

# INSPIRE - Plastic Free Rivers Through Prevention Measures: Zero-Waste Supply and Recovery Chain Innovations

Recy & DepoTech 2024

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# INSPIRE

Innovative Solutions for Plastic Free European Rivers



## Prevention of Plastic Pollution by Supply Chain Design

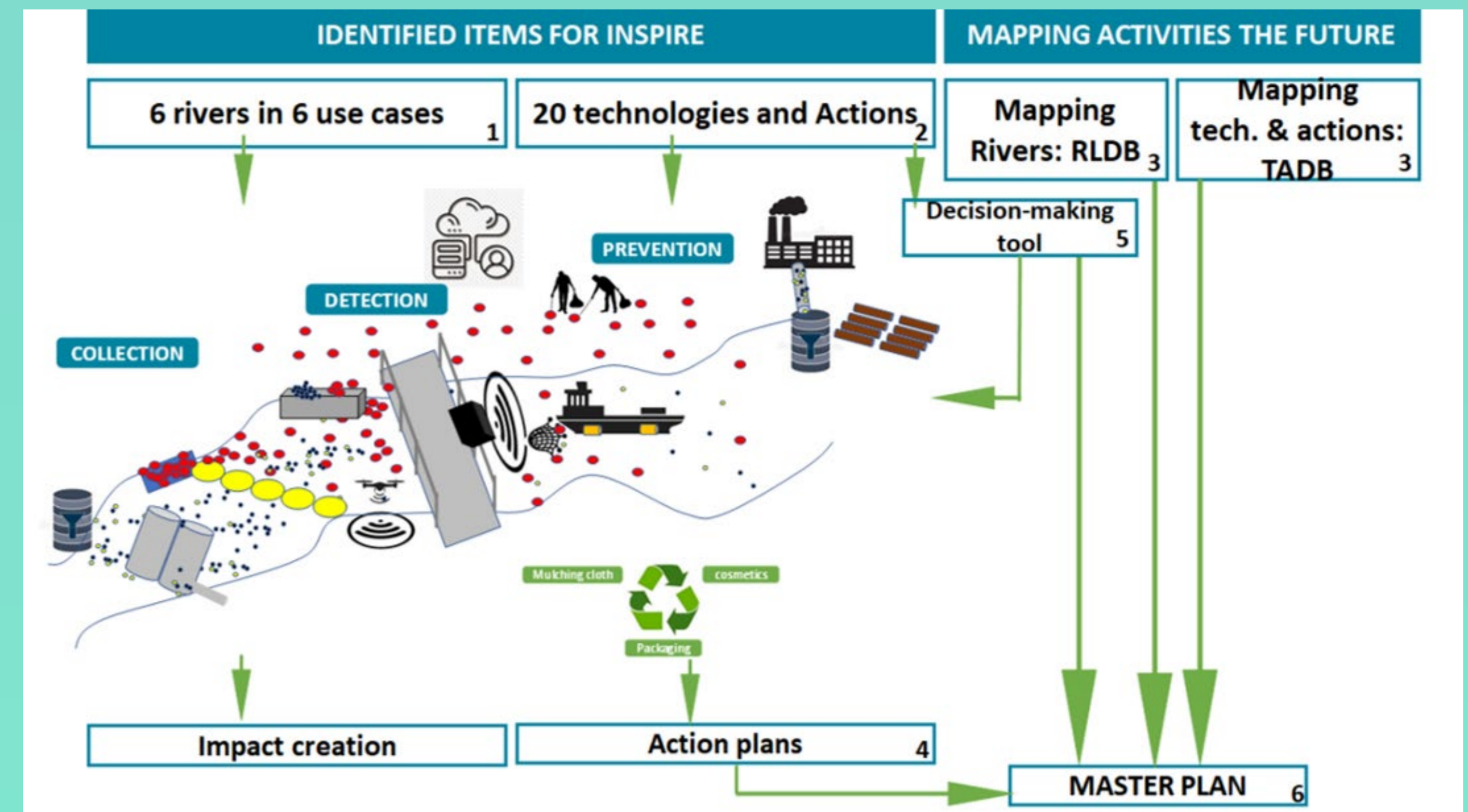
### Project Outline

The **INSPIRE** project is funded through the HORIZON Europe programme and is a pioneering initiative aiming at addressing the pressing global issue of plastic pollution through a multifaceted approach.

### Use cases at rivers

A holistic strategy will tackle the plastic pollution in and around European rivers and, consequently reduce the plastic pollution in the oceans, by bringing together a set of 20 technologies and actions for:

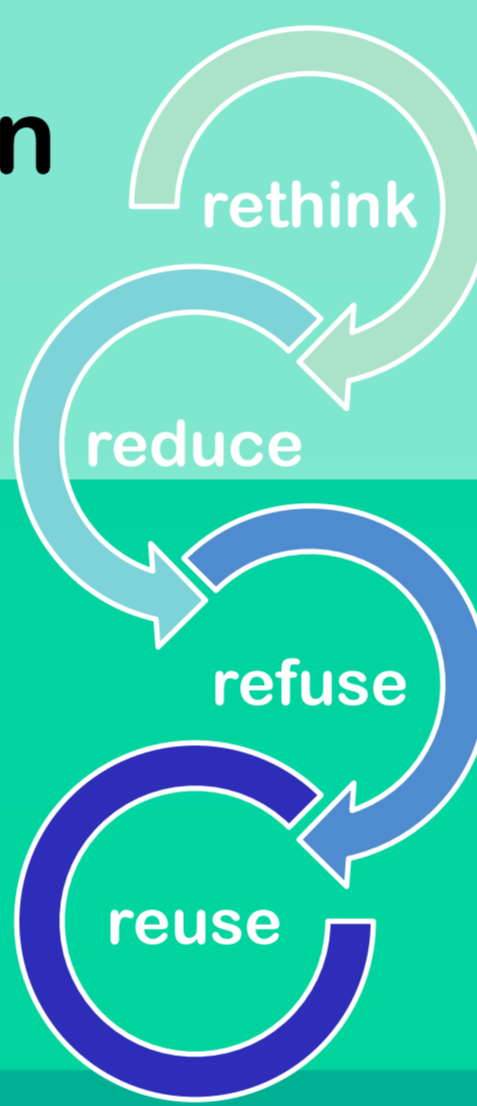
- Detection** of litter in and around European rivers.
- Collection**
- Prevention**



Detection and collection of macro plastic will be conducted at riverbanks, while methods for collection of both micro and macro plastics will be implemented in the river.

## Together for Plastic Free Rivers and Ocean

## Zero-waste supply chain innovations



### Bio-based & bio-degradable products



bio-based & bio-degradable PHA from waste gas:

- carbon capture
- preserving virgin resources

formulation & testing of bio-degradable products

- mulching films
- greenhouse foil
- paper coating



### Extend the shelf-life of fresh produce

bio-degradable nanocoating for fruit & vegetables

- chitosan from seafood waste
- decreasing food packaging



### Introduce zero-waste cosmetics to the market

all natural ingredients:

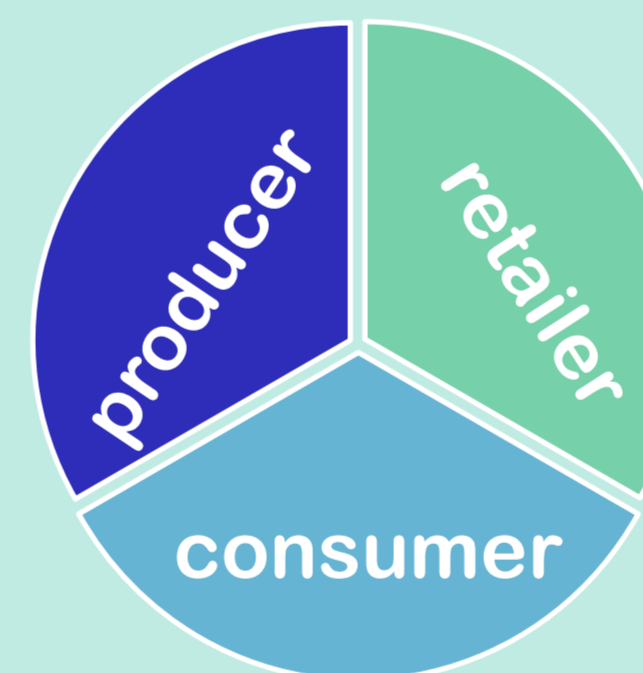
- hair shampoo & body cleanser
- bio-degradable packaging

123 zero

### Establish zero-waste supply & recovery chains

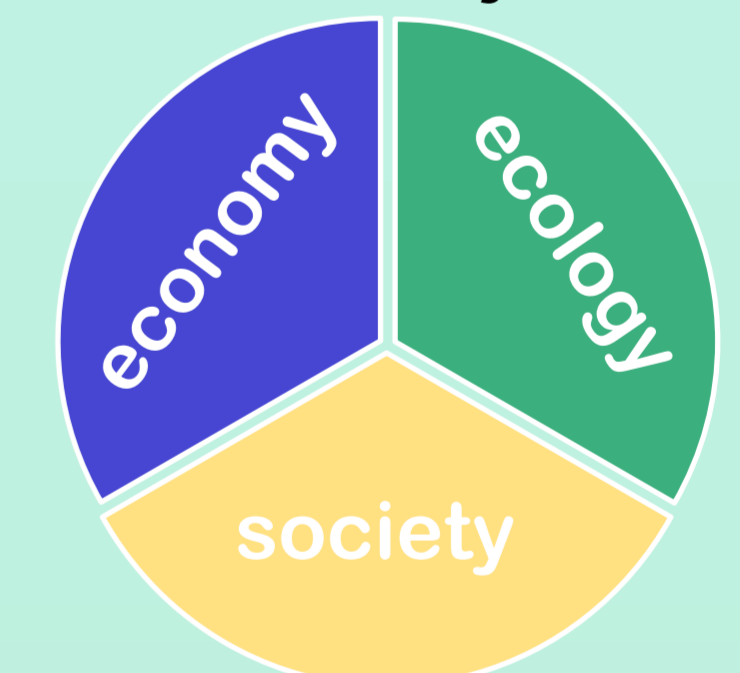
#### 1. Mapping zero-waste supply chain innovations:

- Best Practices



#### 3. Evaluating efficiency and LCA:

- feasibility & benefits



#### 2. Develop >25 zero-waste application cases:

- with & for different target groups & supply chains
- solution testing & implementation

#### 4. Creating fact sheets for replication:



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