

# Plastic flux for innovation and business opportunities in Flanders (PLUXIN)

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## Rationale

Plastic should be **removed at the source** prior to ending up in the marine environment.

**Where, when and how should** action be taken?

Critical **knowledge gap** about the whereabouts of plastics and about their flux towards the marine environment.

**Legislation** is being developed.

Basic data on concentrations and fluxes will create opportunities to develop **new economic activities**.

The PLUXIN project kicked off in September 2020 and is a **three year** EUR 1.8 million basic research project funded by VLAIO through the Blue Cluster in Flanders with **two main objectives**.

## Objectives

**Scientific objective** - Where is the plastic and how to detect?

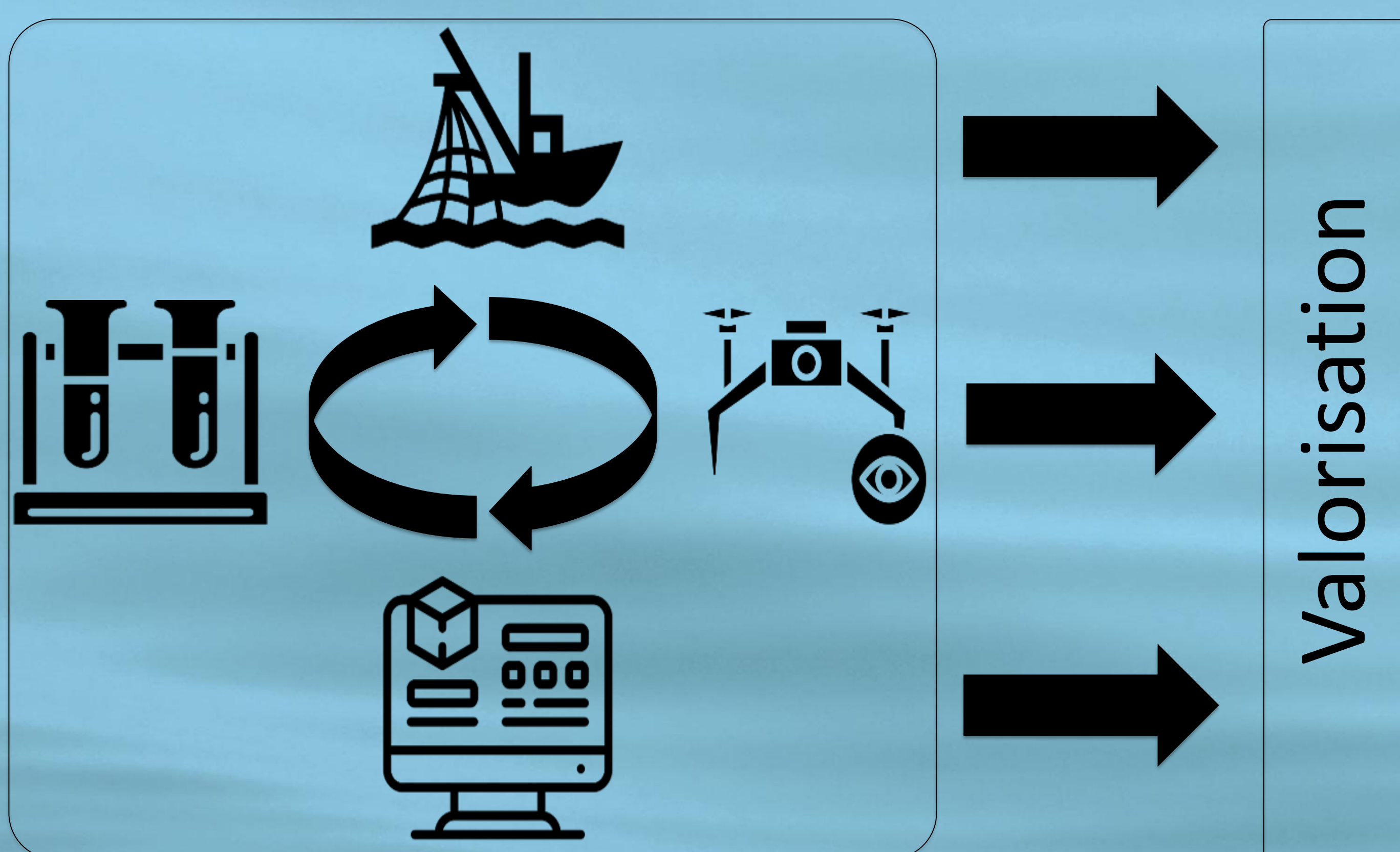
- 3D insight in whereabouts of micro- and macroplastic
- Automated detection of plastic via remote sensing

**Valorisation objective** - Identify, map, and initiate pathways for valorisation. Stimulate innovation and economic development in Flanders.



## Way forward

**Laboratory experiments, remote sensing** and in-situ **observations** in combination with numerical **models** for a better understanding of **sources, circulation patterns** and **fate of plastic** in the aquatic environment.



## Expected output

**Protocol** for sampling, detecting and identifying micro- and macroplastic aligned with EU initiatives.

**Known quantities of plastic** present in rivers and harbours.

**Conceptual model** to quantify plastic flux.

**Quantified flux** of plastic to the ocean.

Unraveled **accumulation zones** of plastic.

Quantified **travel speed** of plastic through the water column.

**Hyperspectral information** for automated detection.

Automated **detection technology** and method.

**See you at MICRO2022 with our results**



Vlaams Instituut voor de Zee vzw  
Flanders Marine Institute

**KU LEUVEN**



Ecosystem Management  
Research Group (Ecobe)  
University of Antwerp



Environmental Toxicology



**vito**  
remote sensing



Samen sterk voor groei