



Ayuntamiento
de Murcia

Agenda Urbana
MURCIA
2030

Urban Circular Bioeconomy Webinar Series

Involvement of Murcia in Circular Economy Projects.
ValueWaste and HOOP

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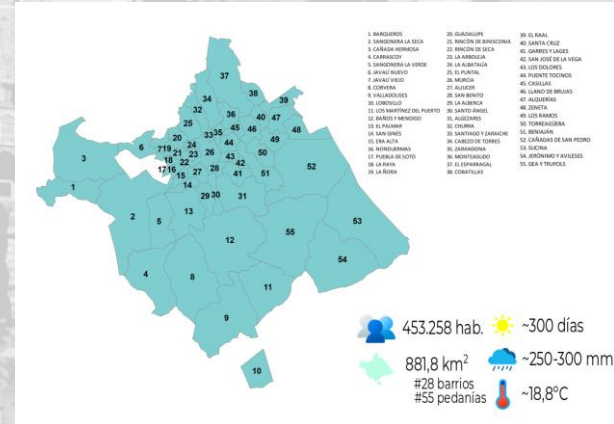
1. Introduction



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- 459 403 inhabitants
- 514 hab/km²
- 881.8 km²:
 - Urban → City
 - Non urban → Other districts (*Pedanías*)
- Economic sectors:
 - Services (the 1st)
 - Food, agriculture
 - Metal, mechanic



1. Introduction



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Extreme weather conditions

- 300 sunny days per year
- Low precipitations (250-300 mm/y)

Seasonal waste variability winter/summer,

Important focus on water recovery

Influence of agriculture:

- The Orchard of Europe (La huerta de Europa)
- Local producers



2. Local Context



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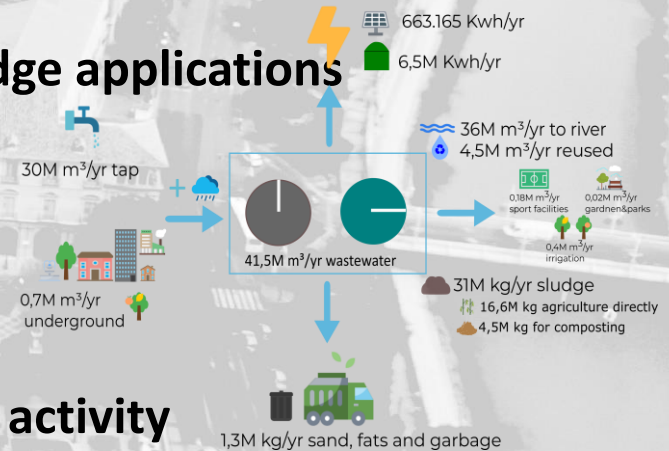
Circular Economy Strategy of Murcia Municipality

Diagnostic ready: <https://www.estrategiamurcia.es/upload/2020/09/Diagnostico-del-estado.pdf>

Plan of action under development (2021)

Participative process

Reference in water treatment and reuse/sewage sludge applications



Number of circular economy related initiatives

Active stakeholder engagement initiatives and social activity

2. Local Context



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2. Local Context



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Selective collection in bins (apart from mixed urban waste bin):

- Paper
- Plastics and metal
- Glass



OFMSW selective collection using bins (since 2020) → 1,4 ton/day currently

Ecopuntos (collection points)



3. VALUEWASTE PROJECT

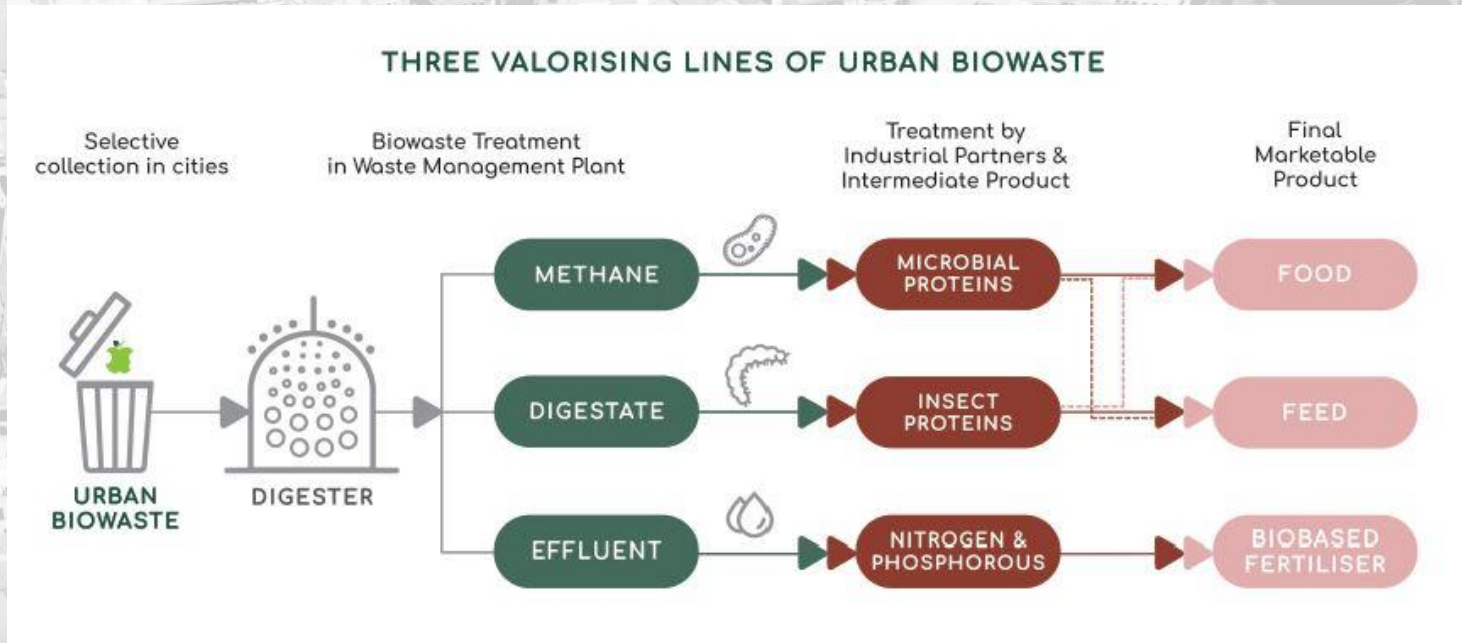


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Valorization of streams from anaerobic digestion into high added value circular value chains

Started operation with 1.5 ton/day. First results expected soon



3. VALUEWASTE PROJECT



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- **We envisage to reach the goal of 1.800 tonnes of organic waste**
- **Produce 60 tonnes of protein flour**
- **Upgrade the Municipal Treatment Plant**
- **New lines of business regarding circular economy**
- **Citizen awareness campaign**
- **Implementation the new container for organic waste**

3. VALUEWASTE PROJECT



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MURCIA IS NOW ON THE ORGANIC RECYCLING MOVEMENT

A new brown container is on the streets.

WHAT GOES INSIDE?

YES	NO
Fruit & vegetables leftovers	Diapers
Food leftovers	Animal excrement
Eggs, seafood & dry fruit shells	Pads
Coffee & tea grounds	Cat's litter
Corks, cardboard & matches	Hair
	Wet wipes
	Cigarette butts
	Kitchen sponges & napkins
	Dust from Desiccants, mud or ash

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VALUEWASTE

NUEVO CONTENEDOR PARA RESIDUOS ORGÁNICOS

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¿SABÍAS QUÉ?

SÚMATE AL CICLO

Reciclar lo orgánico nos permite generar fertilizantes, gases y otros recursos muy valiosos para la producción de alimentos más saludable y ecológica.

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¿SABÍAS QUÉ?

La carne de insecto es muy nutritiva, ya que contiene vitaminas elevadas de proteínas, grasas y minerales.

Para producir un kilo de carne de ternero se necesitan casi ochenta veces más agua que para producir un kilo de carne de insecto.

Los insectos son uno de los animales con menor impacto ambiental durante su ciclo de vida.

Valoraste desarrollará un sistema pionero para la recuperación de residuos y fomento a partir de los residuos orgánicos.

Los insectos comen los restos de los animales que mejoran el suelo ambiental durante su ciclo de vida.

Ambos elementos son claves para la producción de fertilizantes de calidad, necesarios para la agricultura.

La huella ambiental durante la producción de queso que se da cuando se produce queso gouda (queso de vaca) es menor que la de cualquier queso de cabra animal o vegetal.

Los bacterias metabólicas producen un queso gouda (queso de vaca) que es más saludable que el queso de cabra animal o vegetal.

Este proceso aporta las cantidades diarias recomendadas de vitaminas B12.

SÚMATE AL CICLO

VALUEWASTE



3. HOOP: AT A GLANCE



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- The HOOP project supports 8 lighthouse cities and regions in developing large-scale urban circular bioeconomy initiatives to valorise OFMSW (Organic Fraction of Municipal Solid Waste) or UWWs (Urban Wastewater Sludge) with the aim of obtaining safe and sustainable bio-based products.
- How? By providing technical, economic, legal, feasibility studies and business assistance through a PDA to the cities/regions
- Murcia City council is one of the lighthouse cities/regions in HOOP receiving project development assistance
- Our investment commitment: 1,750,000 euros

3. HOOP: AMBITION



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1) Water:

- Achieve a more circular use of this resource
- Obtain high value products from urban wastewater sludge (UWWS; 31,000 tonnes per year) which currently is either applied directly to the land (50%) or composted (50%)
- Interested in the acid fermentation of UWWS in a mixed culture to produce volatile fatty acids (VFAs) and their subsequent purification by membrane technologies

2) VALUEWASTE, HOOP and other bioeconomy projects:

- Act as demonstrators for other cities, to share and replicate the so-called “Murcia experience” (e.g. selective collection strategy, communication campaigns, VALUEWASTE solution...)



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THANKS FOR YOUR ATTENTION

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