The action consists of the co-financing by the ERDF of the implementation of a fifth container (brown container) in municipalities with more than 4,000 inhabitants in the province of Toledo to collect organic waste separately, as well as the construction of a plant that will treat this material individually and finally the modernisation of the existing facilities that treat the "rest" fraction, to adapt it to the new operation. This action represents an improvement in the treatment, selection and valuation service for solid urban waste in the province of Toledo.

The screenshot shows the homepage of the website for the selective collection of organic waste. At the top, there are logos for the Consorcio de Servicios Públicos Medioambientales de la Provincia de Toledo and the Diputación de Toledo. To the right, there is a date (Martes, 11 de Abril de 2023), a contact link (mailto:contacto@cosmatoledo.es), and a login button (Iniciar sesión). Below the header, there is a navigation bar with links for Inicio, El Consorcio, Servicios, Instalaciones, Actividad educativa, Educación y reciclaje, and Transparencia. A search icon is also present. The main content area features a large image of a brown recycling bin overflowing with organic waste like bones, fruit, and vegetables, with the text 'LOS RESTOS DE COMIDA AL MARRÓN' and 'ORGÁNICA'. Above the image, the title 'Recogida selectiva de residuos orgánicos' is displayed. Below the title, there is a message about the start of brown bin collection and a note that the project is co-financed by FEDER and Castilla-La Mancha. A 'SABER MÁS' button is also visible. Logos for Castilla-La Mancha, the European Union, and the Regional Development Fund are at the bottom of the page.

The cost of the investment was approximately 6.8 million euros, of which 5.5 million euros was contributed by the European Regional Development Fund (ERDF). The Consorcio de Servicios Públicos Medioambientales de la Diputación de Toledo has contributed the remaining 20% of the operation's budget.

The implementation of selective collection of bio-waste has many virtues, among which the following stand out:

1. Biogas utilisation: Bio-waste, such as food waste and prunings, can be transformed into biogas through anaerobic digestion. This biogas can be used as a renewable energy source for electricity generation, heating, and vehicle fuel.
2. Fertiliser production: Bio-waste can also be transformed into compost and other organic fertilisers. These fertilisers are more sustainable than chemical fertilisers and can be used in agriculture to improve soil quality and crop production.
3. Contribution to the circular economy: The separate collection of bio-waste is a key element of the circular economy. Bio-waste is converted into valuable resources, reducing the need to extract new raw materials and reducing the amount of waste sent to landfill.

4. Reduction of greenhouse gas emissions: Bio-waste management can contribute to the reduction of greenhouse gas emissions. Composting and anaerobic digestion of bio-waste generate lower emissions than incineration and landfilling.
5. Promoting environmental awareness: The implementation of selective collection of bio-waste promotes environmental awareness in society and encourages the adoption of sustainable practices in households and businesses.

Criterion 1: The role of the ERDF in the action has been adequately disseminated to beneficiaries, potential beneficiaries and the general public.

The actions carried out to properly disseminate the project have been, as we can see below, numerous and diverse. Posters, publications on websites, press releases, multiple publications in the media, merchandising (posters, magnets), publications on social networks.

- ADVERTISING POSTERS



- WEBSITE ADVERTISING

<http://cosmatoledo.es>

- PRESS RELEASES

<https://www.castillalamancha.es/actualidad/notasdeprensa/el-gobierno-regional-destina-seis-millones-de-euros-actuaciones-de-mejora-en-la-recogida-selectiva>

<https://www.castillalamancha.es/actualidad/notasdeprensa/el-gobierno-regional-destina-55-millones-de-euros-para-modernizar-la-gesti%C3%B3n-de-los-residuos-en-la>

- PUBLICATIONS IN THE MEDIA (regional and national print media)

<https://www.abc.es/espana/castilla-la-mancha/toledo/inaugura-nueva-planta-compostaje-separada-ecoparque-inversion-20230328144853-nt.html>

<https://www.europapress.es/castilla-lamancha/noticia-nueva-planta-compostaje-ecoparque-toledo-trabajara-obtener-biogas-vehiculos-centro-20230328144728.html>

<https://www.retema.es/actualidad/el-ecoparque-de-toledo-estrena-una-planta-para-el-tratamiento-de-biorresiduos>

<https://www.encastillalamancha.es/castilla-la-mancha-cat/toledo/el-gobierno-regional-destina-55-millones-en-modernizar-la-gestion-de-los-residuos-de-la-provincia-de-toledo/>

<https://prezero.es/es/noticia/ecoparque-toledo-inaugura-nueva-planta-tratamiento-organicos/>

<https://www.clm24.es/articulo/toledo/gestion-residuos-provincia-toledo-moderniza-5-5-millones-inversion-junta-ecoparque/20230328164151385992.html>

<https://ahoraclm.com/inaugurada-la-nueva-planta-de-tratamiento-de-residuos-organicos-en-el-ecoparque-de-toledo>

<http://www.ngvjournal.com/noticias/estaciones-es/castilla-la-mancha-desarrolla-planta-de-biogas-abastecera-flota-de-ecoparque-de-toledo/?lang=es>

<https://www.castillalamancha.es/actualidad/notasdeprensa/el-gobierno-regional-destina-55-millones-de-euros-para-modernizar-la-gesti%C3%B3n-de-los-residuos-en-la>

- INFORMATION AND AWARENESS CAMPAIGN ADVERTISING



- Posting on social media:

 Fondos Estructurales Castilla-La Mancha
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Castilla-La Mancha ha presentado como Buena Práctica la modernización del Ecoparque de Toledo. Esta operación, con un coste total subvencionable de aproximadamente 6,8 millones de euros, ha sido cofinanciada con #FondosEuropeos #eufeder en un 80%, aportando cerca de 5,5 millones de euros.
#EUfunds
<https://www.cosmatoledo.es/>




[https://www.facebook.com/FondosEstructuralesJCCM/posts/pfbid0ZaTf8LZxA5cJYyNvNW1RDbQbRaUrJUR22St5iCDTqgMGJVtcs8cfNSoh6X9XMJcl? tn =-R](https://www.facebook.com/FondosEstructuralesJCCM/posts/pfbid0ZaTf8LZxA5cJYyNvNW1RDbQbRaUrJUR22St5iCDTqgMGJVtcs8cfNSoh6X9XMJcl?_tn_=-R)

Criterion 2: The action incorporates innovative elements.

This project aims to acquire 1,200 brown containers to be implemented in almost all **municipalities in the province of Toledo with a population of over 4,000 inhabitants** (some 38 municipalities with a total of approximately 291,000 inhabitants) for the separate collection of the organic fraction of municipal waste (FORM), as well as the necessary vehicles for this collection.

In addition, the **Toledo Ecopark** has been **extended with a new facility that will treat this organic fraction separately** by means of "anaerobic digestion" (a process similar to composting in the absence of oxygen), an **innovative solution** that optimises the recovery of this waste by using the **biogas** generated as fuel (for vehicles, electricity generation or in the boiler that maintains the temperature of the process itself) and the resulting "digestate" (substrate obtained in the process) for agricultural use as fertiliser, either directly or after composting in one of the processes. The resulting "digestate" (substrate obtained in the process) can be used in **agriculture** as fertiliser, either directly or after composting in one of the existing reactors in the eco-park.

This innovative proposal aims for greater **greenhouse gas reductions** compared to other composting options, and a **circular economy solution** that uses the waste as a resource to generate two end products: **fuel and compost**.

In addition, it significantly reduces odour emissions and visual impact as the entire work area is enclosed.



New plant for the treatment of separately collected organic matter

Criterion 3. Adequacy of the results obtained to the established objectives.

The ERDF Operational Programme of Castilla - La Mancha is an instrument that aims to contribute to the reorientation of the productive model in order to favour a greener and more competitive sustainable economic growth by making efficient use of resources. As indicated above, the aim of the project is to provide a **circular economy solution** for a waste that to date has been destined, in a significant proportion, for landfill(in 2017, just under 4% of the material recovered from the residual fraction at the Toledowaste treatment centre was organic matter, when it is estimated that around 47% of the residual fraction is organic matter¹). Therefore, this project promotes its separate collection to be used as fertiliser and fuel, favouring efficiency in the use of resources and reducing the consumption of fossil fuels by replacing them with the biogas generated.

The project has been designed to acquire an additional treatment capacity of **22,000** tonnes/year of FORM and **8,000** tonnes/year of other organic cosubstrates, since it is estimated that some 28,000 tonnes/year of organic matter will come from the more than 650,000 inhabitants served by the Toledo waste treatment centre (the rate of generation of organic matter in households is estimated at approximately 0.12 kg/inhabitant/day). In total, the biomethane to be produced is estimated at **1,800,000 Nm³ CH₄/year**.

¹ 2012 data from the State Waste Management Framework Plan (PEMAR).

The project also contributes to meeting the ambitious waste recovery targets set in the new **Law 7/2022 on waste and contaminated soils for a circular economy** (transposition of Directive 2018/851 amending Directive 2008/98/EC on waste), which obliges local authorities with a population of more than 5,000 inhabitants to separately collect bio-waste from households by June 2022, as well as to recycle 50% of certain household waste fractions, including bio-waste.000 inhabitants to separately collect bio-waste from households by June 2022, as well as to recycle 50% of certain household waste fractions including bio-waste (55% by 2025 and 60% by 2030) and to implement the new landfill tax "with the organic fraction as the preferred fraction" to limit the biodegradation capacity of landfilled waste.

Criterion 4. Contribution to the resolution of a problem or weakness identified in the field of implementation.

Currently, organic household waste is collected in the province of Toledo mixed with other waste in the container known as the "remainder fraction". As indicated above, in 2017 around 3.78% of this fraction was recovered, i.e. of the 238,880 tonnes managed, some 9,033 tonnes of organic matter were recovered, which is clearly insufficient to meet the indicated objectives, making a project such as the co-financed one necessary and indispensable in order to comply with this and reduce the amount of waste deposited in landfill.

On the other hand, in the field of agriculture, the use of compost and digestate from separately collected organic waste contributes to the protection of agricultural soils and to the restoration of organic matter content, improving their fertility, which is particularly relevant in Spain where more than 50% of agricultural soils have a very low organic matter content (< 2%)². Current fertiliser regulations only consider compost to be compost from separately collected biowaste.

Criterion 5. High degree of coverage of the target population.

The scope directly includes the 38 consortium municipalities with more than 4,000 inhabitants and a total of 196 municipalities in the province of Toledo to which the consortium provides the waste treatment service in the Ecopark, which means a scope of more than **650,000** inhabitants approximately.

² PEMAR 2012 data

Criterion 6. Consideration of the horizontal criteria of equal opportunities and non-discrimination, as well as social responsibility and environmental sustainability.

Nowadays, waste must be conceived as another resource in the life cycle of products, since it can be used to obtain an infinite number of materials to be reintroduced into the industrial process, thus extending the useful life of raw materials, adding fewer resources to the production cycle with the consequent cost savings for companies in the production of new products, and reducing the dumping, incineration or loss of waste, and its consequent pollution, often providing an important economic value that promotes the creation of new business models and new "green" employment opportunities. The environmental sustainability of the project is implicit in its overall objective.

Criterion 7. Synergies with other policies or instruments of public intervention

The separate collection of bio-waste is one of the priority objectives of both the national and regional waste management plans (currently under review), as well as the reduction of biodegradable waste going to landfill.

On the other hand Castilla - La Mancha approved in 2019 the REGIONAL STRATEGY ON BIORWASTE MANAGEMENT (Order 13/2019 of the Regional Ministry of Agriculture, Environment and Rural Development) which aims at the full implementation of separate collection (or recycling at the point of origin) by the end of 2023, and the reduction of the total landfill of biodegradable household waste to 40% of that generated in 1995, as a way to converge to the 10% landfill limit of municipal waste foreseen for 2035 in the Directive on the landfill of waste, foreseeing the necessary adaptations of the different treatment centres for the management of selectively collected biowaste.

This Strategy, in turn, calls for the extension of separate collection to shops, catering services, hotels and restaurants, offices and markets, as well as other service sector activities, as soon as the municipality in which their facilities are located implements separate collection. Likewise, the selective collection of bio-waste from the maintenance of green areas must be linked to the implementation of these services in the different municipalities.



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