



# European Project Semester

## PROJECT OUTLINE

**Project dates:** March – June 2023

**Title:**

*Development of marine plastic wastes biodegradation solutions*

**Project activity areas:**

*Plastic up-cycling, circular economy, business project funding, material science, biochemistry, Research & Developments, Environment protection*

**Keywords:**

*Plastic marine waste, up-cycling, funding, circular economy, polymer science, material engineering, environment, protection, societal approach*

**Tutor's name and coordinates**

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**Project origin**

*Research, Innovation, Up-cycling, Circular Economy, Environment protection*

**Project technical background:**

This project aims to study solutions to compost / biodegrade plastic wastes and particularly marine plastic waste in order to get rid of oil sourced material and send it back to flora. This project is done in partnership with [www.ReSEAclons.org](http://www.ReSEAclons.org) located in southern France. This association has organised a plastic marine waste collect channel in partnership with fisheries, local communities, governmental organisations, citizens.



Thus, the project shall investigate several aspects of the problem:

1. Project funding: This project implies the seek for funds (governmental, regional, other). This component of the project will consist in analysing all the funding possibilities available, select the best option and implement it. It also implies to be able to defend the project in front of funders or public institutions. A great experience for those who have in mind a future business development.
2. Material science and biochemistry: studies of solutions to physically predegraded plastic materials to enable composting process.
3. Circular economy: this project is deeply anchored in values such as respect. Respect of the environment but also respect for the people. We have to think the future development of this project with respect with local economies by restoring the scale of values through the different actors of the cycle. As a consequence, a whole part of the project shall be dedicated to integrating all the stakeholders of this newborn economical ecosystem. Our goal is to heal the society as we want to heal the marine life.

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4. Up-cycling solution innovation: the up-cycling project is only the first step of the project. We would like to develop other innovative or even revolutionary approaches of up-cycling plastics.

**Studied topics:**

- Innovative project funding
- Polymer science applied to marine plastic waste up-cycled characterisation
- Circular economy study and development
- Product development works in order to open up the application field of the up-cycled material