



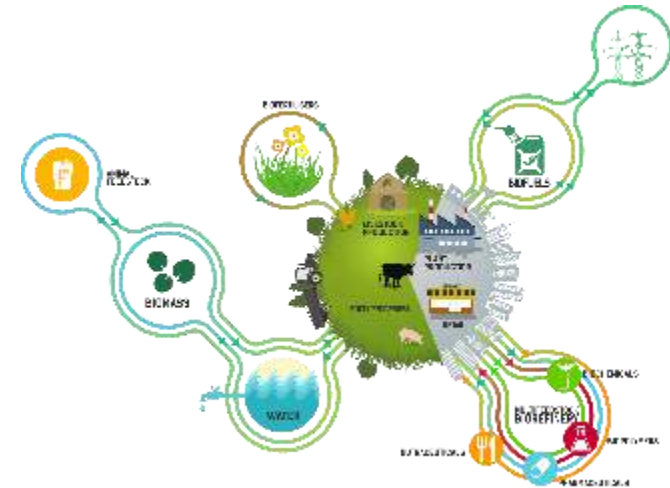
# AGROCYCLE

for a circular economy

## SUSTAINABLE TECHNO-ECONOMIC SOLUTIONS FOR THE AGRICULTURAL VALUE CHAIN

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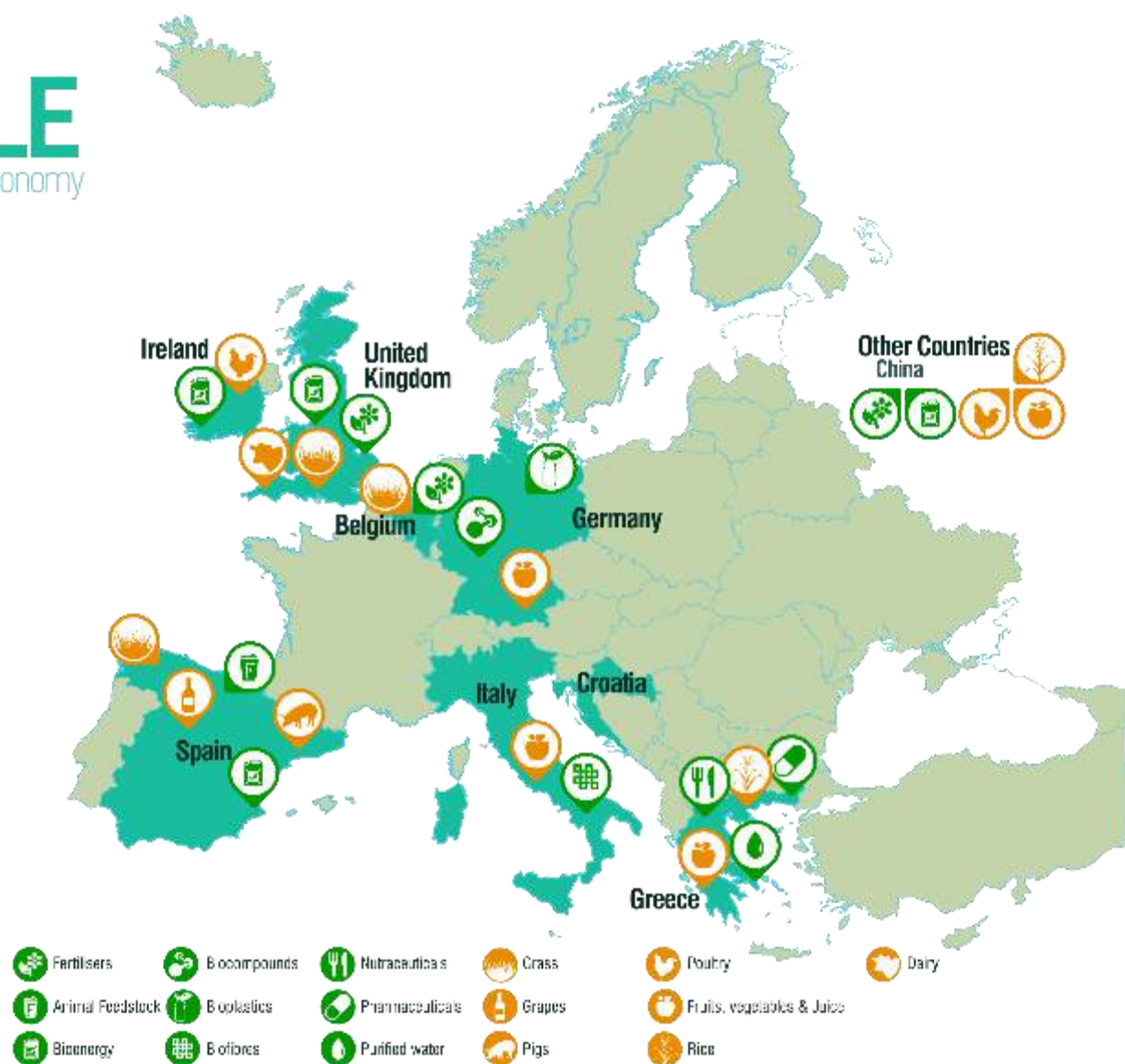
This project has received funding from the European Union's Horizon 2020 Research and Innovation programme under grant agreement No. 690142 in collaboration with the People's Republic of China and the Hong Kong Government

## The project

- Coordinated by the School of Biosystems & Food Engineering, University College Dublin
- EC funded H2020 in collaboration with the Government of the People's Republic of China and the Hong Kong Government
- 3 year project, 26 partners: EU, China, Hong Kong
- € 7 million from EC plus ca. € 1 million from Government of the People's Republic of China and the Hong Kong Government
- 1 June 2016 – 31 May 2019



- 8 EU Countries
  - Ireland
  - Spain
  - United Kingdom
  - Germany
  - Belgium
  - Italy
  - Greece
  - Croatia



- 23 EU partners, 2 from Mainland China and 1 from Hong Kong





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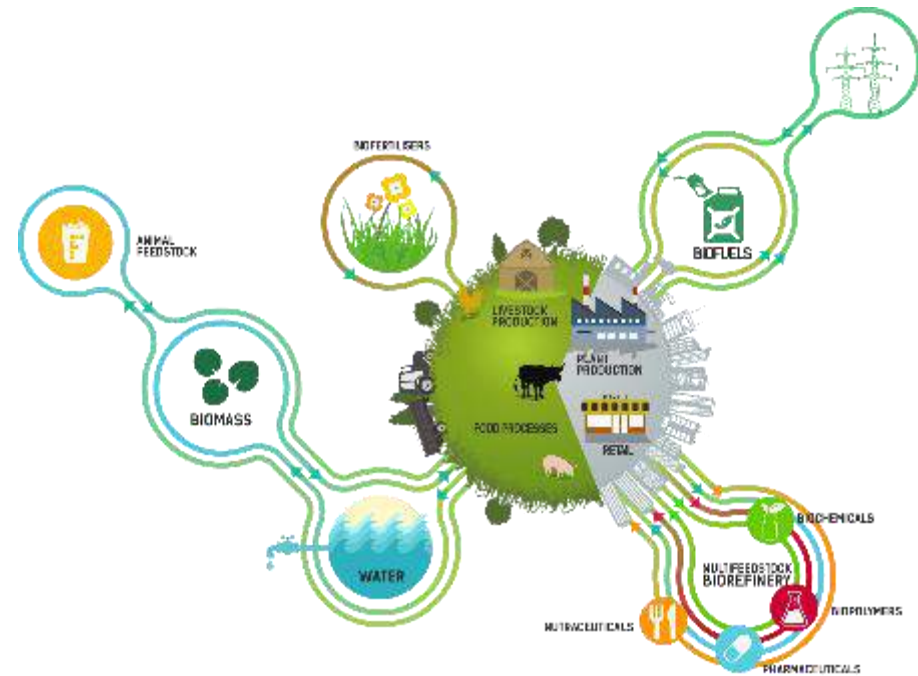


**HELLENIC AGRICULTURAL  
ORGANIZATION-DEMETER**



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## AgroCycle Objectives

- To deliver sustainable agricultural waste valorisation
- Address European policy target of reducing food waste 50% by 2030
- Contribute to the change occurring in China in relation to sustainability

## AgroCycle Approach

Developing a ‘Circular Economy’ around the agri-food chain:

- Pre- and post-farm gate
- Food and agri-products processing sector
- Wholesale and retail (commercial activity)
- Consumer

Waste processing – valorization: bio-fuels,

**high value-added biopolymers and biocomposites,**  
energy & micro fuel cells.



## Workplan – Project Work Packages

- **WP1 Agricultural waste value chain assessment**

To map and quantify the Agricultural Waste Co-products and By-products (AWCB) across Europe in terms of energy, nutrients, valuable molecules, recyclable materials

- **WP2 Biofuels production**

To demonstrate the technical feasibility of the production of biofuels (bioethanol/biobutanol) from AWCB

- **WP3 Fertiliser production**

To develop and evaluate the effectiveness of new biofertilizers from crop and animal residues, and to evaluate their impact on soil and groundwater

- **WP4 Agricultural wastewater exploitation & treatment**

To design a process for exploitation, treatment and recycling of nutritional agricultural wastewaters (for example waste waters containing fruit juices, olive oils ....)



# Workplan – Project Work Packages

## ◦ **WP5 Biowaste valorisation into high value products**

a) To demonstrate the possibility of biowaste valorization through the extraction of valuable fractions

- from *potato pulp* and *potato fruit juice* (proteins, to be used as gas barrier biopolymers, and phenolic compounds, to be used as active ingredients for food and cosmetics packaging)
- from *rice bran* (rice bran oil, with nutraceutical properties, to be used also as **plasticizers for biopolymers**, and antioxidants, to be used as active ingredients for food and cosmetics packaging)

b) To valorise residual fibres from raw materials after extractions for the **production of biocomposites**, to be used in packaging and agricultural applications





# Workplan – Project Work Packages

- **WP6 Life Cycle Assessment and Life Cycle Costing**

To perform environmental and economic sustainability assessments

- **WP7 Knowledge platform and training**

To implement a Joint Stakeholder Platform, facilitating the know-how transfer

- **WP8 To define Sustainable value chains and business models**

- **WP9 To maximize the Innovation impacts of the project,**  
with dissemination of the project results





## Contact Details

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