

Sustainability and the Renewable Circular Economy: EU-funded URBIOFIN project and cosmetic packaging

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NATRUE introduction

Brussels-based, International Non-Profit Association (AISBL) founded in 2007
by the pioneers of the sector including....



Dr. Hauschka



Currently 59 ratified members operating globally

NATRUE: Areas of Activity

Mission:

- To protect and promote natural and organic cosmetics for the benefit of consumers worldwide (through...)

1. Advocacy

In the absence of an official legal definition for a 'natural' or 'organic' cosmetic product to provide a voice for the authentic sector

2. Label (internationally applicable; founded in 2008)

Over 5500 certified products covering 230 brands spread over 30 countries worldwide

3. Research

NATRUE pools resources from its members to investigate scientific issues of concern for the benefit of the sector and consumers alike

URBIOFIN

Project title: Demonstration of an integrated innovative biorefinery for the transformation of Municipal Solid Waste (MSW) into new BioBased products (URBIOFIN)

Topic: Valorisation of the organic fraction of Municipal Solid Waste (OFMSW) and contributing to the renewable circular economy

Duration: 4 years (June 1st 2017 – May 31st 2021)

URBIOFIN Background

- rapid population growth, especially in the cities → steady increase of urban waste
- Europe inhabitant generates **0.5T MSW / year**
- **40-50% is organic waste** - useful raw materials that can be converted to valuable products
- annual production of nearly **100 million T** of biomass from urban waste in the EU

Circular economy

Waste valorisation contributes to the transition from a linear to a renewable circular economy

→ **URBIOFIN**



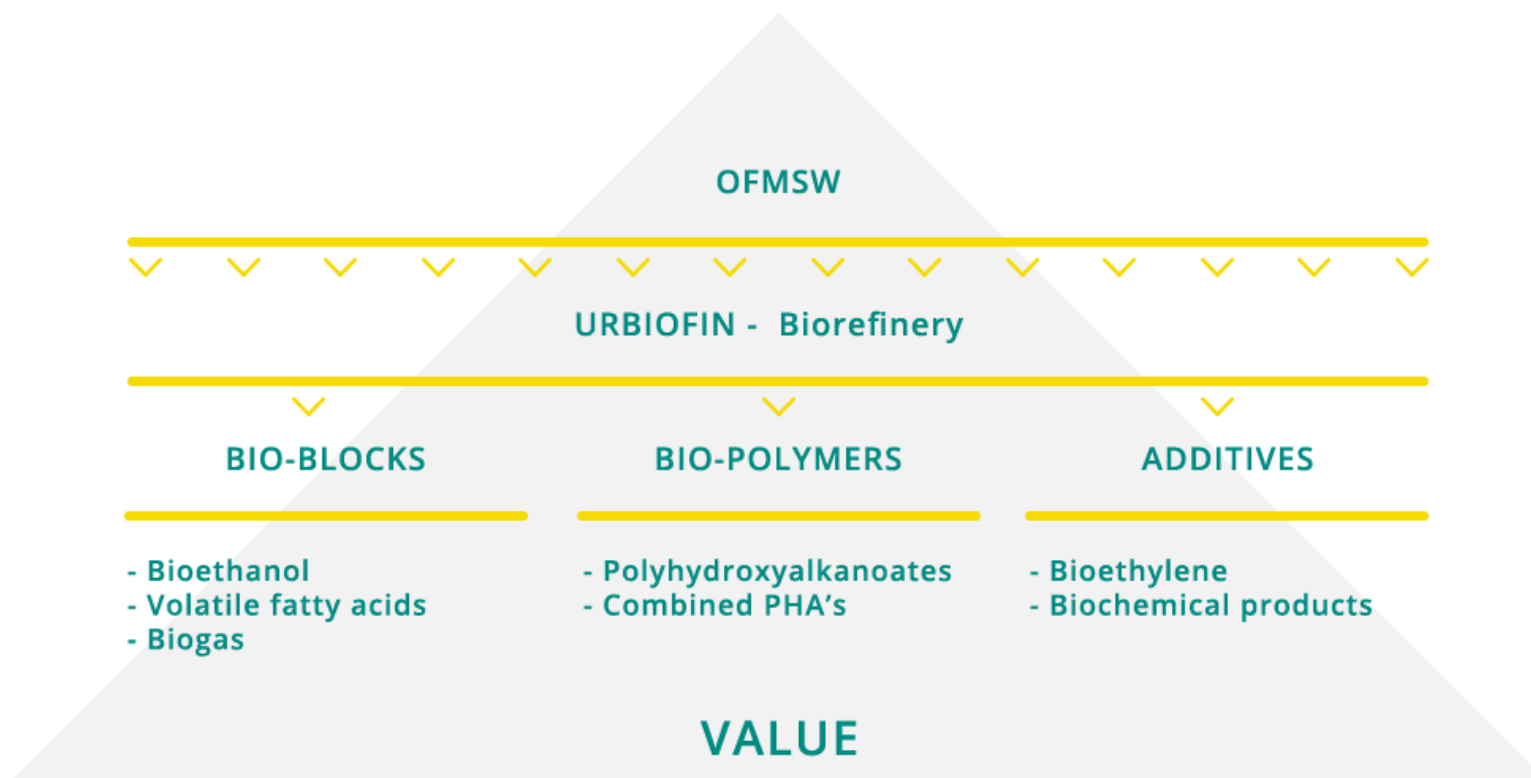
URBIOFIN Objective

- demonstrate techno-economic and environmental feasibility of an
- integrated and innovative **biorefinery**
- for the transformation of the **organic fraction of municipal solid waste (MSW)**
- converting 10 tonnes of organic urban waste per day
- into different **bioproducts with a high industrial interest:**
- chemical building blocks, biopolymers and additives



URBIOFIN Objective

- converting 10 tonnes of **organic fraction of municipal solid waste (OFMSW)** to **bioproducts**





URBIOFIN Impact

- Contribute to:
 - solving **environmental pollution**
 - transition to a **renewable circular bio-economy**
 - reduction of the **biodegradable fraction** of MSW sent to landfill
 - environmental and socio-economical **sustainability**
 - implementation of the **Bioeconomy Strategy** of the European Union.

URBIOFIN Bio-based products

BIOBASED PRODUCT

USE/FINAL APPLICATION

Bioethanol

Chemical building block
for bioethylene production and VFAs elongation

Mcl fatty acids (MCFA)

Chemical platform for mcl-PHA production

Biogas

Chemical building block for scl-PHA

Bioethylene gas

Ripening gas in post-harvest fruit chambers

Short chain polyhydroxyalcanoates (scl-PHA)

Agriculture Bioplastic and use for household bags

Medium chain polyhydroxyalcanoates (mcl-PHA)

Bioplastic for packaging

Biocomposites of scl and mcl-PHA

Cosmetic and hygienic applications

Amino acids rich liquid fertiliser

High added value liquid biofertilisers

Dry organic-mineral granules

Solid Biofertilisers

NATRUE involvement - since 1st June 2017

- From municipal solid waste to →
- **Cosmetic packaging** and packaging materials
- NATRUE is committed to protecting and promoting authentic Natural and Organic Cosmetics, a sector which is increasingly **focused on sustainability**
- *“The Association joined the industry consortium project to help solve environmental pollution and contribute to the transition to a renewable circular bio-economy through sustainably converting municipal waste into targeted products like cosmetic packaging.”*

URBIOFIN funding

- funded by the **Bio Based Industries Joint Undertaking (BBI JU)**
- under the **EU Horizon 2020** research and innovation programme programme
- **Project Budget:** 15 M€
- **Project coordinator:** Spanish engineering company “Industrias Mecánicas Alcudia S.A (IMECAL S.A)”



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URBIOFIN partners

Industry: IMECAL S.A., URBASER S.A., BIOMASA PENINSULAR S.A., EXERGY Ltd, Novozymes A/S, G.I. Dynamics B.V., VISUM Ltd, NATUREPLAST SAS, BCM BioEconomy Cluster Management GmbH, SES STEFANY EMBALLAGES SERVICES, NATRUE AISBL

Research Organisations: ainia, Wageningen University & Bioresearch, Centro de Investigaciones Energéticas Medioambientales y Tecnológicas, IRIAF (CLAMBER Biorefinery)

Universities: University of Valladolid

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Consortium participants



Participant No	Participant name	Participant short name	Country
1. SME (CO)	Industrias Mecánicas Alcudia S.A.	IMECAL	Spain
2. RTO	ainia	AINIA	Spain
3. IND	Urbaser S.A.	URBASER	Spain
4. SME	Biomasa Peninsular	BPE	Spain
5. RTO	Universidad de Valladolid	UVA	Spain
6. SME	Exergy Ltd.	EXERGY	UK
7. IND	Novozymes	NOVO	Denmark
8. SME	G.I. Dynamics B.V.	GID	Netherlands
9. RTO	Wageningen UR	WUR	Netherlands
10. RTO	Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas	CIEMAT	Spain
11. SME	IRIS Advanced Engineering Ltd.	IRIS	Ireland
12. SME	Nature Plast	Nature Plast	France
13. RTO	IRIAF (CLAMBER BIOREFINERY)	IRIAF	Spain
14. CLUSTER	Bioeconomy Cluster	BCM	Germany
15. SME	SES STEFANY EMBALLAGES SERVICES	SES	France
16. Association of SMEs	NATRUE ASBL	NATRUE	Belgium



www.urbiofin.eu

FROM WASTE TO BIOPRODUCTS THROUGH BIOREFINERY



URBIOFIN is an innovation project funded by the Bio Based Industries Joint Undertaking (BBI JU) under the EU Horizon 2020 programme and coordinated by "Industrias Mecánicas Alcudia S.A., (IMECAL S.A.)". The aim of the URBIOFIN project is to demonstrate techno-economic and environmental viability of an integrated and innovative biorefinery for the transformation of the organic fraction of municipal solid waste (MSW) into new marketable bioproducts, chemical building blocks, biopolymers and additives.

> READ MORE

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ABOUT



URBIOFIN
CONSORTIUM

ainia
centro tecnológico

01/26/2018

URBIOFIN VIDEO
PRESENTATION AT BBISF17



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Horizon 2020
European Union funding
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