

## Microplastics - Ecotoxicological effects and mechanisms of action in *Cyprinus carpio* fish (MicroPlasFish)

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The **project goal** is to evaluate the effects generated by microplastics (MPs) on aquatic organisms. Laboratory investigations of the interactions of fish and MPs are less common than those on bivalves, for example, and few knowledges on toxicity levels of MPs in freshwater fish are reported. A variety of experimental designs will be used to evaluate the impacts of MPs on freshwater fish. There is planned to study the effects of MPs in short and long time laboratory experiments using the native European carp and evaluate the hazardous impacts on survival, metabolism, reproduction and behavior.

**WP1** Identification and characterization screening of MPs

**WP2** Assessment of ecotoxicological effects of MPs on fish

**WP3** Mechanisms of action of MPs in fish organs

### DELIVERABLES

- Study on analytical / screening methods implemented in the laboratory for MPs identification and characterization
- Study concerning the ecotoxicity of MPs
- Study on impact of MPs on the antioxidant enzymatic system
- Study on biomarkers expression at translational level induced by MPs
- Study concerning histopathological changes in fish organs exposed to MPs
- ISI papers (Q1 / Q2)

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