



## European Commission launches €7.8 million Research and Innovation project on upcycling bio plastics of food and drinks packaging

- The €7.8 million project ‘upPE-T’ will champion the upcycling of food and drink packaging PE & PET post-consumer wastes to obtain high value products that will be used in the production of biodegradable & recyclable bioplastics (PHBVs) for food & drink packaging manufacturing.
- The upPE-T project will contribute to upcycling up to 60% of food and drink packaging plastic waste by 2030 and develop a viable roadmap to ensure that 60% of the above packaging will be produced from renewable sources by 2030.
- The 4-year project will also increase awareness among EU citizens of products and materials upcycling capacity, bring positive environmental benefits by decreasing 85.6% CO<sub>2</sub> compared to conventional plastics production, contribute to European and international standards and certification schemes.

At present, more than 98% of plastics are produced from non-renewable sources. Some plastics are biobased, however not all are recyclable, reusable, or biodegradable. **Polyethylene (PE) and Polyethylene terephthalate (PET)** are the leading plastics used in food packaging. The progressive substitution of consumer products derived from fossil fuels is crucial to **decarbonise** our society, especially in short shelf-life packaging. In 2019, 19% of food & drink packaging plastic post-consumer waste was still sent to landfill and 39.5% was incinerated for energy recovery in Europe. The sustainable management of such plastic waste has become a very challenging problem for the recycling industry globally. Zero landfilling or incineration is needed to achieve the **circular economy** of plastics. The current alternatives of recycling however have important limitations – (i) mechanical recycling downgrades plastic properties, and (ii) chemical recycling for plastic depolymerisation requires high energy & long reaction times to be effective, consequently only 2% of plastic wastes are chemically recycled.

upPE-T will solve these challenges through an **innovative solution** for the upcycling PE and PET post-consumer packaging wastes by transforming them into a range of biodegradable & recyclable bioplastics (PHBVs) for food & drink packaging manufacturing. The upPE-T project, a Research and Innovation Action (RIA), has received a grant of 7.826.685 € from the European Commission for the [Topic ID: CE-BIOTEC-09-2020](#).

upPE-T will directly contribute to achieve the expected impacts of the topic by: (a) upcycling up to 60% of food & drink packaging plastic wastes (PE & PET) by 2030, (b) highly contribute to increase upgraded waste recycling facilities by introducing an innovative biocatalytic system in the recycling sector, (iii) establishing a viable roadmap to ensure 60% of food and drinks plastic packaging will be produced from renewable sources, (iv) increase awareness among European citizens of products and materials upcycling capacity, and (v) standardisation & certification facilitating future replicability and widest use and ensure market acceptance.



upPE-T is coordinated by CETEC, Spain and involves a total of 20 European partners from 10 countries including 7 SMEs, a Large Enterprise, 5 Universities, 4 RTOs, a Municipality, a Consumers Organisation (UNC), and a Standard Development Organisation (UNE). The project aims to achieve TRL 6 by the end of its lifetime and involves all the key actors in the supply chain. The project will bring additional positive impacts across Europe in terms of (a) CO<sub>2</sub> decreasing (85.6% compared to conventional plastic production), (b) 0.47Mton PHBV/year produced, (c) an estimated 424,000 tons of plastics not sent to landfilling, and (d) creation of 25 direct and 1500 indirect jobs.



## Contact

For questions related to the project, please contact:

Fuensanta Monzó, CETEC, Spain | Coordinator | [f.monzo@ctcalzado.org](mailto:f.monzo@ctcalzado.org)

Soumya Kanti Datta, Digiotouch, Estonia | Dissemination WP Lead | [soumya@digiotouch.com](mailto:soumya@digiotouch.com)

Angela Gaitani, Municipality of Neas Smyrni | Communications Manager | [agaitani@xtdconsulting.gr](mailto:agaitani@xtdconsulting.gr)

## Links:

Website: <https://uppet.eu>

Twitter: [https://twitter.com/t\\_uppe](https://twitter.com/t_uppe)

LinkedIn: <https://www.linkedin.com/in/uppe-t-project-700591201/>

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