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



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Project Outline

| IDENTIFIED ITEMS FOR INSPIRE | | MAPPING ACTIVITIES THE FUTURE | |
|------------------------------|-----------------------------|-------------------------------|----------------------------|
| 6 rivers in 6 use cases | 20 technologies and Actions | Mapping | Mapping tech & actions: |

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

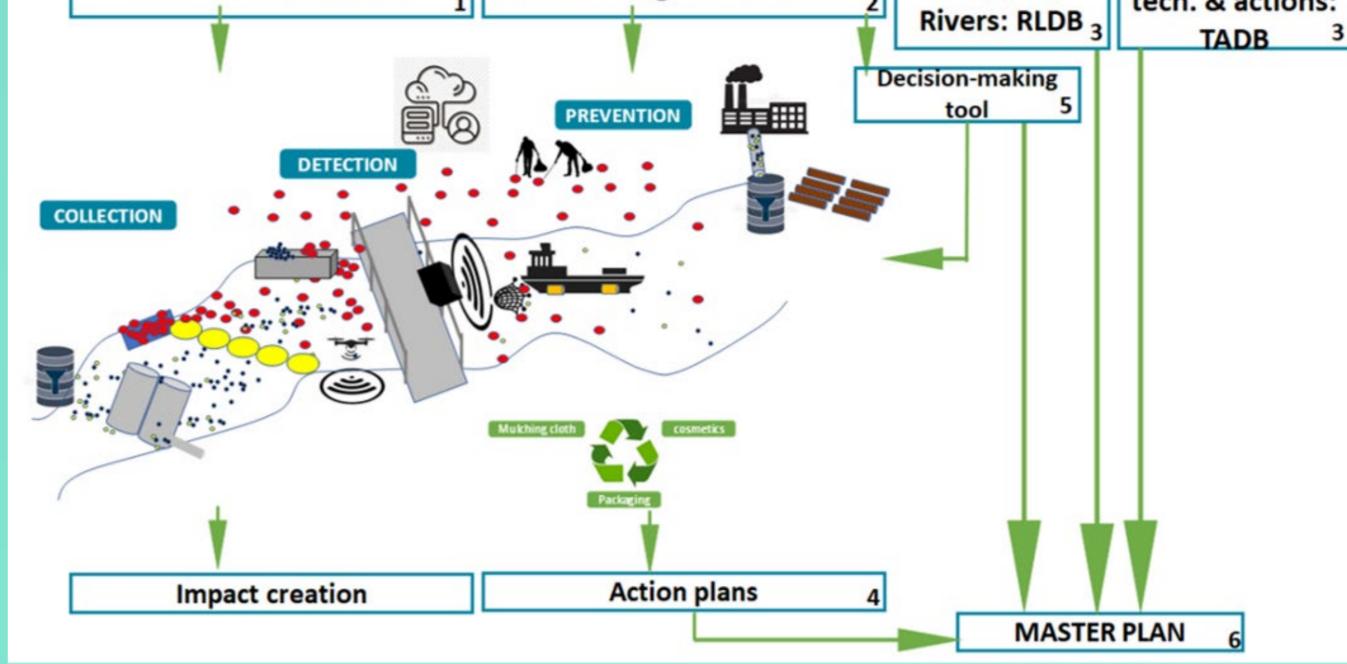
Collection

of litter in and around European rivers.

Together for Plastic Free Rivers and Ocean







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.

Zero-waste supply chain innovations

Bio-based & biodegradable products

bio-based & bio-

degradable PHA

from waste gas:

CIRC \mathbf{O}

carbon capture preserving virgin resources

formulation & testing of bio-degradable products

Mulching films greenhouse foil

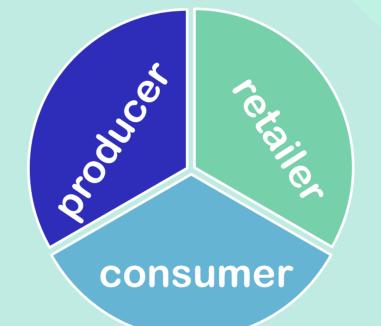
Extend the shelf-life of fresh produce bio-degradable nanocoating for fruit & vegetables

chitosan from seafood waste KTH VETENSKAP OCH KONST Strain and a strain and a strain a st decreasing food packaging

Introduce zero-waste cosmetics to the market all natural ingredients: hair shampoo & body cleanser 123 zerø

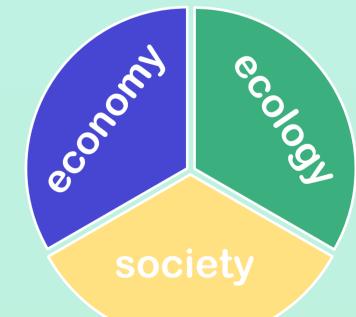
Establish zero-waste supply & recovery chains

- 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 &

4. Creating fact sheets for replication:

| | | _ |
|---|--|---|
| ERO-WASTE | | |
| CHAIN SOLL | TIONS | |
| | En la constante | |
| FIR | IN CALING RESTAURANTS | |
| SINGLE USE | PLASTICS | |
| | of concern when it comes to single-use ainers, cling film - these are just some of | |
| ne products that are indispensable to the nade of plastic, whose environmental con | nese businesses, and which are very often nsequences can no longer be ignored. | |
| HY GET RID OF SINGLE-USE PLASTICS? | PLASTIC CONSUMPTION HAS INCREASED | |
| 100% of worldwide plastic production is plastic plastic total difference ingle-use plastic total difference ingle-use plastic total difference ingle-use | BY 30% IN THE LAST 10 YEARS | |
| ngle-use plastics are everywhere, but only % are recycled. The majority ends up in | TRANSITION STATUS | |
| addilie or oceans, harming ecosystems, ildlife, and human health. Incinerating lastic emits greenhouse gases and may ontain endocrine disruptors. Plastic takes | Legal framework in the EU Plastic pollution is a global problem and is mentioned in 7 of the UN 17 Sustainable Development Goals (SDGs). In March 2024, the | |

| Single use product | | Impact / benefits. | | Implementation | | |
|---|---|---|--|--|--|--|
| Coffee cup to | Bring your own | Reducing single use packaging. Awareness raising of costumer | | Informing costumers on single use plastics. Rewarding costumers with lower price for coffee | | |
| Coffee cup to go | Returnable cups | Reducing single use packaging. Awareness raising of costumer | | Informing costumers on single use plastics. Customers pay for their cup then got their money back when giving back the cup | | |
| Cling film | Biobased and blodegradable paper coating | Does not change habits but is biodegradable and biobased | | Supplementing common paper packaging with plastic coating. Still has to be developed for the food industry. Developing process in INSPIRE | | |
| Sugar sache* | Supply sugar pots to share with customers | Customers can chose the amount of sugar they need which reduces food wate. It does not use plastic Customers can chose the amount of sauce they need which reduces food wate. It does not use plastic | | Informing costumers on single use plastics. Tell people to put the sugar in the drink before leaving the café/restaurant | | |
| Condiment of packe | Supply condiment pots to share with customers | | | Informing costumers on single use plastics. Tell people to put the sauce in the food before leaving the café/restaurant | | |
| There are pl use plastics can be divid | AT MANY LEVEL enty of ways to g in cafés and re ed into the followi | et rid of single- istaurants. They ng categories: | | CH EUROPEAN PRODUCED 188.7 KG DF Packaging Waste in 2021. | | |
| Biobased & Biodegradable. One of the main problems with plastics is their difficulty in degrading. Biosourced plastics do exist, but they are more or less biodegradable. | | | BEST PRACTICES Providers of zero waste supply chain soutions • The Cup Collective : focused on reducing | | | |
| | Reuse. Reuse can come from either the retailer or the customer. | | | the environmental impact of paper cups by creating a transparent, open-loop | | |
| retailer or the Customer. • Zero Packaging, in cafés and restaurants, over-packaging can be a problem. Reducing, eliminating or rethinking packagina can offer a solution. | | | recycling system that integrates paper cups into the circular economy, at a Europen level. https://thecupcollective.eu/ | | | |
| puokugi | - g can chor a son | | Vytal | provides reusable containers for | | |



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