

EXPECTED IMPACTS



Wastewaters valorization

Wastewaters from agri-food industry will be treated, re-used and valorized, as input for algae cultivation.



Microalgae biomass growth

The integrated phototrophic-heterotrophic system will allow costs reduction in microalgae cultivation.



High-added value products

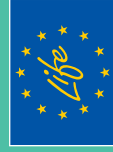
Products for nutraceutical applications and bio-polymers formulations will be extracted from algal biomass.



Use of different wastewaters

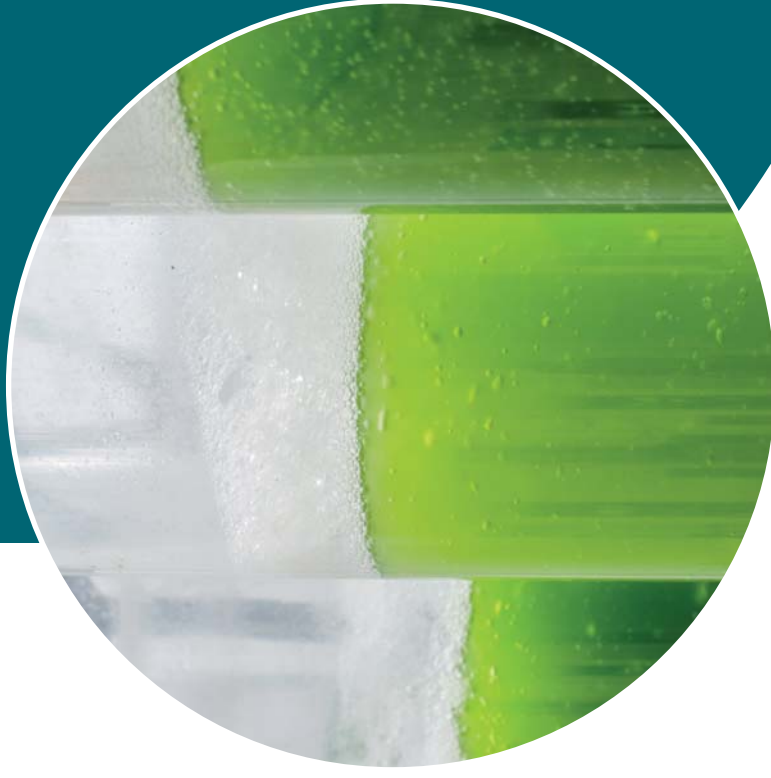
The replicability of the developed process using other wastewaters (i.e whey) will be also addressed during project development.

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and join us at www.mewlife.eu



The project "MicroalgaE biomass from phototrophic-heterotrophic cultivation using olive oil Wastewaters – MEWLIFE" is co-funded by the LIFE Programme of the European Union (LIFE17 ENV IT 000180).

PARTNERSHIP



MEWLIFE

MicroalgaE biomass
from phototrophic-heterotrophic
cultivation using olive
oil Wastewaters



MEWLIFE

Printed on the innovative and ecological recycled
Shiro Alga Paper obtained by the algal blooms of
fragile marine areas.

PROJECT OVERVIEW

MEWLIFE is a LIFE project aiming to demonstrate the environmental benefit and economic feasibility of an innovative approach to produce microalgal biomass in an integrated phototrophic-heterotrophic cultivation system. The proposed system uses pre-concentrated (in a membrane filtration plant) olive oil wastewaters as carbon source for growing algae, thus contributing to waste reuse and valorization.

- Basic Engineering Design of new prototype units
- Detailed & Executive Engineering Design of new prototype units



- Samples of dried algal biomass available for high-added value products extraction

- Sample of algal starch available

- Sample of starch-based biomaterial available

- Revamping of existing wastewaters upstream filtration unit

- New prototype units installation



Context

Wastewaters from olive oil production plants cannot be treated in conventional biological depuration plants due to the toxic effect of antioxidants on active sludge. As results, these wastewaters are discharged in the environment acting as anti-microbial and phytotoxic agents. The MEWLIFE project aims to overcome these hurdles with the validation on pilot scale of an integrated set of technologies for olive oil wastewaters remediation based on both physical and biological treatments.

- Life-Cycle assessment
- Final techno-economic assessment

