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EASME

Executive Agency for Small and Medium-sized Enterprises

Overview of nutrient related Horizon 2020 and Life projects in Europe

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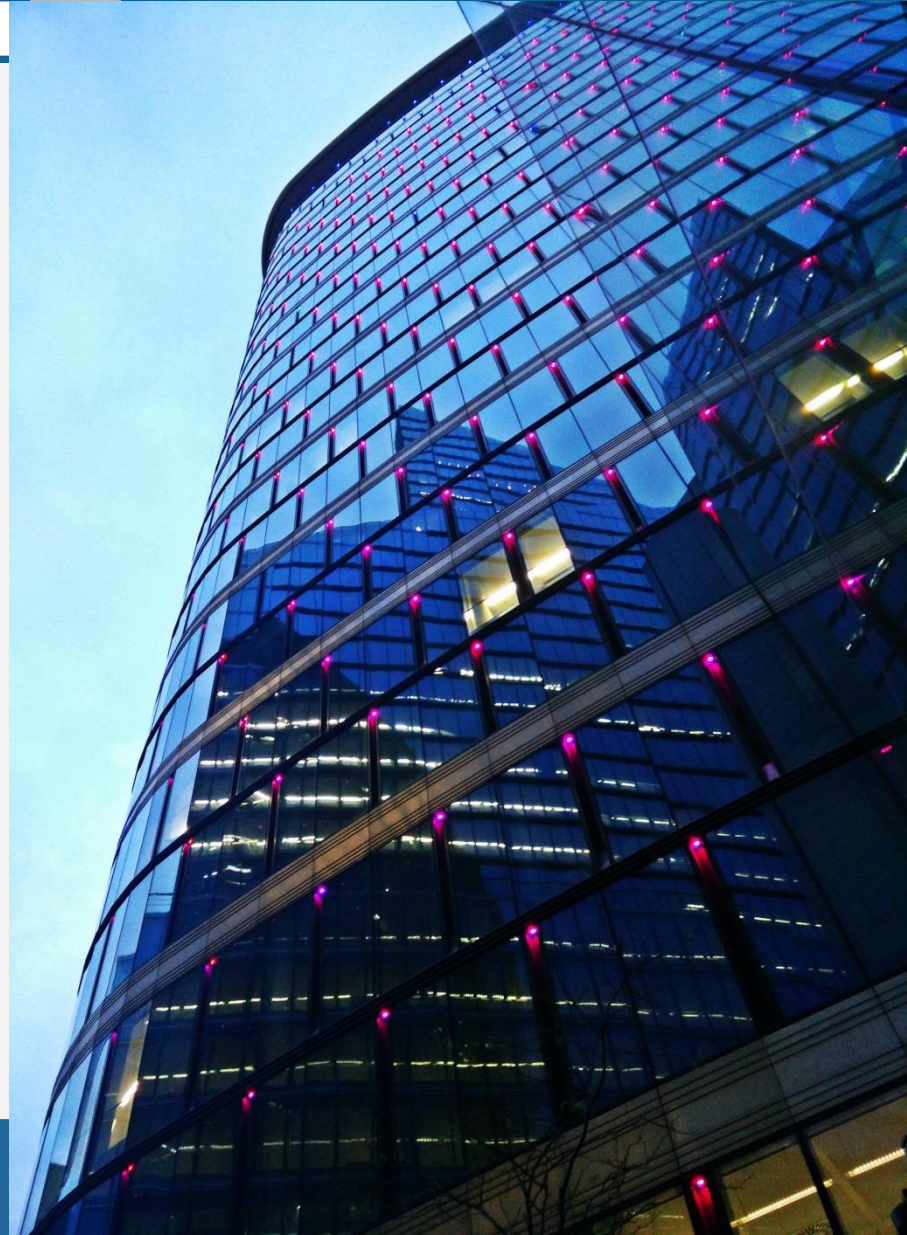
Unit B2 H2020 Environment and Resources

Eco-innovation Sector

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3rd European Nutrient Event:
Towards Circular Economy of Phosphorus
and other nutrients
Ecomondo, Rimini
9 November 2018

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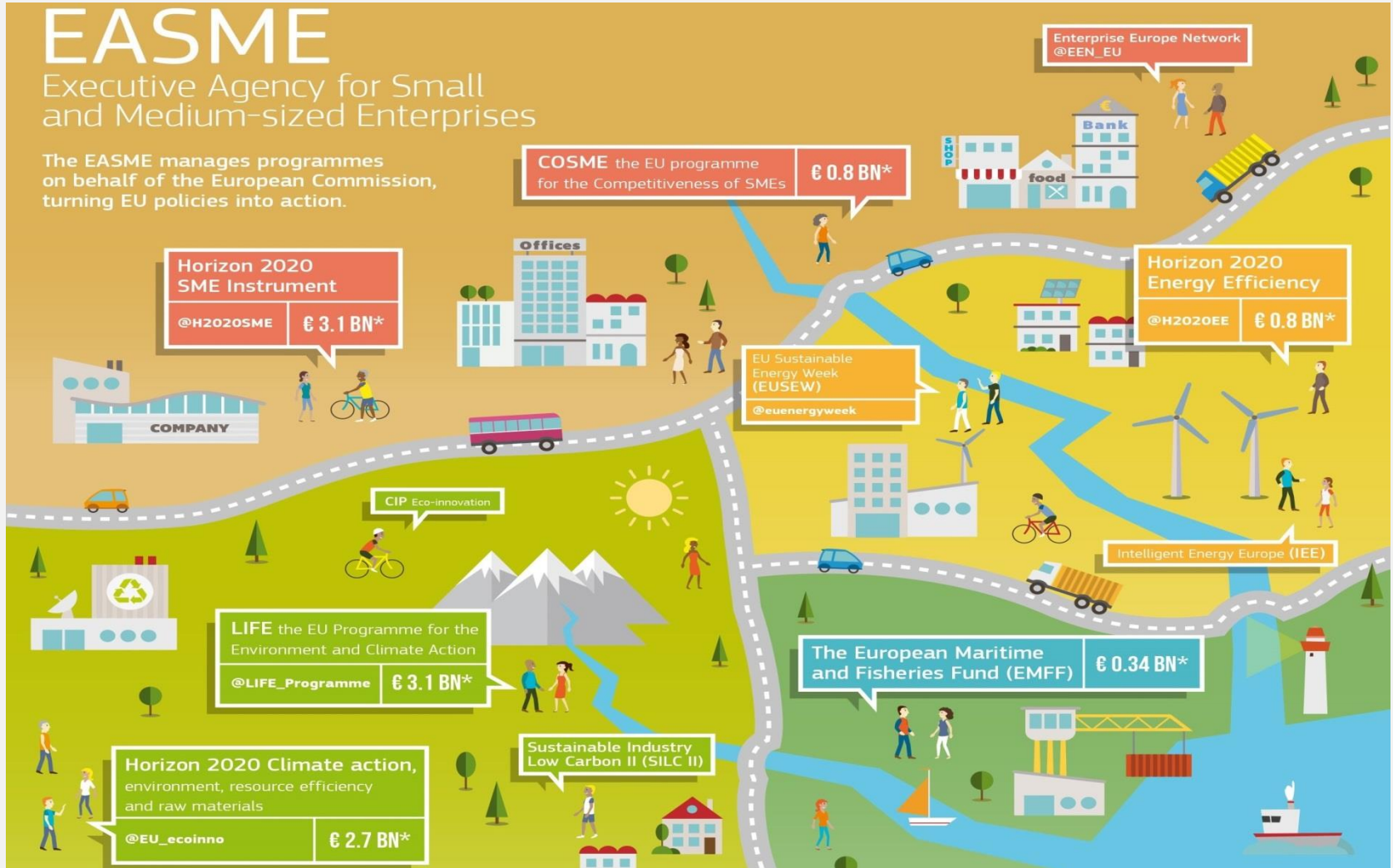


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EASME

Executive Agency for Small and Medium-sized Enterprises

The EASME manages programmes on behalf of the European Commission, turning EU policies into action.



Executive Agency for SMEs



<https://publications.europa.eu/en/publication-detail/-/publication/a78acc80-f3d0-4bde-b2f7-e8a7402b43d3>

Research and Innovation needs

- **Social science** (attitudes, acceptance, choices) to accompany P-recycling implementation
- Focus on actions **covering whole value-chains**, from P-recovery to recycling of the P-products,
- Support for **full-scale demonstration projects**,
- Support the development of **standards, regulations**, BATs, and product criteria
- **Clustering** of projects and networking



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CIRCULAR ECONOMY

Closing the loop



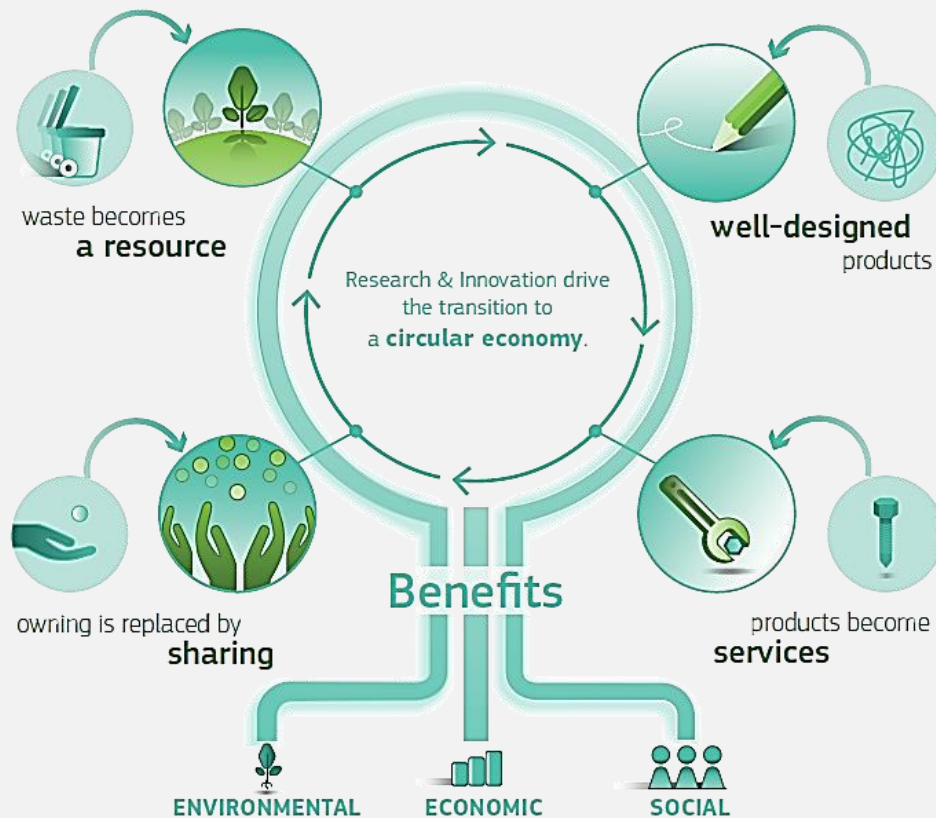
CIRCULAR ECONOMY



where the value of products, materials and resources is maintained in the economy for as long as possible, and the generation of waste minimised

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HORIZON 2020 SUPPORT TO CIRCULAR ECONOMY



- **Going beyond waste -**
Interdependence across the Value Chain
- **All form of innovations:**
(technological and non-technological)
- **Large scale demonstration project**
- **Focus on impact**



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“Waste” and “Water” focus areas
2014-2015: € 190 M



“Industry 2020 in the Circular Economy”
2016-2017: € 650 M



“Connecting economic and environmental
gains – the Circular Economy”
2018-2020: € 940 M

**Create the right
environment for
innovation and
investments**



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NUTRIENT RECOVERY - H2020 INNOVATION ACTIONS

Project	Title	Coordinator
INCOVER (€ 7.2 M)	Innovative Eco-Technologies for Resource Recovery from Wastewater	ASOCIACION DE INVESTIGACION METALURGICA DEL NOROESTE – ES
SMART-Plant (€ 7.5 M)	Scale-up of low-carbon footprint material recovery techniques in existing wastewater treatment plants	UNIVERSITÀ POLITECNICA DELLE MARCHE - IT
DECISIVE (€ 7.8 M)	A DECentralized management Scheme for Innovative Valorization of urban biowaste	INSTITUT NATIONAL DE RECHERCHE EN SCIENCES ET TECHNOLOGIES POUR L'ENVIRONNEMENT ET L'AGRICULTURE - FR
SYSTEMIC (€ 7.9 M)	Systemic large scale eco-innovation to advance circular economy and mineral recovery from organic waste in Europe	WAGENING UNIVERSITY RESEARCH - NL

NUTRIENT RECOVERY - H2020 INNOVATION ACTIONS

Project	Title	Coordinator
RUN4LIFE (€ 6.2 M)	Recovery and Utilization of Nutrients 4 Low Impact Fertilizer	FCC AQUALIA SA - ES
Water2Return (€ 5.9 M)	REcovery and REcycling of nutrients TURNing wasteWATER into added-value products for a circular economy in agriculture	BIOAZUL- ES
HYDROUSA (€ 9.9 M)	Demonstration of water loops with innovative regenerative business models for the Mediterranean region	National Technical University of Athens - GR
NextGen (€ 9.9 M)	CE solutions in the Water Sector	KWR - NL
PROJECT-Ô (€ 9.3 M)	Demonstration of planning and technology tools for a circular, integrated and symbiotic use of water	IRIS srl - IT



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**Scaling up
solutions for
material recovery
across sectors**

**Engaging with
local communities
for an integrated
water
management**

**Testing circular
solutions for
nutrient
recovery**

**Providing new
services for
wastewater and
biowaste**



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<http://smart-plant.eu>

INCOVER

Innovative Eco-Technologies for Resource Recovery from Wastewater

<https://incover-project.eu/>

Scaling up solutions for material recovery across sectors



<http://hydrousa.org/>



<https://run4life-project.eu/>

Testing circular solutions for nutrient recovery

Providing new services for wastewater and biowaste



nextGen

Engaging with local communities for an integrated water management

<https://nextgenwater.eu/>



Project O

<http://eu-project-o.eu/>



DECISIVE

<http://www.decisive2020.eu/>



SYSTEMIC

Circular solutions for biowaste

<https://systemicproject.eu/>



Water2Return

<https://water2return.eu/>

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Total EU funding € 71.66 M

Scaling up
solutions for
material recovery
across sectors

Average EU Contribution
Private org.: **42%**
Public org. (not RES): **0%**

Engaging with
local communities
for an integrated
water
management

Testing circular
solutions for
nutrient
recovery

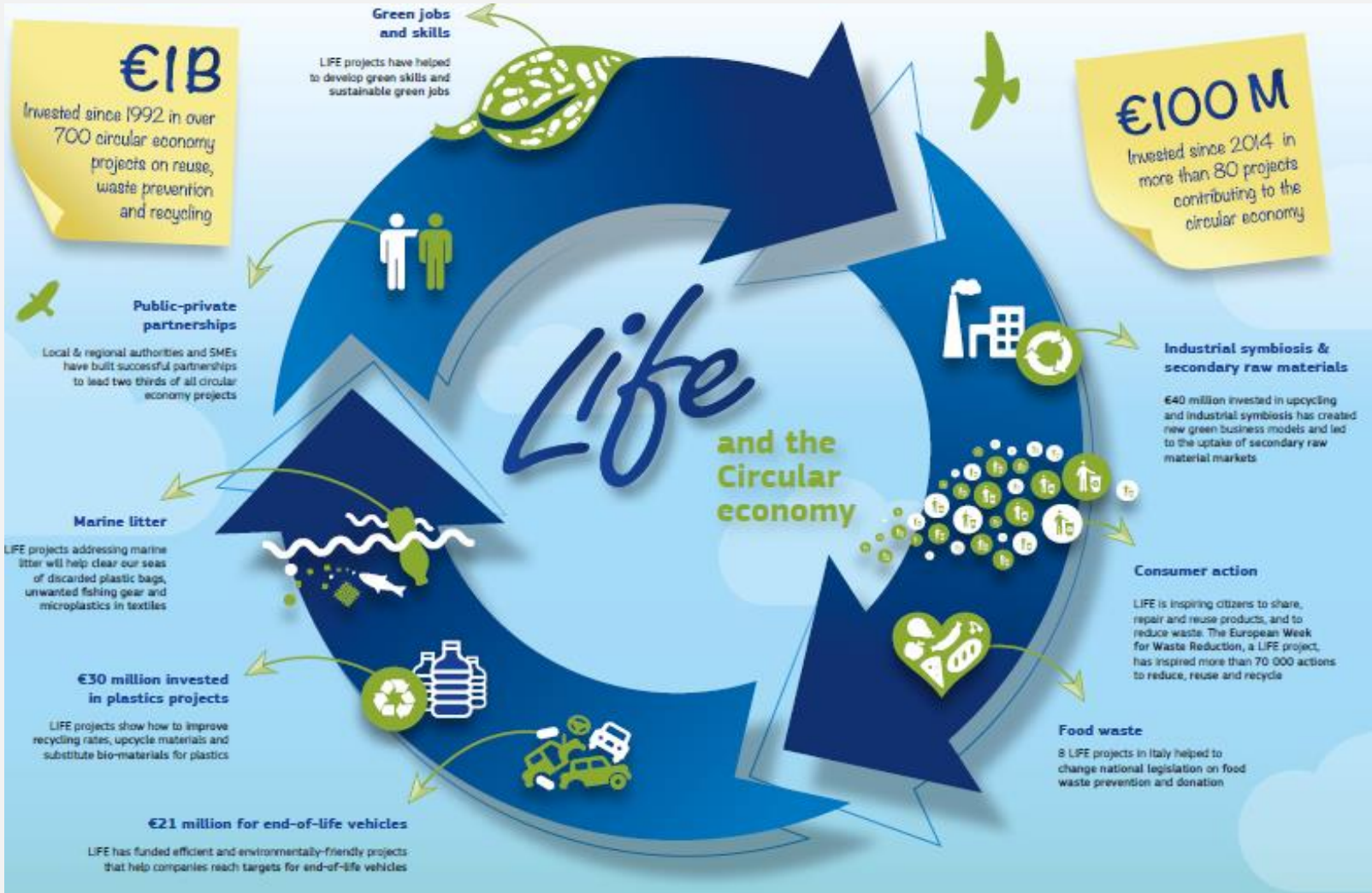
Average EU Contribution
Private org.: **37%**
Public org. (not RES): **7%**

Providing new
services for
wastewater and
biowaste

Average EU Contribution
Private org.: **54%**
Public org. (not RES): **0%**



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LIFE-CHIMERA LIFE15 ENV/IT/000631

CHickens Manure Exploitation and RevAluation

<https://www.life-chimera.eu/>

- set up a pilot plant to treat for poultry manure at farm's premises
- convert the manure into valuable fertilisers, producing thermal and electrical energy

EU Contribution: 1.294.458 €, Start date: 01/07/2016, End date: 31/12/2019

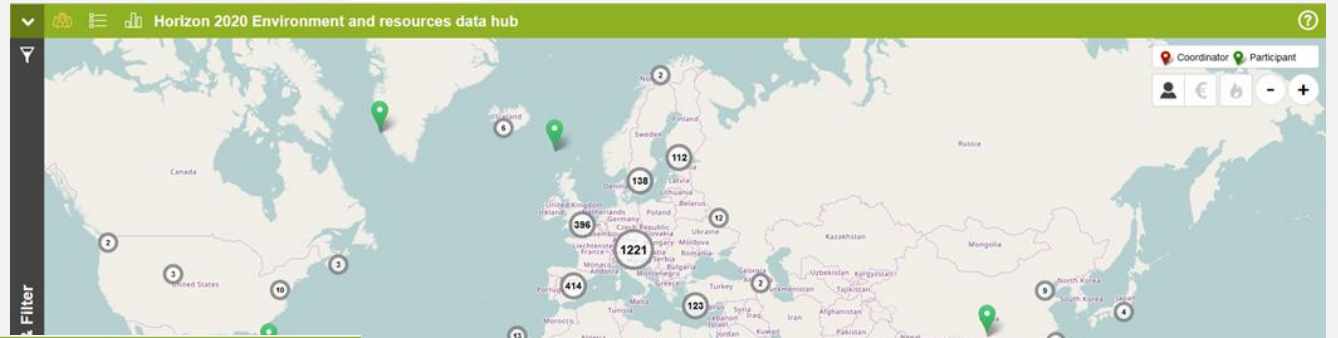


LIFE DeNTreat - LIFE16 ENV/IT/000345

Decentralized innovative treatment of ammonium-rich urban wastewater <https://www.life-dentreat.eu/>

- demonstrate decentralised wastewater pre-treatment modules, based on the Anammox (ANAerobic AMMonium Oxidation) microbial process,
- reduce nitrogen pollutants from the textile industry, and consequently in urban wastewaters

EU Contribution: 835.133 €, Start date: 01/07/2017, End date: 30/06/2020



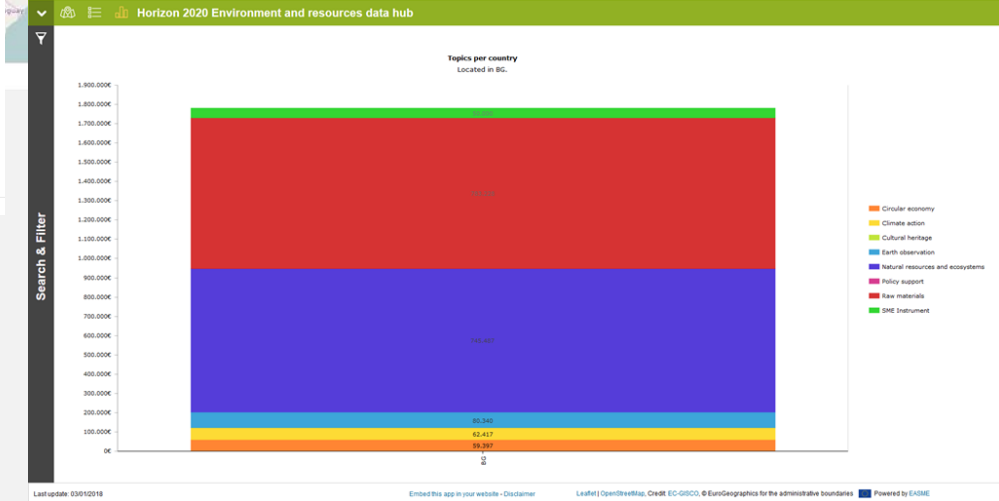
CORES EOOD
<https://www.easme.eu> Direct link X

Project: Zero Emission Robot-Boat for Coastal and Inland Water Monitoring
Project Acronym: ZEMBOOD
Project Type: Innovation (AI)

The project aims to develop an eco-innovative product: a zero emission autonomous (unmanned) robot-boat system intended for use as a monitoring station for quality & quantity of surface waters. The proposed innovative product (system) aims to contribute to solving two important issues: - The (unprecedented) need of high quality, real-time information/data on water environment related primarily to the increasing climate change uncertainty, and its protection of the environment. - The need for low-carbon, low-cost, effective vessels operating in inland and coastal water. The positioning of the present business innovation project can be estimated as being at TRL7 - system prototype demonstration in operational environment. The robot-boat system is intended to be operated as an unmanned apparatus, having onboard computer and a large-capacity radio-telephony system for real-time transfer of data for desktop and web applications, with a large carrying capacity and special shape, to carry onboard various measurement equipment, incorporating a number of innovative solutions. Main objective of project (Phase 1) is the development of a Feasibility study including a business plan. A comprehensive analysis of basic Technological Factors, Economics, Marketing and Financials. Legal requirements. Operational conditions will be carried out. The use of the system as an autonomous monitoring unit can provide low-cost, efficient and routine monitoring of the aquatic environment. This way providing significant impact on EU water sector. Reliable data from such observations are of crucial importance to understanding and adaptation to climate change, as well as to respond to unprecedented burden on water resources, needed not only for safe drinking water, but also to support agriculture, energy, transportation, manufacturing, and civil infrastructure. It can also help coastal and inland communities to adapt to climate change, and react to flood hazards and environmental threats.

Topic: Boosting the potential of small businesses for eco-innovation and a sustainable supply of raw materials

Total budget: 71 429 €
EU Contribution: 50 000 €
Call ID: H2020-SMEINST-1-2014
Start date: 01/06/2015
End date: 30/11/2015
Participants:
 • CORES EOOD (Coordinator) - Bulgaria



EASME DATA HUBs

<https://ec.europa.eu/easme/en/easme-data-hubs>

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EIP Water

Boosting opportunities – Innovating water



**EIP on Raw
Materials**



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ON-GOING CHALLENGES

Exploit the full potential of circular economy

- ✓ Going beyond technologies and looking at services and business models
- ✓ Create an economic case

Continue anticipating R&I needs

- ✓ Feeding policy making at EU and National level, e.g. have your say (https://ec.europa.eu/info/law/better-regulation/have-your-say_en), discussion on Horizon Europe, in order to spur innovation
- ✓ Involving Standardisation bodies since the beginning

Raise awareness

- ✓ Involving end-users in projects to increase acceptance
- ✓ Creating links with local authorities for permitting in demonstration activities

Horizon 2020 - WP 2018-2020

Climate action, environment, resource efficiency and raw materials (SC5)

Greening the economy in line with SDGs

- **CE-SC5-04-2019: Building a water-smart economy and society IA - € 72 M**
- ✓ **Sub-topic a) Symbiosis between industry and water utilities**
- ✓ **Sub-topic b) Large scale applications with multiple water users at various relevant scales**



Planning:

14 November 2018	19 February 2019	4 September 2019
Opening of the call	Stage 1 Evaluation	Stage 2 Evaluation

2018 Information Days - calls 2019

<https://ec.europa.eu/easme/en/section/horizon-2020-environment-and-resources/2018-information-days-calls-2019>

Work Programme

http://ec.europa.eu/research/participants/data/ref/h2020/wp/2018-2020/main/h2020-wp1820-climate_en.pdf



How to apply for LIFE funding



APRIL 2019

Read the **call for project proposals** and start preparing a concept note

OCTOBER 2019

You will get news from the LIFE programme!
Should your concept note be pre-selected, you can then start working on a full project proposal

JUNE 2019

Submit a **concept note** of no more than 10 pages

JANUARY 2020

Submit your **full project proposal** to the European Commission

MAY 2020

You will get news from the LIFE programme!
If your project proposal is selected for funding, the European Commission will start preparing **your grant agreement**



JULY 2020

You sign your grant agreement and start your project!

BECOME AN INDEPENDENT EXPERT



- ✓ Academia
- ✓ Private sector / innovation agencies
- ✓ Local / national authorities / agencies

Call for experts:

<http://ec.europa.eu/easme/en/call-experts-climate-action-environment-resources-management>



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**THANK YOU
FOR YOUR ATTENTION**

Vincenzo GENTE

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EASME on Twitter



@H2020EE • @H2020SME • @EEN_EU • @EU_ECOINNO

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