



Urban Circular Bioeconomy Practices and the CEE region

Sharing solutions among cities and regions: the HOOP network

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OVAM

















REGIONE AUTÒNOMA DE SARDIGNA













Nantes Mětropole



WASTE



Generalitat de Catalunya Departament de Territori





amiu



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Cities and regions exchanging knowledge and mutual learning: the HOOP network



The HOOP network can:

- Facilitate the **connection** among cities and regions facing the same urban challenges in terms of biowaste and wastewater;
- Inspire innovative solutions to make bio-based products.

Who can join the HOOP Network

Organisations that:

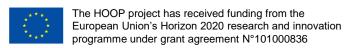
Plan

Organise

Operate

municipal waste management or wastewater treatment at local and regional level.







Who can join the HOOP Network

Municipality

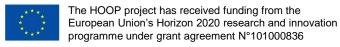
Regional authority

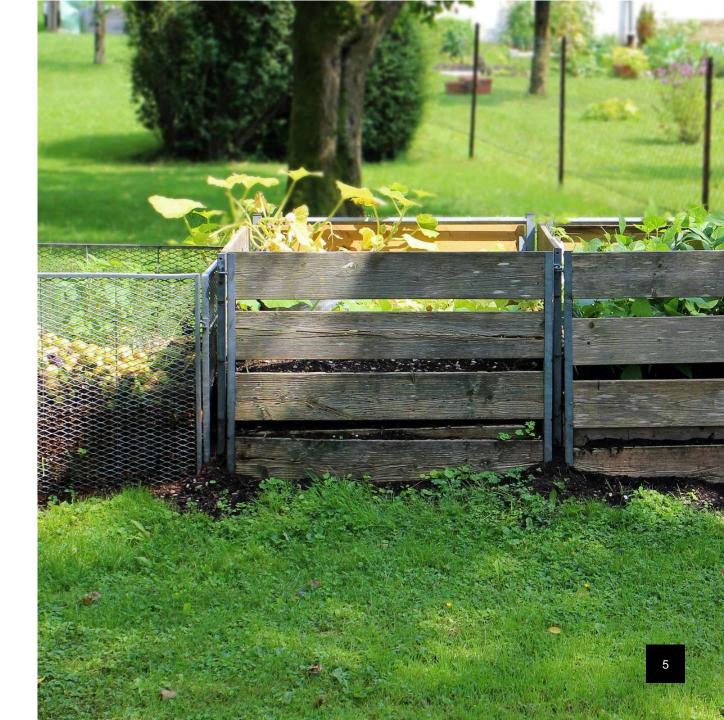
Waste management company

Wastewater treatment company

Willing to **improve** the local bioeconomy strategy and able to potentially **replicate** the project's findings.







Learning from 8 lighthouse cities



Albano Laziale (Italy)

How to increase the **quality level of the organic waste** produced by domestic users.



Bergen (Norway)

Exploring the processing of food resources from **commercial market** to generate feed for salmon.



Almere (The Netherlands)

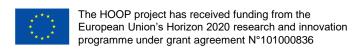
Learn about innovative technologies to improve the processing of **aquatic plants**.



Greater Porto (Portugal)

Develop bio-based products from both the refuse produced in the composting plant and the digestate that will be produced in the future anaerobic digestion plant.





Learning from 8 lighthouse cities



Kuopio (Finland)

Improve **efficiency** of separate collection of Organic Fraction of Municipal Solid Waste, while boosting the **citizen engagement**.



Münster (Germany)

Expand the **biogas production** and improve the quality of the collected **organic and garden waste.**



Murcia (Spain)

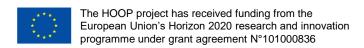
Obtain high value products from **urban** wastewater sludge.



Western Macedonia (Greece)

Expand the separate collection of biowaste through the inclusion of **spent coffee grounds** collection and their valorisation via **fermentation technologies**.





The services for the HOOP cities and regions



The Urban Circular Bioeconomy Hub (UCBH)

an online platform to foster the mutual exchange and replication



Circularity label

a circular ranking system to understand the current position in regard to the implementation of circular measures.



Project activities

Invitation – and covering of travel expenses – to take part to conferences, workshops, capacity buildings events, and study visits.



Virtual Academy

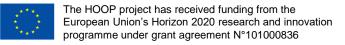
a section of the UCBH to provide access to resources and interactive services related to Urban Bioeconomy.



HOOP Lunch Talks

Monthly 30 minutes exchanges about the urban circular bioeconomy





The HOOP Lunch Talks

EPISODE I: HOOP TECHNOLOGIES TO FOSTER BIOECONOMY IN YOUR CITY

31 MARCH | 14:00-14:30 CEST

Discover the technologies that the 8 HOOP Lighthouse cities and regions are developing with the goal to recover valuable resources from biowaste to make biobased products. Dive into collection strategies, bio-products to feed animals, revalorisation of the refuse produced in a composting plant, valorization of streams from biogas production, high-value products from urban wastewater sludge, and also valorisation of coffee grounds and used cooking oil.



Elisa Gambuzzi

R&D Technician, Environment

Department at Technological Center for
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EPISODE II: ENGAGING CITIZENS IN FOOD WASTE COLLECTION

28 APRIL | 14:00-14:30 CEST

A successful biowaste management system requires the active involvement and long-term commitment of citizens. Discover how BIR, the company managing municipal waste of the HOOP Lighthouse City Bergen in Norway, promoted citizen awareness and engagement in circular economy, leading to significant improvements in waste separation.



Emilia Hamarsland Bjånes Development Advisor, BIR AS



Maria Jacobsen Zafar Communications Advisor, BIR AS



Every last Thursday of the month at 2pm CET: 30 minutes of exchange with an expert on urban circular bioeconomy from the HOOP team.

The HOOP Lunch Talks are reserved only to the HOOP Network members!

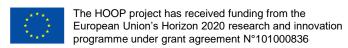


Network members

only!

Horizon 2020

Grant N°101000836.



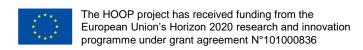
The first HOOP Study visit

The HOOP partners and some cities and regions of the network will visit the HOOP Lighthouses Almere and Münster to learn more about their management of biowaste and wastewater.

The project will cover the travel costs of the HOOP members.







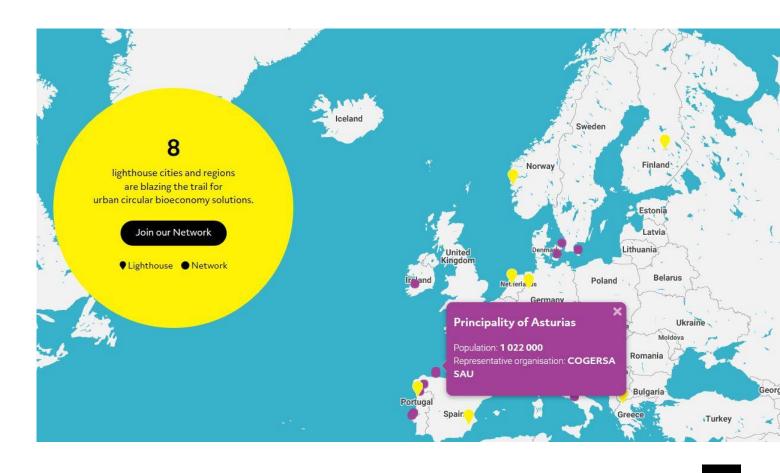
HOOP cities and regions

Meet the early birds that already joined the HOOP network

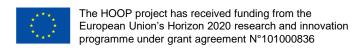
9 waste management/wastewater treatment companies 25 public authorities

representing

10 regions21 cities







HOOP cities and regions

Belgium

- Roeselare City of Roeselare
- Brussels region Brussels Environment

Cyprus

Aglantzia – City of Aglantzia

Czech Republic

Ostrava – Municipality of Ostrava

Denmark

- Bornholm Bornholms Energi og Forsyning and BOFA
- Copenhagen City of Copenhagen
- Guldborgsund Bioeconomy Hotspot Guldborgsund

Greece

Kalamaria - Municipality of Kalamaria

Ireland

South-West Ireland - Circular Bioeconomy Cluster South-west

Italy

- Avigliana City of Avigliana
- Vesuvian cities UCSA

Montenegro

Kotor – Public Utility Company Kotor

Norway

- Bergen Dyrkbart
- Ålesund City of Ålesund

Poland

- Krakow Municipality of Krakow
- Warsaw City of Warsaw

Portugal

- Alentejo Central Gesamb and CIMAC
- Cascais Cascais ambiente (EMAC)
- Guimarães Guimarães City Hall
- Lisbon and West region Valorsul
- Viana do Castelo Serviços Municipalizados de Viana do Castelo

Spain

- Avilés Municipality of Avilés
- Berguedà Consell Comarcal del Berguedà
- · Cartagena Municipality of Cartagena
- Catalonia Agencia de residus de Catalunya
- Manlleu Municipality of Manlleu
- Principality of Asturias COGERSA SAU
- Sevilla Mancomunidad de Servicios La Vega
- Ourense City of Ourense
- Torre Pacheco City of torre Pacheco

The Netherlands

- Apeldoorn City of Apeldoorn
- Arnhem-Nijmegen Green Metropolitan Region
- The Hague City of The Hague





The HOOP cities and regions The story of Public Utility Company Kotor

Kotor (Montenegro)

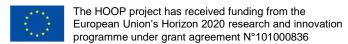
23,000 inhabitants

First composting facility (aerobic composting with aerated windrow method) in Montenegro.

25% of the total waste collected in a year **is processed** to produce an high-quality compost, used for the maintenance of public green space.

"Our plans for the following period are to further develop the operation of the composting facility by expanding its capacity so that we can **start to compost organic waste (leftover food)**. Such activities will require involvement of restaurants which would provide the material for composting. We also intend to procure the equipment we need (a sieve and a packing machine) in order to offer the remaining compost for sale to the interested citizens."







The HOOP cities and regions The story of city of Guimarães

Guimarães (Portugal)

152,700 inhabitants

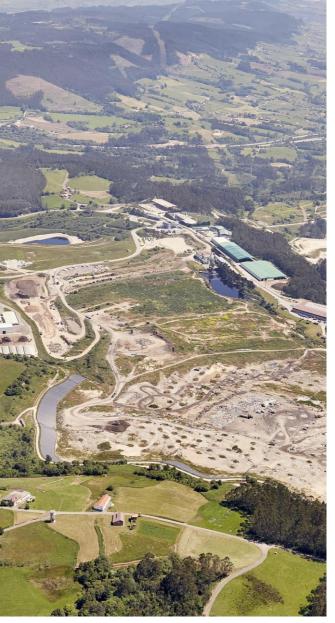
Guimarães' **sustainable development path** has been recognised several times as a reference regarding waste and water management, climate change mitigation and adaptation, nature, and biodiversity.

The strategy focuses on **citizens' engagement**. They have also developed and committed to a Guimarães Strategy for Circular Economy (G4CE) that consists of several raising awareness activities.

The Historic Centre of Guimarães is the first one to implement a **pay-as-you-throw** (PAYT) system in Portugal, meaning the purchase of pre-paid bags that correspond to waste tariff, **increasing the selective collection of 34%.**

In terms of **organic (food) waste**, the city built a **decentralised composting system** in the parishes and home composters for households. The Municipality offers a composter free of charge and a guide for citizens that want to participate.





The HOOP cities and regions The story of COGERSA SAU

Asturias region (Spain)

1,022,000 inhabitants

Since 2003, the **composting plant for bio waste** and selected manures produces a successful eco-labelled compost.

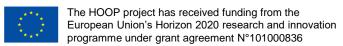
Since 2010, **sewage sludge**, from wastewater treatment processes, is used to produce good-quality compost.

Since 2014, the **anaerobic digestion plant** started treating sewage sludge, in 2020 the plant reached to treat 10,000t of biowaste separately collected.

R&D activities focused on **low carbon** and **circular bioeconomy**.

"Municipal mixed waste of Asturias still contains great amounts of kitchen waste and biowaste (35%) and its organic fraction exceeds 50% if paper/cardboard and fabric materials are also included. Thus, environmental campaigns of Cogersa are focused on waste prevention and promotion of separate collection across Asturias."







The HOOP cities and regions The story of REFA

Guldborgsund (Denmark)

60,000 inhabitants

Located in an agricultural part of the country where local farmers are plant production specialists and produce **large amounts of bioresources** from sugar beet to grass seed, quinoa and pulses. This is a unique opportunity not only for sustainability challenges, but also for economic growth and job creation.

REFA, managing waste and bioresources on behalf of the municipality focuses on the circular economy, notably on **future valorisation of household biowaste** as part of the local circular bioeconomy, by recycling and producing energy.

Food waste is an important bioresource and when it is incinerated, the nutrients are lost. This is why from 2022 REFA will collect food waste separately from all households and use it for **biogas production**. The degassed food waste will be used as **fertilizer** on local fields too.

"We are committed to advance in urban bioeconomy to ensure that future generations can access the same bioresources that we do."











Do not hesitate to contact us

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