

# DEEP PURPLE

LOW COST WASTEWATER TREATMENT IN  
ANAEROBIC PHOTOBIOREACTORS  
ENRICHED IN PURPLE PHOTOTROPHIC  
BACTERIA

Patricia Zamora

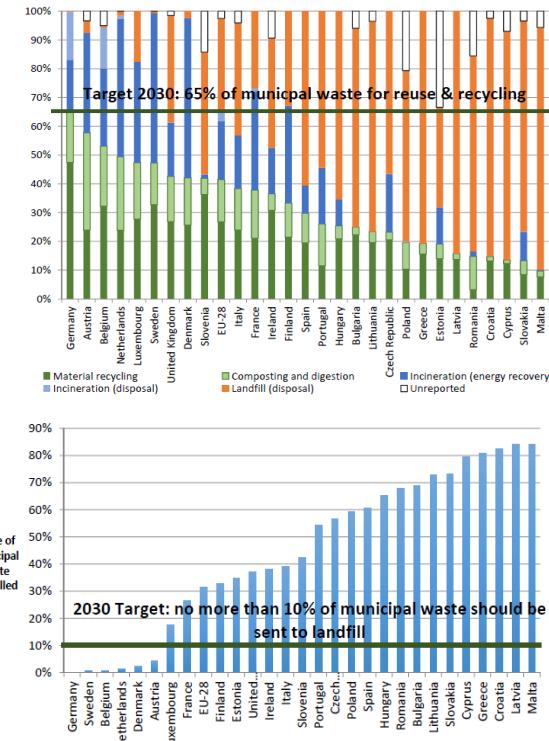
Departamento de Innovación y Tecnología

18 de Junio de 2021

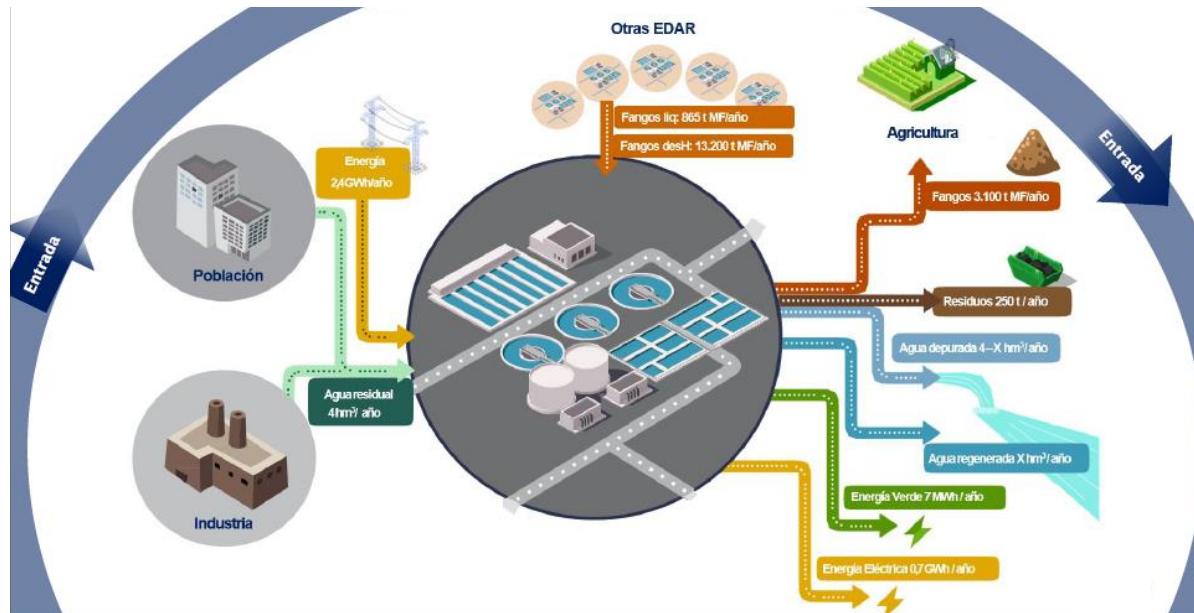


# Justificación del proyecto

## BIOECONOMÍA 2030



## DE BIORRESIDUO A RECURSO

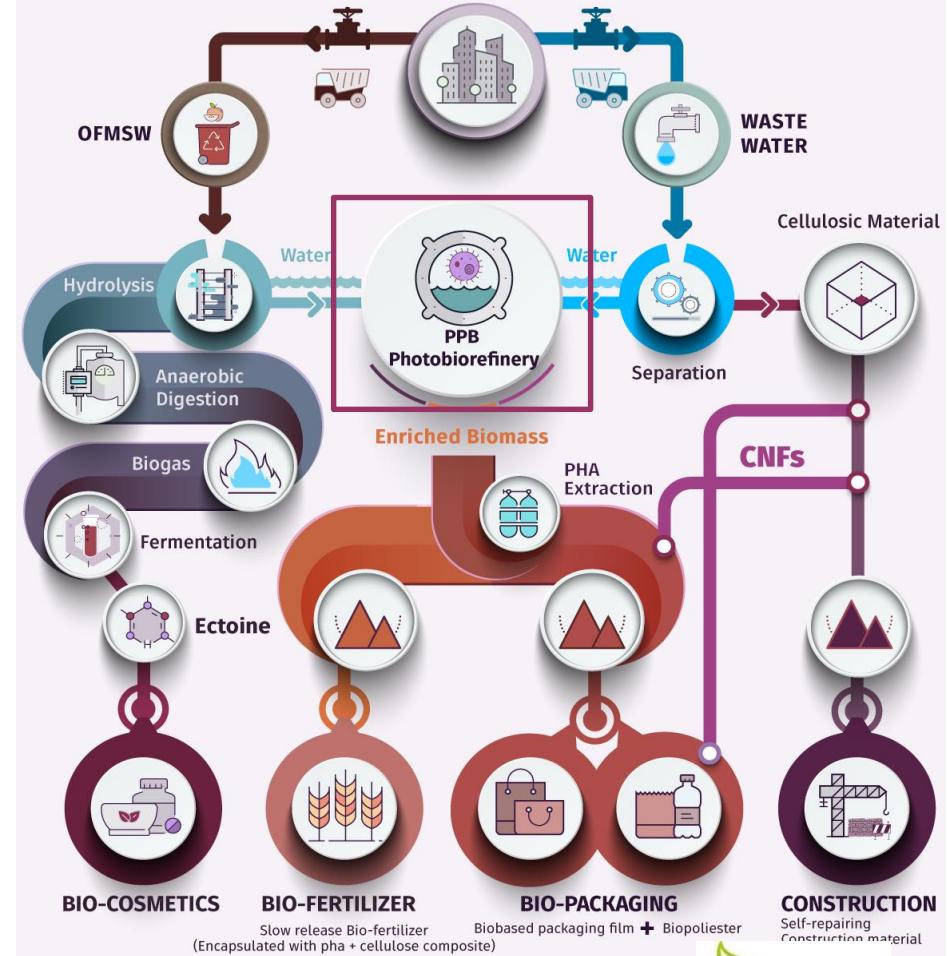


"This project has received funding from the Bio Based Industries Joint Undertaking (JU) under the European Union's Horizon 2020 research and innovation programme under grant agreement No 837998. The JU receives support from the European Union's Horizon 2020 research and innovation programme and the Bio Based Industries Consortium."

## Objetivo del proyecto

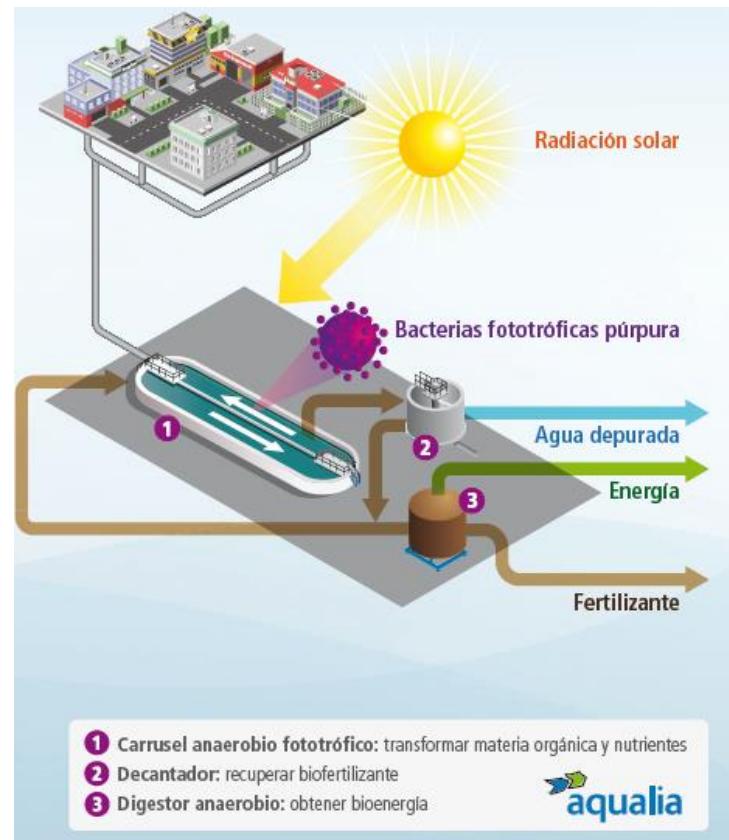
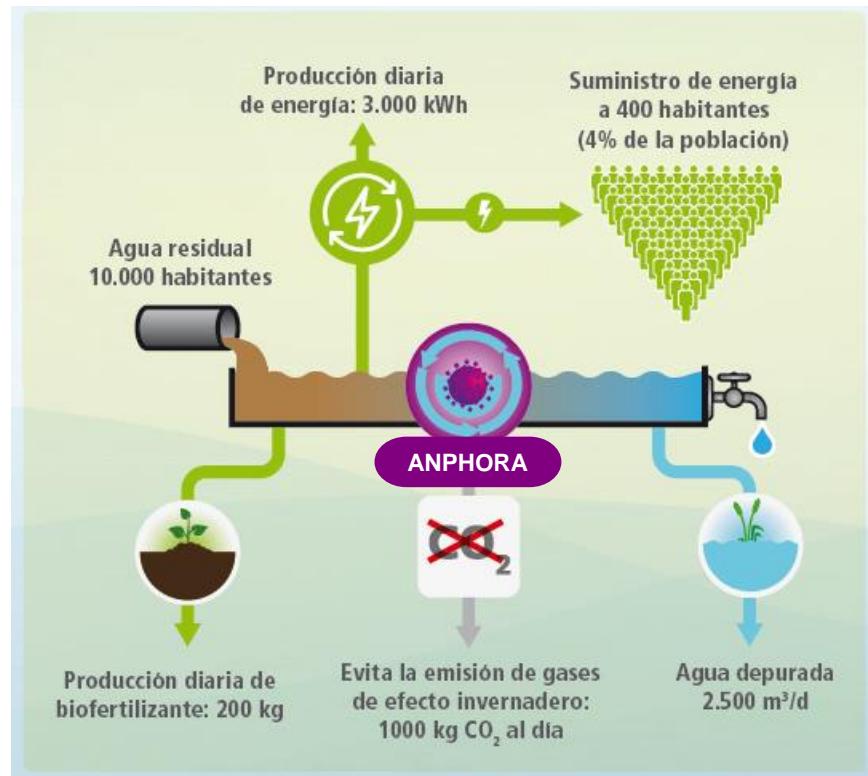
Desarrollo y **demostración** de **biorrefinería multiplataforma** para la recuperación y valorización de recursos de valor añadido a partir de **biorresiduos urbanos, aguas residuales y fangos de depuradora** para la obtención de bio-productos:

- **Fertilizantes**
- **Bioplásticos (biopolíster y embalaje)**
- **Cosméticos**
- **Material de construcción**



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# Objetivo de Aqualia en DEEP PURPLE



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El proyecto **DEEP PURPLE** se centra en la tecnología **ANPHORA** con el objetivo de

**Desarrollar un nuevo sistema de tratamiento de aguas residuales a bajo coste**



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## Planta pre-piloto

- 2 fotobiorreactores de 0,5 m<sup>3</sup> y 2 decantadores de 0,2 m<sup>3</sup>
- Capacidad de tratamiento: 3,5 m<sup>3</sup>/d



## Planta piloto

- 2 fotobiorreactores de 35 m<sup>3</sup>, 1 digestor anaerobio de 2,5 m<sup>3</sup>, 2 decantadores de 2,7 m<sup>3</sup>, 1 tanque homogeneizador de 2 m<sup>3</sup>
- Capacidad de tratamiento: 20 m<sup>3</sup>/d

## Los fotoreactores anaerobios PPB más grandes del mundo

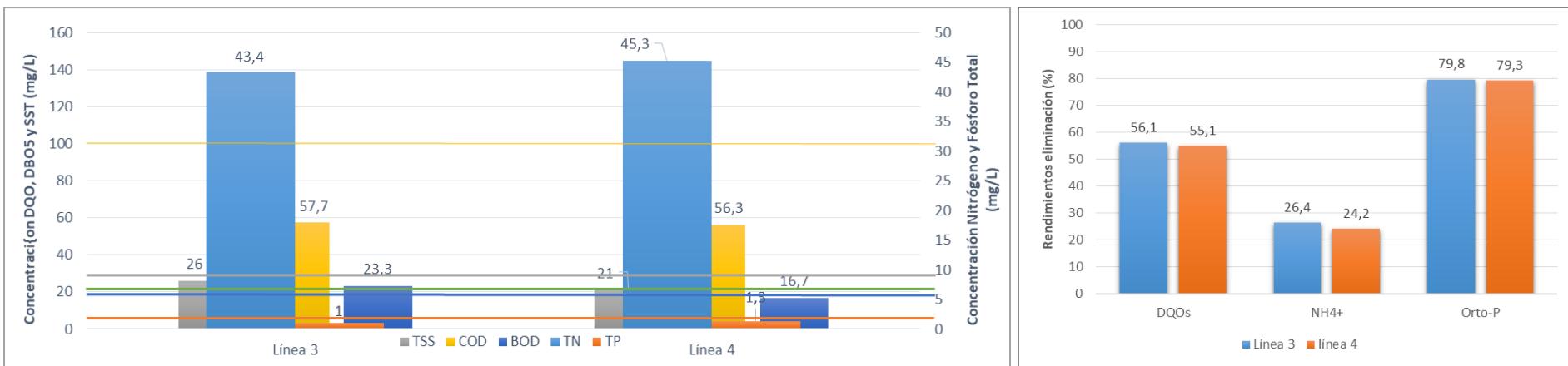


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## Resultados operación planta pre-piloto

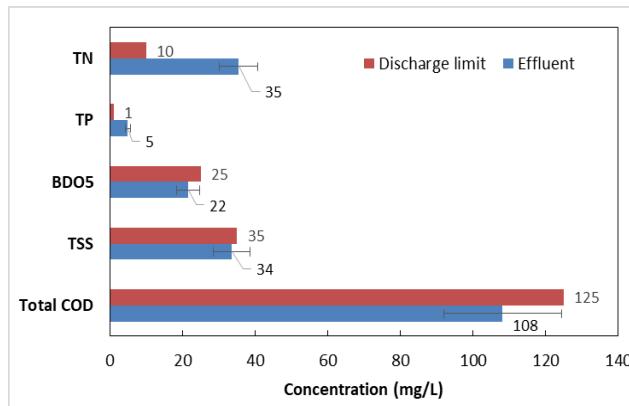
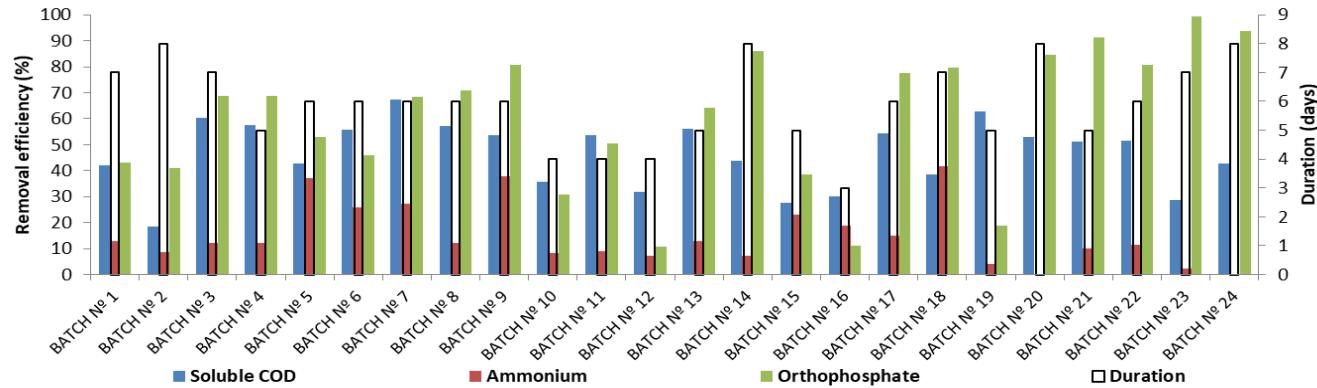
- Fotobioreactores alimentados con agua residual tras decantación primaria en semicontinuo.
- El efluente cumple con parámetros de vertido en DQO, DBO5, SST y P.**



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## Resultados operación planta piloto

- Fotobioreactores alimentados con agua residual tras decantación primaria en batch.



El efluente cumple con parámetros de vertido en DQO, TSS y DBO5.

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[www.deep-purple.eu](http://www.deep-purple.eu)

**Muchas gracias!**

Patricia Zamora

patricia.zamora@fcc.es

A detailed illustration of a rod-shaped bacterium with cilia at both ends, set against a dark purple background.

**Smallwat<sup>21</sup>v**  
Wastewater in Small Communities

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 Bio-based Industries  
Consortium

 BBI JU