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InPlasTwin

# Increasing expertise in micro- and nanoplastics analysis through twinning action

## D9.2 Synergetic links and Ecosystem building report I

Horizon Europe Grant agreement ID: 101160289

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| **Work Package Title** | WP9 - Dissemination, exploitation and communication (Phase 1) |
| **Linked task title** | Plan & enhance synergetic links with relevant R&I initiatives |
| **Partner responsible** | Foodscale Hub |
| **Actual Delivery Date** | 31.03.2026. |
| **Dissemination Level** | PUB |
| **Abstract:** | This deliverable presents the initial Synergetic Links and Ecosystem Building Report of the InPlasTwin project, outlining the strategic approach for establishing and strengthening collaboration with relevant projects, initiatives, platforms, and stakeholder networks at European and international levels. It provides a structured mapping and classification of complementary research and innovation activities in the fields of micro- and nanoplastics, environmental monitoring, and sustainable agri-food systems.<br>The document defines criteria for identifying and engaging with relevant actors, and introduces an action plan for developing synergies through joint activities such as workshops, webinars, scientific exchanges, and dissemination events. It also describes the ecosystem-building approach of the project, highlighting the multi-actor engagement of academia, industry, policymakers, and civil society.<br>As the first report of its kind, this deliverable establishes the foundation for a dynamic and collaborative innovation ecosystem, supporting knowledge exchange, avoiding duplication of efforts, and maximizing the scientific, societal, and policy impact of the InPlasTwin project throughout its implementation and beyond. |

**Document Revision History**

| Date | Version | Author/Contributor/ Reviewer | Summary of main changes |
|---|---|---|---|
| 20.02.2026. | V1 | Gordana Racić | ToC created |
| 10.03.2026. | V2 | FSH team | 1st draft |
| 26.03.2026. | V3 | Janja Vidmar | 2nd draft |
| 30.03.2026. | V4 | Gordana Racić, Janja Vidmar | Final version |

| Participant Number | Participant organisation name | Short name | Country |
|---|---|---|---|
| 1. | INSTITUT JOZEF STEFAN | JSI | Slovenia |
| 2. | GEOPONIKO PANEPISTIMION ATHINON | AUA | Greece |
| 3. | UDRUZENJE ZA PREDUZETNISTVO I INOVACIJE FOODSCALE HUB | FSH | Serbia |
| 4. | VLAAMSE INSTELLING VOOR TECHNOLOGISCH ONDERZOEK N.V. | VITO | Belgium |
| 5. | HAVFORSKNINGSINSTITUTTET | IMR | Norway |
| 6. | DANMARKS TEKNISKE UNIVERSITET | DTU | Denmark |

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Title: Increasing expertise in micro- and nanoplastics analysis through twinning action

Type of action: HORIZON Coordination and Supporting Action

Topic:HORIZON-WIDERA-2023-ACCESS-02-01

Start date of project: 1 October 2024 • Duration: 36 months

## Table of Contents

## List of Figures

**List of tables**



| List of Abbreviations and Acronyms | |
|---|---|
| Jožef Stefan Institute | JSI |
| Agricultural University of Athens | AUA |
| Micro- and nanoplastics | MNPs |
| Flemish Institute for Technological Research and | VITO |
| Institute of Marine Research | IMR |
| Technical University of Denmark | DTU |
| Foodscale Hub | FSH |

# 1. Introduction

## 1.1. Overview

The InPlasTwin project aims to enhance the research and innovation capabilities of the Jožef Stefan Institute (JSI) and the Agricultural University of Athens (AUA) in micro- and nanoplastics (MNPs) analysis by collaborating with leading European institutions like Flemish Institute for Technological Research (VITO), Institute of Marine Research (IMR), and Technical University of Denmark (DTU). InPlasTwin will provide access to advanced equipment, training, and expertise in MNP detection, extraction, quantification, identification, characterization, and plastic additive analysis so that its objective can be achieved. The partnership with Foodscale Hub (FSH) will expand the reach of JSI and AUA's research, raise awareness about plastic pollution in the agri-food sector, and promote diversity and ethical practices. Through twinning activities, including researcher exchanges, training workshops, and scientific meetings, InPlasTwin aims to transfer knowledge and skills, foster collaboration, and disseminate research findings. By advancing MNP research and promoting responsible research practices, InPlasTwin will contribute to improved environmental sustainability and food safety.

## 1.2. Document scope

This document presents the first Synergetic Links and Ecosystem Building Report developed within the framework of the InPlasTwin project. The report aims to identify, analyse, and establish strategic connections with relevant European and international projects, initiatives, platforms, and stakeholder networks that address related themes and research domains.

The main objective of this deliverable is to support the development of a collaborative ecosystem around InPlasTwin by mapping existing initiatives, identifying opportunities for cooperation, and defining concrete actions for establishing synergetic links with complementary projects and stakeholders. Through these activities, the report contributes to strengthening knowledge exchange, avoiding duplication of efforts, and maximizing the impact of the project.

The document provides an overview of relevant projects and initiatives, including sister projects funded under similar calls, other EU-funded projects, research and innovation initiatives, and relevant thematic platforms. It further proposes an action plan for collaboration, outlining criteria for selecting potential partners, mechanisms for establishing contact, and possible forms of cooperation such as joint events, workshops, training activities, and dissemination initiatives.

In addition, the report introduces the ecosystem building approach adopted in InPlasTwin, highlighting how collaboration with academia, industry, policy actors, civil society, and international partners contributes to the creation of a multi-actor and cross-sectoral innovation ecosystem. The document also describes mechanisms for monitoring and reporting synergy activities and assesses the expected outcomes and impacts.

This deliverable focuses on the initial mapping of relevant initiatives and the establishment of collaboration pathways, providing a foundation for further ecosystem development activities and updated reporting in subsequent project phases.

## 1.3. Document structure

This document is organized into several sections that present the approach, methodology, and planned activities for establishing synergetic links and strengthening the ecosystem around the InPlasTwin project.

**Section 1** provides an overview of the document, including the executive summary, the scope of the report, and the overall structure of the deliverable.

**Section 2** introduces the context of the report by presenting the project aims and objectives, the purpose of the Synergetic Links and Ecosystem Building Report, and the definition and classification of relevant projects and initiatives that may contribute to the development of collaboration and knowledge exchange.

**Section 3** presents the inventory and mapping of relevant projects, initiatives, and platforms. It includes a pre-scan of potential collaborators, identification of sister projects and other relevant initiatives, and an assessment of their relevance and opportunities for cooperation.

**Section 4** outlines the action plan for establishing and strengthening collaboration with identified projects and initiatives. It describes the criteria for selecting relevant partners, the approach for initiating contact, the possible forms of collaboration, and the planning of joint activities such as workshops, webinars, events, and other dissemination and networking activities.

**Section 5** describes the ecosystem building activities within the InPlasTwin project. It introduces the concept of ecosystem building, highlights linkages with other work packages and tasks, and presents the multi-actor and cross-sectoral engagement approach involving academia, industry, policy makers, civil society, and international partners.

**Section 6** presents the monitoring and reporting framework for synergy and ecosystem building activities, including mechanisms for tracking progress and assessing the effectiveness of collaboration efforts.

**Section 7** summarizes the expected and achieved results, outcomes, and impacts of the synergy and ecosystem building activities.

**Section 8** outlines the next steps and planned future activities aimed at further strengthening collaboration and expanding the InPlasTwin innovation ecosystem.

# 2. Project Objectives and Ecosystem Framework

## 2.1. Project aims and objectives

InPlastTwin is a three-year project that began in October 2024 and is set to conclude in September 2027, with the participation of 6 partners from 6 different countries. The InPlasTwin project's main aim is to enhance the research capabilities of the JSI and AUA in analyzing MNPs in the environment and food through networking, knowledge sharing, and research activities with leading research institutions in Europe.

Strategic partnerships and collaborations will foster knowledge sharing, hands-on training, and access to advanced analytical techniques. This will empower partners from widening countries to better understand the generation of MNPs from agricultural plastics and their impact on crop cultivation and quality. Additionally, the project will foster collaboration with the FSH to increase the research profile, social impact, and public awareness of plastic pollution in the agri-food sector. Finally, the project will transfer management and administrative skills to the JSI, AUA, and FSH institutions, all from widening countries, and promote diversity, inclusion, and ethics practices within the partner institutions (Figure 1).

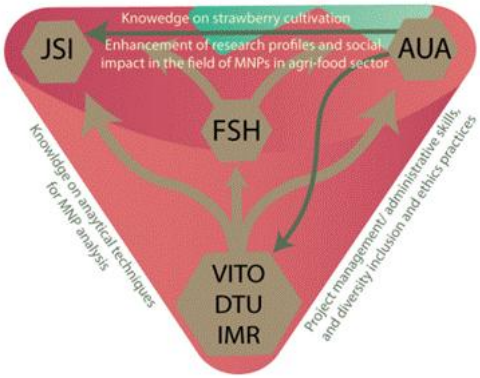



*Figure 1 Flowchart of the knowledge transfer pathways in the InPlasTwin project*

InPlasTwin seeks to achieve **4 interrelated objectives**:

SO1: Enhancing long-term and sustainable networking activities of the JSI and AUA with project partner institutions (FSH, VITO, DTU, IMR) through knowledge transfer and exchange of best practices in the investigation of MNPs in the environment and food

SO2: Strengthening the scientific and innovation capacity of JSI and AUA in investigating MNPs in the environment and food

SO3: Strengthening the research profile of the JSI and AUA and their staff, including increasing management and administrative skills of the JSI and diversity inclusion, and ethic practices at JSI, AUA, and FSH

SO4: Enlarging the social impact of research and raising awareness of different target groups on the environmental and food impacts of MNPs

## 2.2. Purpose of Synergetic Links and Ecosystem Building Report

The purpose of the Synergetic Links and Ecosystem Building Report is to support the strategic development of collaboration and knowledge exchange within and beyond the InPlasTwin project by identifying, establishing, and strengthening connections with relevant projects, initiatives, platforms, and stakeholder networks at the European and international levels.

This report provides a structured approach for identifying opportunities for synergies with complementary research, innovation, and policy initiatives addressing related topics in the field of agricultural sustainability and food safety. By mapping and analysing relevant projects and initiatives, the report aims to facilitate cooperation that enhances knowledge sharing, promotes joint activities, and maximizes the overall impact of the project.

Another important objective of this report is to support the creation of a dynamic and collaborative ecosystem around the InPlasTwin project. Through engagement with a wide range of stakeholders, including research institutions, industry actors, policymakers, civil society organizations, and international partners, the project seeks to foster cross-sectoral dialogue, promote innovation, and encourage the exchange of expertise and best practices.

The report also outlines a framework for establishing and managing collaborations, including criteria for selecting relevant partners, approaches for initiating contact, and potential forms of cooperation such as joint workshops, webinars, conferences, training activities, and staff exchanges. These activities contribute to strengthening the visibility of the project, facilitating mutual learning, and creating opportunities for long-term collaboration.

Furthermore, the report establishes mechanisms for monitoring and tracking synergy-building and ecosystem development activities, ensuring that collaboration efforts are systematically documented and assessed. The insights and outcomes presented in this report will serve as a foundation for future ecosystem building activities and subsequent reporting within the project lifecycle.

## 2.3. Definition and classification of relevant projects and initiatives

In order to effectively establish synergetic links and strengthen the innovation ecosystem around the InPlasTwin project, it is essential to clearly define and classify the types of projects, initiatives, and platforms that are considered relevant for collaboration. Relevant projects and initiatives are those whose objectives, thematic focus, research activities, or stakeholder networks align with or complement the goals of the InPlasTwin project.

Within this report, relevant projects and initiatives are identified based on their contribution to areas such as microplastic detection, monitoring methods and analytical protocols, soil and water protection, agri-food safety, and innovative solutions for preventing and mitigating plastic pollution. These projects and initiatives may operate at different levels, including European Union programmes, international collaborations, national initiatives, research networks, industrial platforms, and policy-oriented actions.

For the purpose of systematic mapping and analysis, relevant initiatives are classified into several categories:

**Sister projects** refer to projects funded under the same or closely related European funding calls as InPlasTwin, particularly within the Horizon Europe framework. These projects share similar objectives, thematic priorities, or research areas, and therefore represent key opportunities for direct collaboration, joint dissemination activities, and knowledge exchange.

**Other relevant projects** include EU-funded, national, or international research and innovation projects that address complementary topics related to plastics sustainability, environmental technologies, circular economy solutions, or pollution mitigation. Although they may not originate from the same funding call, their results, methodologies, and networks can contribute valuable knowledge and collaboration opportunities.

**Relevant initiatives and platforms** encompass broader programmes, partnerships, research alliances, policy initiatives, and networks that promote innovation, sustainability, environmental protection, and circular economy practices. These initiatives often play an important role in shaping research agendas, supporting stakeholder engagement, and facilitating knowledge transfer between research, industry, and policy communities.

This classification enables a structured approach to identifying potential collaborators and ensures that synergy-building activities target the most relevant actors within the broader research and innovation landscape. By systematically mapping these categories, the InPlasTwin project aims to build a strong, interconnected ecosystem that promotes cooperation, enhances project visibility, and amplifies the impact of project outcomes.

# 3. Inventory of relevant projects and initiatives

## 3.1. Pre-scan of relevant projects and initiatives

One of the initial tasks under this work package was the pre-screening and development of a comprehensive inventory of relevant projects, initiatives, and platforms at European, international, national, and regional levels. This activity began during the proposal preparation phase, when key projects and networks were initially identified and mapped based on their thematic relevance, policy alignment, and potential for synergy with InPlasTwin's objectives. The preliminary list, presented in the Grant Agreement, served as a starting point for more detailed screening following project initiation. The pre-screening process involved a desk-based review of Horizon 2020 and Horizon Europe project databases, major EU networks, and strategic initiatives referenced by partners, as well as scanning national and international programmes aligned with food safety and Environmental protection/preservation. Following the project's launch, this pre-screening was refined and expanded through a structured desk-based review, which involved cross-referencing relevant databases (e.g., CORDIS), internal consortium expertise, and existing internal thematic networks. Each consortium partner was invited to contribute suggestions based on their institutional links and national knowledge. The resulting list was collated, categorized by thematic relevance, and stored in a shared Next Cloud repository, accessible to all project partners (Figure 2.)

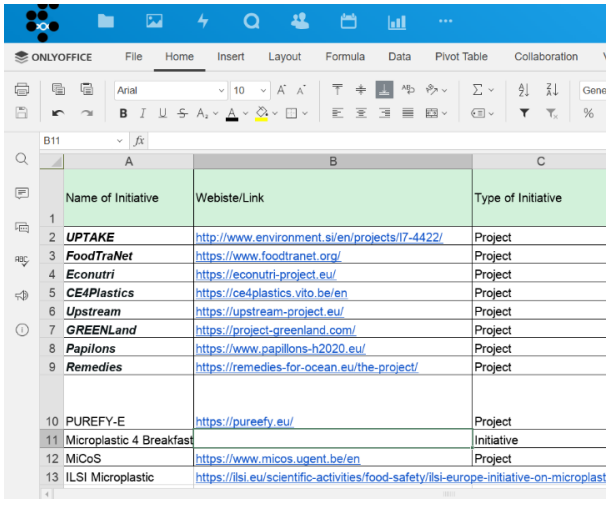
The inventory functions as a living resource and will be regularly updated throughout the project. A dedicated database has been established and is maintained by FSH, with co-development responsibilities shared across the InPlasTwin consortium. This tool is critical for tracking engagement opportunities, facilitating knowledge exchange, coordinating dissemination activities, and ensuring

InPlasTwin remains responsive to the evolving research, innovation, and policy environment related to sustainable livestock systems. The table below showcases some of the closely aligned projects determined in the Grant Agreement of the InPlasTwin project.

## 3.2. Mapping of relevant projects and initiatives

To ensure that the flagship initiatives, projects, and policymakers (PIPs) included in the inventory are directly relevant to the objectives and scope of InPlasTwin, the mapping process was carried out using a dual approach. First, a desk-based review was conducted by the WP9 leads (FSH), focusing on identifying relevant projects, initiatives, and platforms through a systematic analysis of EU databases (CORDIS), thematic networks, and related literature. This ensured a broad and structured foundation for the inventory. Second, FSH developed and distributed via email a targeted table to gather input from other Work Package leaders and consortium members.

Its purpose was to identify specific PIPs that individual partners considered valuable for knowledge exchange or methodological alignment, as well as those that could support or benefit from synergies with their respective WP activities. The table responses were used to refine the initial inventory by highlighting thematically or methodologically aligned PIPs that could support the development of project outputs and strengthen InPlasTwin's integration within the wider research and innovation landscape. To ensure the inventory remains current and reflective of new opportunities, the table will continue to be used periodically throughout the project, allowing consortium members to report new connections and suggest emerging collaborations. In this inventory, we determine closely aligned projects, other relevant projects, relevant initiatives and relevant platforms.




| | Name of Initiative | Webiste/Link | Type of Initiative |
|---|---|---|---|
| 2 | ***UPTAKE*** | http://www.environment.si/en/projects/l7-4422/ | Project |
| 3 | ***FoodTraNet*** | https://www.foodtranet.org/ | Project |
| 4 | ***Econutri*** | https://econutri-project.eu/ | Project |
| 5 | ***CE4Plastics*** | https://ce4plastics.vito.be/en | Project |
| 6 | ***Upstream*** | https://upstream-project.eu/ | Project |
| 7 | ***GREENLand*** | https://project-greenland.com/ | Project |
| 8 | ***Papilons*** | https://www.papillons-h2020.eu/ | Project |
| 9 | ***Remedies*** | https://remedies-for-ocean.eu/the-project/ | Project |
| 10 | PUREFY-E | https://pureefy.eu/ | Project |
| 11 | Microplastic 4 Breakfast | | Initiative |
| 12 | MiCoS | https://www.micos.ugent.be/en | Project |
| 13 | ILSI Microplastic | https://ilsi.eu/scientific-activities/food-safety/ilsi-europe-initiative-on-microplast | |

*Figure 2 Table in shared repository where potential collaborations are mapped and monitored*

### 3.2.1. Sister projects

InPlasTwin will actively collaborate with a set of closely aligned projects to maximize knowledge exchange, avoid duplication, and strengthen the overall impact of EU-funded research in the sustainable agricultural sector. These projects offer valuable insights on sustainability metrics, policy frameworks, and stakeholder engagement approaches that InPlasTwin can build upon. Existing relationships with project coordinators and partners facilitate efficient coordination of joint activities, including data sharing, cross-referencing case studies, and co-hosted dissemination events. This

collaboration ensures that InPlasTwin remains embedded within a broader ecosystem of innovation, amplifying its relevance and reach across Europe.

### 3.2.2. Other relevant projects

In addition to direct collaboration with closely aligned projects, InPlasTwin will draw upon the results, methodologies, and knowledge generated by other thematically relevant initiatives that support its scientific objectives. These include projects addressing micro- and nanoplastics in the environment, plant–plastic interactions, sustainable agricultural and food systems, and advanced analytical and monitoring approaches, which are areas closely aligned with the scope of InPlasTwin.

Several of these initiatives have developed innovative analytical methods, data management approaches, and stakeholder engagement frameworks that can provide useful insights for InPlasTwin activities. Their experiences in areas such as environmental monitoring of micro- and nanoplastics, assessment of plastic contamination in soils and crops, data harmonization, and science–policy interfaces may help inform the development of InPlasTwin's research protocols, data integration strategies, and policy-relevant outputs.

Although these projects may not involve InPlasTwin partners directly, their publicly available outputs, tools, and recommendations represent an important source of knowledge. By drawing on these resources, InPlasTwin will ensure alignment with current scientific advances and best practices, while also strengthening the evidence base that supports its research outcomes and policy recommendations related to micro- and nanoplastics in plant systems and the broader environment.

### 3.2.3. Relevant initiatives

InPlasTwin will strategically disseminate project findings with key European and international initiatives that promote scientific excellence, cross-sector collaboration, and policy alignment in areas related to micro- and nanoplastics (MNPs), environmental pollution, food safety, and sustainable agricultural systems**.** By aligning its scientific outputs, networking activities, and communication efforts with the priorities and platforms of these initiatives, InPlasTwin will enhance the visibility and impact of its findings, particularly regarding the detection, characterization, and environmental and food-related impacts of MNPs originating from agricultural plastics.

Participation in such initiatives will also enable InPlasTwin to contribute to evidence-based policymaking and knowledge exchange in support of major European policy frameworks, including the EU Green Deal, the Circular Economy Action Plan, and the Zero Pollution Action Plan. Through collaboration with these initiatives, the project will strengthen synergies with ongoing European research efforts, promote the uptake of advanced analytical methodologies for micro- and nanoplastics, and facilitate the dissemination of results to policymakers, researchers, industry stakeholders, and the agricultural sector.

Some of the initiatives that may be particularly relevant for the InPlasTwin project results are presented in Table 1.

*Table 1 Relevant European initiatives supporting InPlasTwin project results*

| Initiative | Description | Relevance to InPlasTwin |
|---|---|---|

| | | |
|---|---|---|
| **EU Green Deal** | EU strategy for climate neutrality and environmental protection. | Supports reduction of plastic pollution and sustainable agricultural practices. |
| **Circular Economy Action Plan (CEAP)** | EU framework to reduce waste and promote recycling and sustainable materials. | Relevant to plastic lifecycle, biodegradable agricultural plastics and waste management. |
| **EU Zero Pollution Action Plan** | Strategy to reduce pollution in air, water and soil by 2050. | Directly linked to monitoring and reducing micro- and nanoplastic contamination. |
| **Farm to Fork Strategy** | EU strategy for sustainable food systems. | Addresses food safety risks and environmental contaminants in the agri-food chain. |
| **EU Plastics Strategy** | Policy framework to improve plastic design, recycling and sustainability. | Aligns with research on plastic degradation and microplastic formation in agriculture. |
| **European Partnership for a Circular Bio-based Europe (CBE JU)** | Supports bio-based materials and circular value chains. | Relevant for biodegradable agricultural plastics and sustainable alternatives. |
| **European Environment Agency (EEA) Knowledge Platforms** | Provides environmental data and assessments across Europe. | Supports evidence-based policymaking on plastic pollution. |
| **COST Actions on Microplastics** | European networks addressing micro- and nanoplastics research. | Supports scientific networking and knowledge exchange in MNP analysis. |
| **European Technology Platform "Food for Life"** | Platform connecting research and industry in the food system. | Relevant to food safety implications of microplastics in crops. |
| **European Soil Mission – "A Soil Deal for Europe"** | EU mission aiming to restore soil health. | Relevant to soil contamination by microplastics from agricultural plastics. |

### 3.2.4. Relevant platforms

InPlasTwin will actively engage with established European knowledge platforms and networks that support scientific collaboration, stakeholder engagement, and policy dialogue in the areas of environmental pollution, food safety, sustainable agriculture, and plastics management. In particular, platforms such as the European Innovation Partnership for Agricultural Productivity and Sustainability **(EIP-AGRI), the EU CAP Network**, and knowledge-sharing tools such as **EU-FarmBook** provide effective channels for disseminating project results, facilitating knowledge exchange, and aligning research outcomes with European policy priorities.

Through these platforms, InPlasTwin will increase the visibility, accessibility, and uptake of its scientific outputs related to micro- and nanoplastics (MNPs) detection, environmental monitoring, analytical methodologies and protocols, and agri-food contamination pathways. Project results will be translated into practice-oriented knowledge outputs, including Practice Abstracts disseminated through the EU CAP Network and targeted knowledge contributions shared via EU-FarmBook. These formats support the transfer of research findings into accessible and applicable information for a broad stakeholder community, including researchers, policymakers, environmental monitoring authorities, agricultural advisors, and practitioners.

Engagement with thematic networks, working groups, and online knowledge exchange environments supported by these platforms will further strengthen the dissemination and exploitation of project outcomes. This will facilitate dialogue between science, policy, and practice, while supporting the wider adoption of advanced methodologies and analytical approaches for the detection and monitoring of micro- and nanoplastics in environmental and agri-food systems.

Given the increasing concern regarding micro- and nanoplastic contamination in agricultural soils, water systems, and the food chain, collaboration with European knowledge networks represents an important mechanism for amplifying the impact of project results. Such engagement will contribute to raising awareness of emerging environmental risks, supporting evidence-based decision-making, and fostering cross-sectoral dialogue on solutions addressing plastic pollution.

In addition, relevant project outputs may contribute to the broader Agricultural Knowledge and Innovation System (AKIS) knowledge ecosystem, where appropriate, by supporting knowledge exchange among actors involved in agriculture, environmental protection, and food systems. This will further enhance the accessibility and practical relevance of InPlasTwin research results.

Overall, engagement with European knowledge-sharing platforms, including EU CAP Network Practice Abstracts and EU-FarmBook contributions, will support the effective dissemination and uptake of project outcomes while contributing to broader European objectives related to environmental protection, circular economy, sustainable agriculture, and resilient food systems under the EU Green Deal.

## 3.3. Determining the importance and opportunities for cooperation

Determining the importance and opportunities for cooperation with PIPs is a critical step in ensuring that InPlasTwin's activities are aligned with the broader ecosystem of sustainable agriculture. This process involves evaluating each PIP based on its thematic alignment, geographic relevance, stakeholder reach, and potential to support knowledge exchange, policy influence, or methodological synergies. Importance is determined by assessing how closely a PIP's objectives, outputs, or target audiences overlap with InPlasTwin's goals, particularly in areas such as externality quantification, sustainable food systems, and livestock system transformation. Opportunities for cooperation are identified by exploring how InPlasTwin can either contribute to or benefit from joint activities, such as co-organizing events, sharing protocols, co-authoring outputs, or integrating tools and methodologies. PIPs with ongoing or upcoming activities in areas such as micro- and nanoplastics in the environment, soil systems, and food safety are prioritized for strategic engagement. This targeted analysis helps InPlasTwin focus its resources on high-value collaborations that can enhance impact, accelerate dissemination, and create added value for both the project and the wider stakeholder community. It is important for InPlasTwin to have collaborations on different network levels.

# 4. Action Plan

## 4.1. Selection and establishing contact with identified projects

As one of the key tasks within Work Package 9 is to establish synergies with relevant Projects, Initiatives, and Platforms (PIPs) working in fields related to micro- and nanoplastics (MNPs),

environmental pollution, analytical chemistry, food safety, and sustainable agriculture, a structured approach will be implemented to identify and engage with relevant stakeholders and initiatives. One of the main objectives of this activity is the development of an **Action Plan** that evaluates opportunities for collaboration with relevant PIPs and knowledge networks at international, European, national, and regional levels. After mapping and analyzing the most relevant initiatives, the next step will involve selecting priority projects and establishing contact with them.

The Action Plan within the InPlasTwin project aims to foster strategic collaboration with ongoing research projects, European initiatives, and stakeholder platforms in order to enhance the impact, visibility, and scientific relevance of the project outcomes. Through these collaborations, InPlasTwin seeks to promote knowledge exchange, methodological alignment, and stronger engagement with the wider research and innovation community working on micro- and nanoplastics and environmental contamination.

These activities will support connections between researchers, environmental monitoring organizations, policymakers, industry representatives and other relevant stakeholders working on plastics pollution and sustainable environmental management. Such engagement will facilitate the dissemination of project findings, promote the exchange of best practices and analytical methodologies, and strengthen collaboration across the European research ecosystem addressing plastic pollution and its impacts on ecosystems and food systems.

The scope of this activity includes identifying and maintaining a dynamic network of relevant projects, initiatives, and platforms, and fostering collaboration through joint activities such as webinars, workshops, training sessions, scientific exchanges, and dissemination events. Opportunities for collaboration may also include sharing methodological approaches, exchanging knowledge on analytical techniques for MNP detection and characterization, and participating in joint communication or policy-oriented activities.

Integrated across the project activities, the Action Plan will ensure coordination and consistency in networking and collaboration efforts while promoting co-creation of knowledge and strengthening research capacity among consortium partners and external stakeholders. Regular monitoring and updates of the identified PIPs network will help maintain alignment with evolving research developments and policy priorities related to micro- and nanoplastics pollution, environmental sustainability, and food safety.

### 4.1.1 Criteria for selection

The identification of relevant Projects, Initiatives, and Platforms (PIPs) for collaboration within **InPlasTwin** is based on a systematic screening process aimed at identifying initiatives with complementary expertise and activities. The process begins with a review of publicly available information regarding the objectives, scope, and outputs of potential initiatives. This review is primarily conducted through trusted sources such as the CORDIS, official project webpages, scientific publications, and publicly accessible reports or deliverables.

This initial mapping step enables the consortium to recognize initiatives that operate in areas closely related to InPlasTwin's objectives, particularly those focusing on micro- and nanoplastics (MNPs), environmental pollution monitoring, analytical methodologies, food safety, and sustainable

agricultural practices. Through this exploratory analysis, the consortium obtains an overview of ongoing activities and determines the extent to which each initiative could contribute to or benefit from collaboration with InPlasTwin. Particular attention is given to projects where complementary expertise, overlapping research themes, or shared stakeholder communities create opportunities for joint activities such as knowledge exchange events, training sessions, collaborative dissemination actions, or scientific dialogue.

After this preliminary identification phase, a set of evaluation parameters is applied to determine which initiatives are most suitable for cooperation. These parameters include:

- **Alignment with project topics**, ensuring that the initiative addresses themes relevant to InPlasTwin, such as micro- and nanoplastics analysis, environmental contamination, analytical chemistry, or sustainable agri-food systems;

- **Opportunities for methodological exchange**, particularly regarding laboratory techniques, monitoring approaches, or analytical tools used for the detection and characterization of MNPs;

- **Connection to policy or regulatory frameworks**, especially where initiatives contribute to European or national discussions on plastic pollution, environmental protection, circular economy, or food safety;

- **Representation across different geographical contexts**, supporting interaction with initiatives operating in diverse environmental and research settings across Europe; and

- **Variety of stakeholder involvement**, favoring initiatives that engage multiple actor groups such as researchers, environmental authorities, industry stakeholders, agricultural representatives, and civil society organizations.

Applying this structured selection approach allows **InPlasTwin** to focus on collaboration opportunities that are most likely to reinforce the project's networking activities, scientific capacity building, and dissemination impact. Information about potential collaboration links is documented in a monitoring table, while decisions regarding the establishment of cooperation are coordinated and validated by the project coordinator to ensure alignment with the overall objectives and implementation strategy of the project.

### 4.1.2. Contacting selected projects

After identifying and evaluating relevant Projects, Initiatives and Platforms (PIPs), the next step is to establish contact to explore potential collaboration opportunities. This activity is coordinated within **Work Package 9**, with support from other work package leaders when strong thematic connections are identified.

Initial outreach usually takes the form of a personalized message introducing the **InPlasTwin** project, highlighting its objectives in micro- and nanoplastics (MNPs) research, and suggesting possible

collaboration. This may include proposing a short introductory meeting, sharing project information and logo on the project's respective websites, participation in joint events, or other knowledge-exchange activities.

Whenever possible, existing networks and contacts of consortium partners are used to facilitate introductions and strengthen engagement. The aim of this first contact is to identify shared interests and define potential areas for cooperation, such as joint dissemination, workshops, or exchange of expertise related to MNP analysis and environmental monitoring.

## 4.2. Determination of the type of collaboration

The form and level of collaboration between **InPlasTwin** and selected Projects, Initiatives, and Platforms (PIPs) may vary depending on thematic relevance, shared interests, and the availability of resources. To ensure productive engagement, the project follows a flexible approach that allows different types of cooperation, ranging from informal knowledge exchange, such as meetings or information sharing, to more structured joint activities.

Initial discussions with each PIP will help determine the most appropriate form of collaboration, considering the objectives of both initiatives and the timing of project activities. This flexible approach enables **InPlasTwin** to establish collaborations that are practical, mutually beneficial, and aligned with the project's goals related to micro- and nanoplastics research, knowledge transfer, and stakeholder engagement.

### 4.2.1. Possible collaboration approaches

Different forms of collaboration may be developed within the PIPs Action Plan, depending on the interests and activities of the identified initiatives. These may include knowledge exchange, joint dissemination, cross-promotion of events, or participation in workshops and webinars.

InPlasTwin partners may share relevant project materials, such as fact sheets or scientific outputs, and propose potential joint activities related to micro- and nanoplastics research and environmental monitoring.

All interactions will be recorded in an internal monitoring table to ensure coordination and follow-up across the consortium. This flexible approach allows **InPlasTwin** to establish collaborations that are practical, mutually beneficial, and aligned with the project objectives.

### 4.2.2. Aims of collaboration

The main objective of collaborating with Projects, Initiatives and Platforms (PIPs) is to enhance the **impact, visibility, and practical relevance** of **InPlasTwin** through knowledge exchange and strategic cooperation. These collaborations also support broader European priorities related to environmental protection, plastic pollution reduction, and sustainable food systems.

Engagement with external initiatives provides important added value by facilitating the exchange of data, methodologies, and expertise related to micro- and nanoplastics research. It also helps align analytical approaches and strengthens the scientific robustness of project outputs. In addition,

collaboration expands stakeholder engagement and increases the visibility of project results through joint activities and dissemination efforts.

Overall, these partnerships support the wider uptake of **InPlasTwin** results, strengthen networking across the European research community, and contribute to the long-term sustainability and impact of the project.

### 4.2.3. Management of collaboration

Effective coordination of collaborations with Projects, Initiatives, and Platforms (PIPs) is essential to ensure continuity, transparency, and alignment with the objectives of **InPlasTwin**. These activities are coordinated within **Work Packages 9 and 10**, in close collaboration with the project coordinator and relevant work package leaders, depending on the thematic relevance of each initiative.

Interactions with external initiatives will be documented in a shared monitoring tool maintained by the consortium, recording key contacts, collaboration activities, and progress updates. Periodic internal reviews will help assess the development of these collaborations and identify opportunities for further engagement.

When appropriate, more structured cooperation (e.g., letters of intent or other collaboration arrangements) may be considered. One of the examples is the Memorandum of Understanding (MoU) with GREENLand, ECONUTRI, Pureef-y, and SPECTRA projects. Joint activities will also be aligned with the project's communication and dissemination efforts to maximize the visibility and impact of **InPlasTwin** results.

## 4.3. Planning joint activities

Joint activities with Projects, Initiatives, and Platforms (PIPs) are an important part of **InPlasTwin's engagement strategy**, supporting collaboration, knowledge exchange, and increased visibility of project activities. These actions provide opportunities to share project results, exchange expertise, and connect with other initiatives working on micro- and nanoplastics, environmental monitoring, and related research areas.

**Work Packages 9 and 10** coordinate the planning of these joint activities to ensure alignment with project objectives, timelines, and stakeholder engagement efforts.

### 4.3.1 Workshops/webinars/high-level events/project showcases

Joint activities with relevant Projects, Initiatives, and Platforms (PIPs) may take different forms depending on the objectives of each collaboration, the stakeholders involved, and the stage of the project. Planned formats include:

- **Joint webinars** on topics related to micro- and nanoplastics (MNPs), environmental pollution, analytical methodologies, and sustainable agri-food systems, organized together with relevant initiatives and open to researchers, policymakers, and other stakeholders.

- **Thematic workshops** (online or in person) targeting specific audiences such as researchers, environmental agencies, industry representatives, or agricultural stakeholders to exchange knowledge, methods, and experiences.

- **Participation in conferences and scientific events**, where InPlasTwin partners may present project results or contribute to joint sessions with other projects working on plastic pollution and environmental monitoring.

- **Project showcases and knowledge-exchange events**, providing opportunities to present research progress, analytical approaches, and key findings to the wider scientific and stakeholder community.

These activities will help expand the visibility of **InPlasTwin**, strengthen collaboration with other initiatives, and support the wider dissemination and uptake of project outcomes.

## 4.4. Public Communication

Effective public communication is essential to ensure the visibility, accessibility, and societal relevance of **InPlasTwin** results. It helps connect the project's scientific work with broader audiences, including researchers, policymakers, industry stakeholders, environmental organizations, and the general public. As part of its engagement with Projects, Initiatives, and Platforms (PIPs), **InPlasTwin** will integrate communication activities into joint actions and ensure that key messages are presented in a clear and accessible way.

Public communication is aligned with the project's overall dissemination and communication strategy and will make use of both central and partner-level channels. These include the project website, social media platforms, newsletters, and other communication materials developed during the project. Where possible, partners will also use local languages in outreach activities to better reach regional audiences and stakeholders.

By integrating communication into collaborations with PIPs, **InPlasTwin** will ensure that project knowledge and results reach a wide audience and contribute to raising awareness about micro- and nanoplastics research and environmental sustainability.

# 5. Ecosystem building activities

Ecosystem building is an important component of the **InPlasTwin** project, aiming to strengthen collaboration, knowledge exchange, and networking within the European research and innovation landscape, addressing micro- and nanoplastics (MNPs). Through joint events, collaboration with related projects, and participation in international conferences and stakeholder initiatives, InPlasTwin contributes to the development of a broader research ecosystem focused on plastic pollution in environmental and agri-food systems.

These activities facilitate interaction between researchers, policymakers, industry stakeholders, and civil society organizations, while also increasing the visibility and impact of the project's scientific work.

## 5.1. Concept of Ecosystem Building in InPlasTwin

Ecosystem building in InPlasTwin is based on a cross-sectoral and interdisciplinary approach that connects a wide range of actors working on micro- and nanoplastics (MNPs) within the European research and innovation landscape. The concept aims to strengthen collaboration and knowledge exchange between research institutions, policymakers, industry stakeholders, agricultural and food sector representatives, and civil society organizations, fostering coordinated efforts to address plastic pollution in environmental and agri-food systems.

A key element of this approach is the implementation of capacity-building activities designed to enhance skills, knowledge sharing, and collaboration among stakeholders. InPlasTwin will organize workshops, panel discussions, round table meetings, and a Spring School, providing platforms for dialogue, training, and exchange of expertise between early-career researchers, established scientists, and relevant stakeholders. These activities will support the dissemination of new methodologies, research findings, and policy perspectives related to MNPs.

In addition, through joint events, collaboration with related EU-funded projects, and participation in international conferences and stakeholder initiatives, InPlasTwin will contribute to the development of a collaborative research ecosystem. These interactions will facilitate the sharing of data, tools, and best practices, strengthen professional networks, and increase the visibility and impact of the project's scientific work, while supporting evidence-based policy development and innovation in the field of micro- and nanoplastics.

## 5.2. Participation in scientific conferences and high-level events

Participation in international scientific conferences and high-level events represents an important pathway for disseminating project results and strengthening the visibility of the InPlasTwin project within the global research community. Throughout the reporting period, consortium partners actively participated in several international conferences and scientific meetings related to environmental monitoring, analytical chemistry, and microplastic pollution.

These events provided opportunities for presenting research activities and exchanging scientific knowledge with experts working on related environmental challenges. Conference participation also enabled the consortium to communicate project objectives, discuss emerging analytical approaches for microplastic detection, and establish new collaborations with researchers, institutions, and initiatives addressing plastic pollution and environmental sustainability.

By engaging in high-level scientific events, the InPlasTwin consortium contributes to the broader dialogue on environmental pollution and sustainable agricultural systems. These activities strengthen the project's visibility within the European and international research landscape and support the dissemination and uptake of innovative analytical approaches developed within the project.

The project has been presented at several international conferences, including:

**European Winter Plasma Conference on Plasma Spectrometry**

Janja Vidmar participated in the 20th EUROPEAN WINTER CONFERENCE ON PLASMA SPECTROCHEMISTRY, from 02 - 07 March 2025 in Berlin, a scientific event that gathers plasma spectrochemists from around the world to exchange and discuss the latest research and advancements in Plasma Spectrochemistry. The conference fosters collaboration between academia and industry, covering a wide range of topics in analytical plasma spectrochemistry, as well as related mass and emission spectrometric techniques. Among these topics were ICP-MS-based methods for characterizing micro- and nanoplastics and analyzing inorganic additives, which are part of the InPlasTwin project. During the conference, Janja Vidmar delivered a poster presentation titled “The InPlasTwin project: Investigating the uptake and impact of micro- and nanoplastics from mulching film degradation on strawberries through twinning action,” providing an overview of the project, its objectives, methodology, and scientific capacity-building activities.

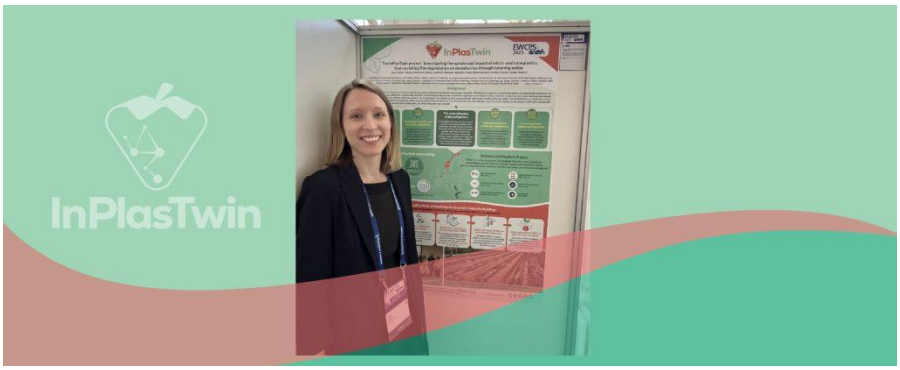



*Figure 3 InPlasTwin at European Winter Plasma Conference on Plasma Spectrometry*

**AGRIFOODPLAST 2025**

Xiaoyu Zhang, PhD student of Dr. Milica Velimirovic, from VITO, presented the InPlasTwin project at AGRIFOODPLAST 2025, the international conference on micro and nano-plastics in the agri-food chain, on April 8-9 in Brussels. AGRIFOODPLAST was a great opportunity to meet and hear presentations of world experts, decision makers, farmers, and business actors who discussed the latest research on environmental and human risks of nano- and microplastics, and plastic-associated chemicals in food production and packaging. She presented a poster titled “The InPlasTwin project: Investigating the uptake and impact of micro- and nanoplastics from mulching film degradation on strawberries through twinning action.” This presentation provided a comprehensive overview of the InPlasTwin project, highlighting its objectives, methodologies, and scientific capacity-building activities.


*Figure 4 InPlasTwin at AGRIFOODPLAST conference*

**PRIORITY Final Conference**

From September 2 to 5, 2025, Janja Vidmar from JSI participated in the Final PRIORITY Conference 2025, held at the Technical University of Leoben, Montanuniversität in Austria. This event marked the concluding meeting of COST Action PRIORITY, a research network in science and technology dedicated to developing, implementing, and consolidating strategies to address the global challenges posed by micro- and nanoplastics in the environment. The conference program featured thematic sessions on the core topics of the COST Action, including emerging sampling and analytical methods for microplastic detection, the impacts of microplastics on human health and the environment, biodegradation of plastics, sustainable technologies for plastic remediation, citizen engagement in plastic pollution monitoring, and current trends and challenges in nanoplastics. The program also included oral presentations, a poster session, networking opportunities with related projects, and presentations by early-career researchers. During the conference, Janja Vidmar presented research from the InPlasTwin project on micro- and nanoplastics through two posters: *The InPlasTwin project: Increasing expertise in micro- and nanoplastics analysis through twinning action* and *Sizing and quantification of Micro- and Nanoplastics by single particle ICP-MS: A Comparison Between Quadrupole and High-Resolution instruments.*


*Figure 5 InPlasTwin at PRIORITY final conference*

**MICROM2025 Conference**

The InPlasTwin team actively participated in the MICROM2025 Conference, contributing to the scientific dialogue with multiple high-impact presentations focused on advancing micro- and nanoplastics (MNPs) analysis in agricultural soils.

On the first day of the conference, Quynh Nhu Phan Le (VITO) presented two poster contributions highlighting recent methodological advancements developed within the project:

1. **"Quantification of polyethylene in soils using pyrolysis–gas chromatography mass spectrometry: A comprehensive assessment of matrix interference and plastic weathering effects."**
2. **"Development of a protocol for extracting nanoplastics from agricultural soils using metal-doped nanoplastics."**

These posters showcased innovative approaches for improving the detection, quantification, and extraction of MNPs from complex soil matrices—reflecting the strong collaboration and technical expertise across the InPlasTwin consortium.

On the second day, the project was featured during the Project Networking Session, where Gordana Racić (Foodscale Hub) presented *"InPlasTwin – Increasing expertise in micro- and nanoplastics analysis through twinning action."* This session provided an excellent opportunity to highlight the project's goals, strengthen partnerships, and emphasize the importance of building European research capacity in MNP analysis.

With two poster presentations and a project spotlight, InPlasTwin concluded its participation at MICROM2025 with meaningful contributions to knowledge exchange, methodological innovation, and scientific collaboration.


*Figure 6 InPlasTwin at MICROM2025*

**BelTox Conference**

On 4 December 2025, **Dr. Milica Velimirovic (VITO)** participated in the *Annual Meeting 2025 – Unmasking Microplastics: Impacts, Challenges and Implications for (Eco)Toxicology* held in Brussels.

Dr. Velimirovic delivered a presentation titled **"Low µm-range microplastics and nanoplastics: finding the needle in the haystack"**, where she also introduced the activities of the **InPlasTwin** project alongside related initiatives, including REMEDIES, Nexus monARC, SSbD4CheM, and Upstream Horizon.

Her contribution highlighted the scientific challenges associated with detecting and characterizing low-micrometer microplastics and nanoplastics, while emphasizing the value of cross-project cooperation in developing robust, environmentally safe, and sustainable analytical approaches.


*Figure 7 InPlasTwin at the BelTox conference*

**4th Microplastic Symposium, University of Bergen**

The symposium, titled *"Microplastic contamination seen through different lenses,"* was organized by the Plastic Network at the University of Bergen in collaboration with the Institute of Marine Research (IMR), the Norwegian Institute for Water Research (NIVA), and the Norwegian Society of Pharmacology and Toxicology. On 20 November 2025, Majda Nikezić (JSI) delivered a 20-minute lecture at the 4th Microplastic Symposium, where she presented the InPlasTwin project, outlining its objectives, current progress, and the key scientific challenges addressed by the consortium. The presentation emphasized the project's role in strengthening analytical capacity and advancing harmonized methodologies for assessing micro- and nanoplastics in agricultural soils. The event brought together experts from environmental science, human health, toxicology, and analytical chemistry, providing an interdisciplinary platform for discussing the complexity of microplastic pollution and its diverse impacts. More information about the symposium is available at: https://www.uib.no/en/plastics/179822/microplastic-contamination-seen-through-different-lenses


*Figure 8 InPlasTwin at 4th Microplastic Symposium*

**MICROPLASTIC DAYS 2026**

Pia Leban from JSI, PhD student of Dr. Janja Vidmar, participated in Microplastic Days 2026 held in Ljubljana, Slovenia, from 3 to 5 February 2026. The activity consisted of a flash presentation accompanied by a poster presentation entitled “Development of an Extraction Protocol for Nanoplastics in Agricultural Soils”. The aim of the activity was to advance the scientific understanding of nanoplastics in soils by presenting recent methodological developments achieved within the project. The purpose was to share innovative approaches for isolating and characterizing nanoplastics from complex agricultural soil matrices, addressing a critical analytical gap in environmental research.

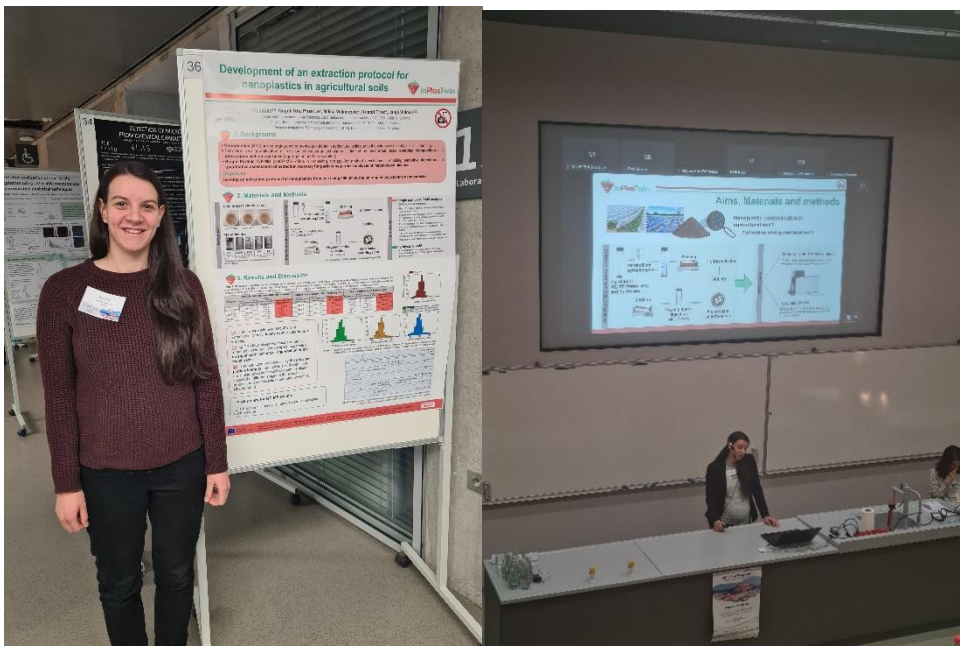


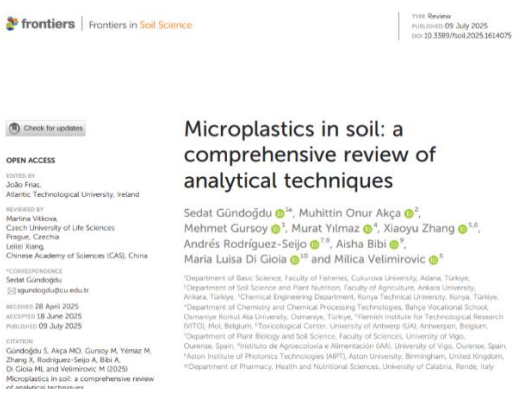

*Figure 9 InPlasTwin at Microplastic Days*

### 5.3.1 Scientific Publications

As part of the dissemination and knowledge-sharing activities of the InPlasTwin project, project partners contributed to the publication of a peer-reviewed scientific article addressing analytical approaches for the detection of microplastics in soil. The article titled **"Microplastics in soil: a comprehensive review of analytical techniques"** was published in the journal **Frontiers in Soil Science** in July 2025. The publication provides a detailed overview of current analytical methodologies used for the identification, extraction, and characterization of microplastics in soil environments.

The review brings together expertise from several international research institutions and includes contributions from **Xiaoyu Zhang and Dr. Milica Velimirovic (VITO)**, partners in the InPlasTwin consortium. The article discusses the strengths and limitations of existing analytical techniques and highlights current challenges in detecting and quantifying microplastics in complex environmental matrices such as agricultural soils. By synthesizing the latest developments in analytical approaches, the publication contributes to advancing methodological knowledge in the field and supports the broader objectives of the InPlasTwin project related to improving analytical capacity and harmonizing methodologies for micro- and nanoplastics detection.

The publication represents an important contribution to the scientific community working on environmental contamination by microplastics and supports the dissemination of knowledge generated within the InPlasTwin network.


frontiers | Frontiers in Soil Science

TYPE Review
PUBLISHED 09 July 2025
DOI 10.3389/fsoil.2025.1614075

Check for updates

OPEN ACCESS

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RECEIVED 28 April 2025
ACCEPTED 18 June 2025
PUBLISHED 09 July 2025

CITATION
Gündoğdu S, Akça MO, Gursoy M, Yılmaz M, Zhang X, Rodríguez-Seijo A, Bibi A, Di Gioia ML and Velimirovic M (2025) Microplastics in soil: a comprehensive review of analytical techniques

Microplastics in soil: a comprehensive review of analytical techniques

Sedat Gündoğdu[1*], Muhittin Onur Akça[2], Mehmet Gursoy[3], Murat Yilmaz[4], Xiaoyu Zhang[5,6], Andrés Rodríguez-Seijo[7,8], Aisha Bibi[9], Maria Luisa Di Gioia[10] and Milica Velimirovic[5]

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*Figure 10 First InPlasTwin journal publication*

## 5.3. Knowledge exchange through webinars

On 23 April 2025, the online webinar **"Microplastic Analysis in the Environment: Sampling, Extraction Protocols, and Contamination Control"** was held via Zoom as part of the project's dissemination, capacity-building, and knowledge-exchange activities. The webinar brought together researchers and practitioners to share analytical methodologies, sampling strategies, and quality assurance practices related to micro- and nanoplastics across environmental matrices.

The event opened with introductory presentations of the participating projects, including the presentation of the InPlasTwin Project by Janja Vidmar (JSI), followed by contributions from the GREENLand project.

The technical programme featured expert contributions focused on sampling, extraction, and analytical challenges:

- **"Ensuring reliable microplastics analysis with best sampling practices and contamination control",** Dr. Nataša Stojić, Educons University, GREENLand project
- **"Case study: Training experience at Alfred Wegener Institute, Helgoland, Germany"**, Galina Ćurčić, Educons University, GREENLand project
- **"Micro- and Nanoplastics in Soil: Challenges and Analytical Advances",** Nhu Phan, PhD, Flemish Institute for Technological Research (VITO), InPlasTwin project

The webinar concluded with an interactive discussion session, providing space for questions, exchange of experiences, and identification of common challenges and collaboration opportunities. Overall, the event supported the project's objectives of promoting harmonised methodologies, strengthening research capacity, and ensuring wide dissemination of best practices within the European research community.

Webinar Recording

In line with the project's commitment to open access and transparency, the webinar was recorded and is publicly available on the project's YouTube channel, ensuring continued access to the presented knowledge and discussions: https://www.youtube.com/watch?v=MM_ZeaadSvY


*Figure 11 InPlasTwin 1st ONLINE WEBINAR with GREENLand project*

## 5.4. Joint workshops with the PUREEF-Y project

To further strengthen collaboration between the two initiatives, **two joint workshops** were organized with participation from researchers and stakeholders involved in both projects.

The **first workshop** focused on presenting the research objectives and activities of each project and identifying potential areas for collaboration. Participants exchanged experiences regarding analytical techniques, sampling approaches, and methodological challenges related to micro- and nanoplastics detection. On **5 November 2025**, the online workshop **"Practical Approaches for Sampling and Extraction of Microplastics from Soil, Sediment, Compost, and Biota"** was held via Zoom as part of the project's dissemination, capacity-building, and knowledge-exchange activities. The workshop brought together researchers and practitioners to share practical methodologies, analytical approaches, and quality assurance practices related to microplastics research across different environmental matrices. The event opened with welcome remarks and housekeeping by **Gordana Racić** (Foodscale Hub), followed by introductory presentations highlighting relevant EU research initiatives. **Janja Vidmar** (Jožef Stefan Institute) presented the *InPlasTwin Project*, while **Gotelenne Piaton** (CMMI) introduced the *PUREEF-Y Project*.

The technical programme featured expert contributions focused on practical sampling, extraction, and analysis techniques for microplastics:

- **"Microplastics Analysis in Soil: From Sample Preparation to Quality Assurance and Quality Control"**
  *Nhu Phan, PhD*, Flemish Institute for Technological Research (VITO)

- **"Separation of Microplastics from Marine Sediments"**
  *Fred Olav Libnau, PhD*, Institute of Marine Research, Norway

- **"Oleo-extraction of Biodegradable Microplastics in Compost"**
  *Sevil Vafadar Afshar, PhD*, Technical University of Denmark

- **"Tracking Microplastics in Biota: Hands-On Sampling and Extraction Techniques"**
  *Eleni Christoforou, PhD*, Cyprus Marine & Maritime Institute

The workshop concluded with an interactive **Q&A and brainstorming session**, fostering discussion, experience sharing, and collaboration among participants. Overall, the event supported the project's objectives of promoting harmonized methodologies, strengthening research capacity, and ensuring the wide dissemination of best practices within the European research community.

**Workshop Recordings**

In line with the project's commitment to open access and transparency, the workshop recordings are available on our **YouTube channel**:

- **Part 1:** https://www.youtube.com/watch?v=UvZYvuGYMXw

- **Part 2:** https://www.youtube.com/watch?v=O9NQVQNDeCo


*Figure 12 InPlasTwin 1st Workshop*

The **second workshop** expanded the discussion to broader research topics related to plastic pollution and environmental monitoring. The workshop facilitated further scientific dialogue and strengthened collaboration between researchers working on micro- and nanoplastics contamination in environmental and food systems.

On **19 January 2026**, the online workshop **"Advanced Spectroscopic Approaches for Microplastic Detection and Characterization"** was held via Microsoft Teams as part of the joint dissemination and knowledge-exchange activities of the participating EU research projects

The workshop brought together experts and researchers to present and discuss state-of-the-art spectroscopic techniques for the detection, identification, and characterization of microplastics. The event opened with welcome remarks and housekeeping by **Kathy Christoforou** (Cyprus Marine and Maritime Institute). This was followed by introductory presentations outlining relevant EU research initiatives, including the *InPlasTwin Project* presented by **Janja Vidmar** (Jožef Stefan Institute), and the *PUREEF-Y Project* presented by **Gotelenne Piaton** (CMMI).

The technical programme focused on advanced spectroscopic and imaging methods for microplastics analysis and included the following expert presentations:

- **"Tracking Microplastics with Laser-based Infrared Imaging"**
  *Olga Novillo Sanjuan, PhD*, Technical University of Denmark (DTU)

- **"Automated Microplastics Analysis with Focal Plane Array-Based FTIR Microscopy and Advanced Image Analysis"**
  *Genna-Leigh Geldenhuys, PhD*, Cyprus Marine and Maritime Institute (CMMI)

- **"High-throughput Microplastic Analysis Using QCL-based Infrared Microscopy"**
  *André Marcel Bienfait, PhD*, Institute of Marine Research (IMR), Norway

- **"Raman Spectroscopy for Microplastic Identification"**
  *Michaël Grelaud, PhD*, Universitat Autònoma de Barcelona (UAB)

The workshop concluded with an interactive **Q&A and brainstorming session**, encouraging discussion on methodological challenges, data quality, and the harmonization of spectroscopic approaches for microplastics research.

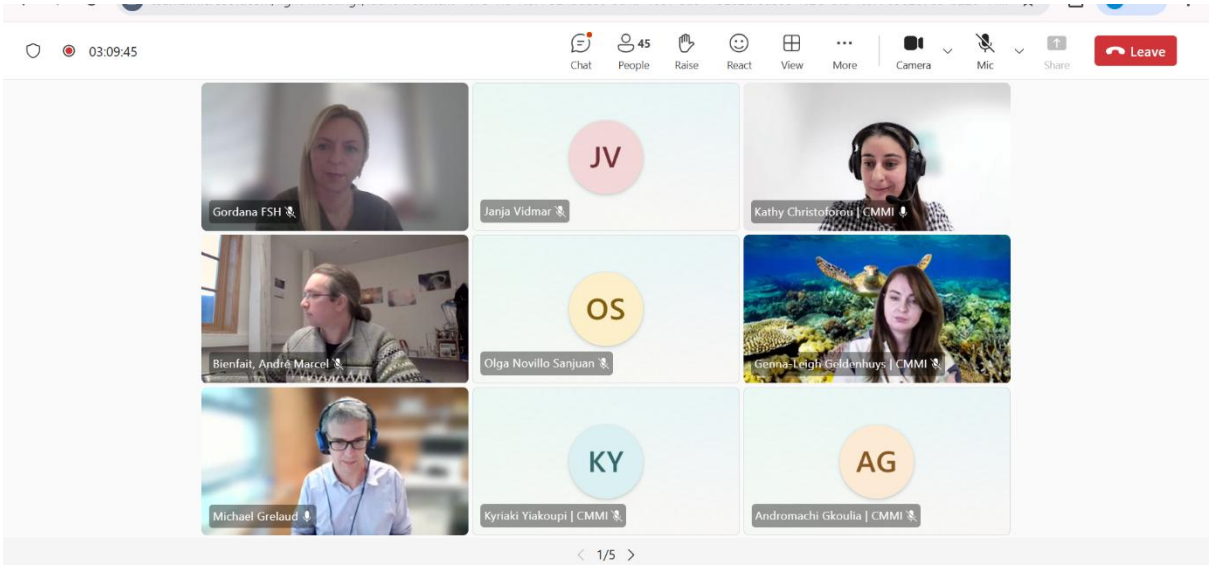


*Figure 13 InPlasTwin 2nd WORKSHOP*

**Workshop Recordings**

In line with the project's commitment to open access and transparency, the workshop recordings are available on our **YouTube channel**:

- **Part 1:** https://www.youtube.com/watch?v=Rt0sWA1l86A
- **Part 2:** https://www.youtube.com/watch?v=OcfHcOGYZpA

These workshops contributed to knowledge exchange and helped establish a stronger research network between the participating initiatives.

## 5.5. Stakeholder outreach activities

In addition to scientific events, InPlasTwin also engages with stakeholders through outreach activities aimed at raising awareness about micro- and nanoplastics pollution and promoting dialogue between research and practice.

**Stakeholder engagement and field visit to strawberry farms in Western Peloponnese**

As part of the ecosystem-building and stakeholder engagement activities of the InPlasTwin project, Konstantina Argyropoulou and Prof. Dimitrios Savvas (AUA) conducted a field visit to strawberry farms in Western Peloponnese in January 2025. The purpose of the visit was to present and disseminate the

objectives of the InPlasTwin project to local agricultural stakeholders and to support the organization and preparation of the field experiment scheduled for autumn.

During the visit, two commercial strawberry production sites were visited: Labidino – Quality Earth Products and BERRY PLASMA, Greece. Discussions with growers focused on current strawberry production practices, particularly the use of plastic mulching materials, and on identifying suitable conditions for the implementation of the planned InPlasTwin experiment. The visit provided an opportunity to exchange knowledge between researchers and farmers, gather practical insights from agricultural producers, and ensure that the experimental activities planned within the project are aligned with real production systems.

This activity contributed to strengthening collaboration between the research community and agricultural stakeholders, supporting the project's multi-actor approach and facilitating the implementation of research activities aimed at assessing the environmental implications of plastic use in strawberry cultivation.


*Figure 14 Visit to the Peloponnese strawberry fields*

In addition, in December 2026, Dr. Janja Vidmar (JSI) conducted a project visit to Greece, hosted by Prof. Dimitrios Savvas from the Agricultural University of Athens (AUA). A field visit covered strawberry production sites in Varda, greenhouse facilities in Nafplio, the BERRY PLASMA facilities, and a plastic recycling facility in Varda. Although implemented within WP8 to support planning of the field experiment, these activities also contributed to the dissemination of the InPlasTwin project to relevant stakeholders and facilitated knowledge exchange with agricultural producers and industry representatives.

*Figure 15 Janja Vidmar's visit to the greenhouse facilities in Varda, and a plastic recycling facility in Varda*

**Open Day**

On March 29, 2025, the Jožef Stefan Institute (Ljubljana, Slovenia) organized an Open Day as part of the traditional Stefan's Days, which commemorate the birthday (March 24) of the renowned Slovenian scientist Jožef Stefan. During this event, visitors had the opportunity to tour the Institute's laboratories and learn more about its ongoing research activities. The InPlasTwin project was also presented at the Open Day. Visitors could participate in interactive activities, such as observing small plastic particles under a microscope or magnifying glass. They also learned about the role of mulching films in strawberry production and their potential environmental and health impacts. The InPlasTwin stand attracted many visitors, who also had the opportunity to taste fresh strawberries and strawberry-based sweets while learning more about the project and its objectives.


*Figure 16. Open day at JSI*

Foodscale Hub's team, Gordana Racic and Olivera Stojilovic Trivunic, attended the event "Microplastics for Breakfast," in Belgrade, held on the 10th of April. This event gathered various stakeholders working on micro and nanoplastics from Serbia, Montenegro, and Bosnia and Herzegovina, providing an opportunity for the exchange of the latest knowledge and experiences in this field. In her 3-minute pitch, Gordana Racić highlighted the importance of dissemination and science communication within the InPlasTwin project. Alongside the FSH team, Dr. Milica Velimirovic from VITO in her presentation From Macro to Nanoplastics and Beyond: Advances in Analytical Techniques mentioned a project and its positive impact.


*Figure 17. InPlasTwin at Microplastic for Breakfast Event*

The project was also showcased at the **92nd International Agricultural Fair in Novi Sad**, where project partners introduced the objectives of InPlasTwin to farmers, industry representatives, and other stakeholders interested in sustainable agricultural practices and environmental protection. Moreover, our partners from Foodscale Hub successfully showcased the InPlasTwin project at the **15th CASEE CONFERENCE** in Novi Sad (June 25-27). The event, focused on "Green transitions in agriculture and food systems," was a fantastic opportunity to exchange ideas with over 150 participants from Europe, strengthening our mission to share best practices in the investigation of micro- and nanoplastics (MNPs) in the environment and food.


*Figure 18. InPlasTwin at the Agricultural fair and the CASEE conference*

Within the framework of ecosystem-building and knowledge exchange activities, Dr. Janja Vidmar (JSI) participated in the ECONUTRI Project Online Hackathon Series, organized by the Agricultural University of Athens, which took place on 15–16 December 2025. The event focused on optimizing nutrient management plans and enhancing decision support systems (DSS) performance, bringing together farmers, advisors, researchers, and AgTech experts to discuss sustainable agricultural practices and innovative technological solutions.

During the event, Dr. Vidmar presented the InPlasTwin project and delivered a talk entitled "Hidden Hazards: Microplastic Pollution in Agricultural Water and Its Environmental Risks." The presentation highlighted current research within the InPlasTwin project addressing the presence of micro- and nanoplastics in agricultural environments, their potential pathways into water systems used in crop production, and the associated environmental and food safety implications. The talk also emphasized the importance of improving monitoring methodologies and developing sustainable agricultural practices to mitigate plastic pollution.

Participation in this event contributed to strengthening collaboration between research initiatives addressing environmental sustainability and agriculture, while also promoting the visibility of the InPlasTwin project among stakeholders involved in nutrient management, agricultural innovation, and environmental protection.

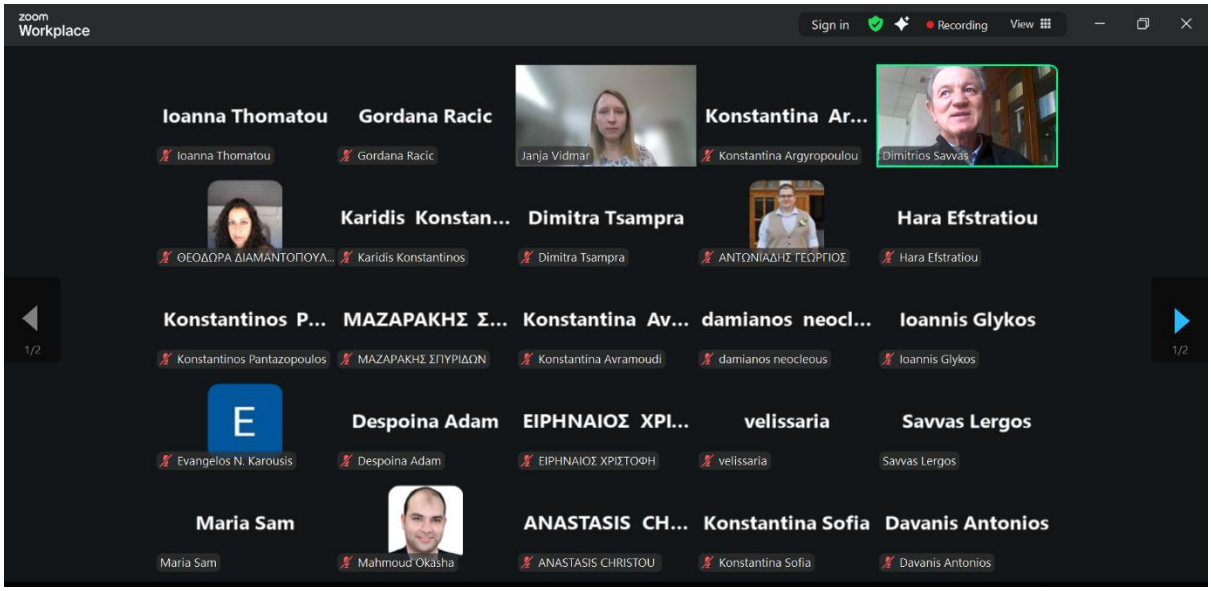


*Figure 19 InPlasTwin at Econutri Hackaton*

As a **Horizon Europe Twinning project**, InPlasTwin also participates in networking activities with other EU-funded initiatives aimed at strengthening research capacity and collaboration. One example is participation in the **Online Twinning Info Day on 15th of September 2025**, which brought together several Twinning projects to exchange experiences and best practices related to research management, knowledge exchange, and stakeholder engagement. Such networking activities support collaboration between projects and contribute to the development of a stronger European research ecosystem.


*Figure 20 Participation in Twinning Info Day*

## 5.6. Digital ecosystem and community engagement

In addition to physical events, InPlasTwin actively develops its digital presence to support ecosystem building and knowledge exchange. The project website serves as a central hub for project information, news, events, and scientific outputs, while social media platforms and newsletters are used to share project updates and reach wider audiences.

The InPlasTwin website, launched in M01, serves as a central hub for communication and dissemination, enabling target audiences and stakeholders to track the project's progress and outcomes. Designed with user-friendly features, the website is populated with up-to date information and content relevant to the public, including news updates, informative blogs, capacity building and knowledge exchange activities, and project results. It also includes digital visualisations of project processes and outcomes, ensuring broader accessibility. The website is mobile-friendly, further enhancing accessibility and maximising the project's reach and impact.

To optimise the visibility of the website, InPlasTwin incorporates search engine optimisation (SEO) practices. This involves strategically integrating relevant keywords to attract target groups, with a particular emphasis on blogs. Continuous SEO monitoring is conducted to evaluate the effectiveness of these practices, ensuring the website achieves high search engine rankings and effectively supports the project's dissemination objectives.

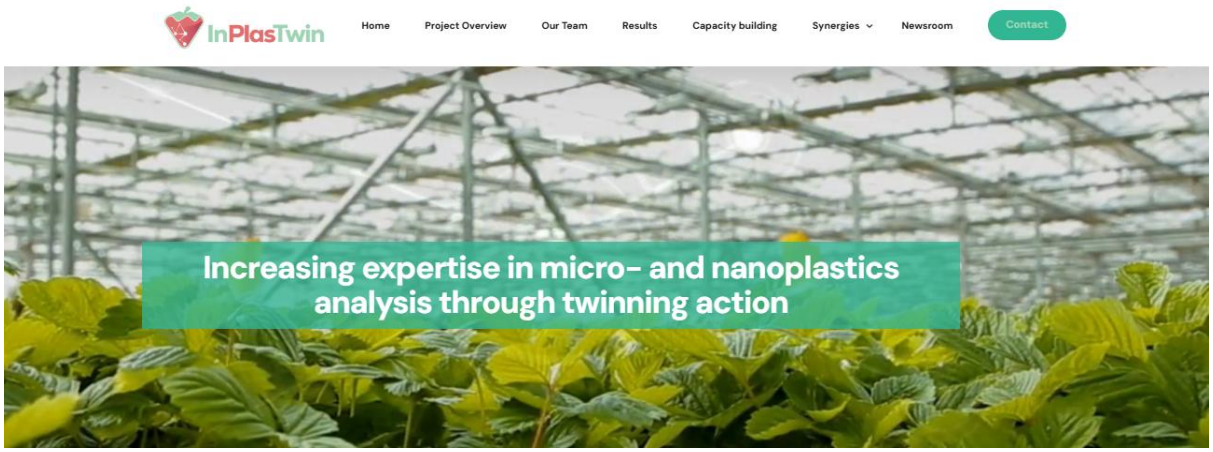


*Figure 21 Project website*

The website is structured with the following sections/tabs:

**Home Page:** Features the project logo, project graphics, images, and social media icons (LinkedIn, Instagram, Facebook, Twitter/X, YouTube, Slideshare) alongside a newsletter sign-up button and an intuitive navigation menu for easy access to all project information. It also includes a video that effectively conveys the project's goals and core messages.

**Project Overview:** Presents a more elaborate project depiction and specifies the project's aspirations, its foreseen impact, and its objectives.

**Our Team:** Features a list of consortium partners, along with brief descriptions of their roles, areas of expertise, and contributions to the project.

**Results:** Once the deliverables from the InPlasTwin project become publicly available, this tab will feature information and links to public project deliverables and results.

**Capacity building:** This section of the InPlasTwin website presents training activities, staff exchanges, workshops, and knowledge-transfer initiatives organized within the project to strengthen research skills, analytical expertise, and collaboration among partners working on micro- and nanoplastics analysis and environmental monitoring.

**Synergies:** Highlights collaborations and knowledge exchange with related European projects and initiatives working on complementary topics such as microplastics, environmental monitoring, sustainable agriculture, and pollution mitigation, aiming to strengthen networking, share best practices, and maximize the impact of research activities.

**Newsroom:** Includes press releases, news updates, articles, and blog posts that keep stakeholders informed about the project. With 15 blog posts and 2 press releases, it has grown considerably in both scope and engagement. The blog posts cover a broad range of themes, including updates on project progress, reports from consortium meetings, detailed scientific explanations of the methodologies and processes applied within the project, as well as posts published to mark occasions such as Soil Day and Environment Day.

**Social media**

From the start of the InPlasTwin project, we have established a strong and recognisable presence across six social media platforms: LinkedIn, Facebook, X (formerly Twitter), YouTube, Instagram, and SlideShare, which collectively count 721 followers. Through engaging captions with an informative and compelling tone, paired with visually appealing content, we have consistently shared project updates and relevant news aligned with the project's mission.

The DEC leader has developed QR codes for social media pages, which are now available in the project repository for both online use and print materials. This addition is expected to make it easier to present the project’s social media channels during conferences, fairs, workshops, and other events, improving access for stakeholders and, in turn, supporting follower growth and wider dissemination of InPlasTwin’s mission.

*Figure 22 InPlasTwin QR codes for LinkedIn, YouTube, Facebook, Instagram, and X, respectively*

The social media principles outlined in D9.1 were successfully implemented during the last months and have proven effective in strengthening the project's online presence. Targeted communication was applied by tailoring messages to the needs and interests of specific audience groups. This ensured that key project updates were conveyed clearly and remained relevant to each segment. Visual engagement continued to be a central component of the strategy. The use of strong visuals and concise, well-framed titles contributed to higher interaction rates across platforms.

Project partners were actively encouraged to share InPlasTwin content, engage with posts, develop original material highlighting project activities, and, where relevant, translate content into their local languages. This collaborative approach broadened the project's reach by engaging diverse audiences, thereby strengthening overall visibility across stakeholder groups.

Through these channels, the project engages with researchers, students, policymakers, and other stakeholders interested in micro- and nanoplastics research and environmental sustainability. Digital communication tools also support the dissemination of project results and facilitate interaction with the broader research community.

## 5.7. Capacity building activities

Capacity building and knowledge exchange represent key components of the InPlasTwin project, aiming to strengthen the scientific, technical, and managerial capacities of participating institutions. Through a series of staff exchanges, training visits, and collaborative research activities, researchers from the project partners gained hands-on experience with advanced analytical techniques, experimental methodologies, and project management practices related to the study of micro- and nanoplastics in agricultural systems and food matrices.

*Table 2 Capacity building activities of InPlasTwin*

| No. | WP / Task | Activity description | Host institution | Participants | Date | Type of activity |
|---|---|---|---|---|---|---|
| 1 | WP1 (T1.1) | Administrative and project management training to strengthen research management capacity | VITO (Belgium) | Janja Vidmar (JSI) | 17–21 Feb 2025 | Training |
| 2 | WP3 (T3.1) | Training on microplastic generation and degradation from mulching films | DTU Sustain (Denmark) | Majda Nikezić (JSI), Dimitrios Savvas (AUA) | 17 Feb – 14 Mar 2025 | Short-term staff exchange |
| 3 | WP6 (T 6.2) | Training on migration and leaching studies with MNPs | DTU Food (Denmark) | Majda Nikezić (JSI) | 17 March – 16 May 2025 + 12 January – | Short-term staff exchange |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | 6 February 2026 | |
| 4 | WP4 (T4.1) | Training on extraction protocols for micro- and nanoplastics from environmental samples | VITO (Belgium) | Janja Vidmar (JSI), Dimitrios Savvas / Vasileios Papasotiropoulos (AUA) | 1–30 Jun 2025 | Short-term staff exchange |
| 5 | WP6 (T6.3) | Virtual consultation on plastic additive leaching from micro- and nanoplastics | DTU Food | Majda Nikezić (JSI), Katrin Löschner, Bina Bhattarai | 23 Jun 2025 | Virtual training |
| 6 | WP4 (T4.2) | Training on extraction protocols for micro- and nanoplastics from food matrices | DTU Food & Sustain | Majda Nikezić (JSI), Konstantina / Dimitrios (AUA) | 4–29 Aug 2025 | Short-term staff exchange |
| 7 | WP5 (T5.1–T5.2) | Training on analytical techniques for micro- and nanoplastic detection | VITO (Belgium) | Pia Leban (JSI) | 18–29 Aug 2025 | Training |
| 8 | WP3 | Virtual meeting on results presentation and discussion (Task 3.1) | DTU Sustain | Majda Nikezić (JSI), Sevil Vafadar Afshar | 19 Aug 2025 | Virtual training |
| 9 | WP3 (T3.2) | Training on generation of model microplastics and experimental methods | DTU Sustain | Majda Nikezić (JSI), Konstantina / Dimitrios (AUA) | 1–27 Sep 2025 | Short-term staff exchange |
| 10 | WP4 (T4.3) | Virtual knowledge exchange on MNP extraction techniques | VITO, DTU Food | Janja Vidmar / Pia Leban / Majda Nikezić (JSI), Nhu Phan Le (VITO) | 23 Sep 2025 | Virtual training |
| 11 | WP5 (T5.1) | Training on spectroscopic techniques for MNP analysis | IMR (Norway) | Janja Vidmar, Majda Nikezić (JSI); Evangelos N. | 1–31 Oct 2025 | Short-term staff exchange |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | Karousis / Dimitrios (AUA) | | |
| 12 | WP5 (T5.2) | Training on mass-spectrometric techniques for MNP analysis | IMR (Norway) | Majda Nikezić (JSI), Dimitrios Savvas (AUA) | 3–28 Nov 2025 | Short-term staff exchange |
| 13 | WP3 (T3.1) | Advanced training on microplastic degradation and characterization | DTU Sustain | Janja Vidmar (JSI), Filippa Maniou (AUA) | 27 Oct – 14 Nov 2025 | Short-term staff exchange |
| 14 | Cross-WP collaboration | Knowledge exchange visit and field experiment review in strawberry cultivation systems | AUA (Greece) | Janja Vidmar (JSI) | 7–14 Dec 2025 | Staff exchange |
| 15 | WP6 (T6.1) | Training on analytical techniques for plastic additive analysis | DTU Food | Majda Nikezić /Stefan Marković (JSI); Aikaterini Spanoudaki (AUA) | 12 Jan–20 March 2026 | Short-term staff exchange |
| 16 | WP5 (T5.3) | Virtual training on Enhancing MNPs analysis techniques knowledge exchange | IMR | Janja Vidmar /Majda Nikezić (JSI) | 27 January 2026 | Virtual training |
| 17 | WP7 (T7.2) | Coordination visit for the hydroponic strawberry experiment and experimental design finalization | AUA (Greece) | Janja Vidmar (JSI) | 23–27 Feb 2026 | Staff exchange |

**Project Management and Research Support Training at VITO**

Dr. Milica Velimirovic of VITO hosted Dr. Janja Vidmar from JSI for a week of intensive training focused on enhancing project management capabilities. This collaboration aimed to strengthen JSI's administrative and management capacity, crucial for the successful execution of the InPlasTwin project. The training covered essential topics, including project data management, application and management skills, and the utilization of digital solutions. Participants gained insights into VITO's Research Support Office, learning best practices for providing comprehensive research support. Networking with VITO professionals also provided valuable connections for future InPlasTwin activities. This training has significantly benefited Dr. Vidmar and JSI, improving their understanding

of research project management and enhancing their ability to secure future funding. The knowledge gained will directly contribute to the effective coordination and implementation of the InPlasTwin project. The detailed description of the training and its outcomes can be found in D1.1.


*Figure 23. Visit of Janja Vidmar to VITO*

**Training on Microplastic Formation from Mulching Films at DTU**

Researchers from the InPlasTwin consortium, Professor Dimitrios Savvas from Agricultural University of Athens (AUA), and Majda Nikezić from Jožef Stefan Institute (JSI), had training activities at the Technical University of Denmark (DTU Sustain). The goal of the training was to acquire practical experience in studying the degradation, fragmentation, and generation of microplastics from mulching films under realistic environmental conditions, including natural soil and accelerated weathering simulations. This involved working with specialized instruments to control and monitor solar radiation, temperature, and humidity. During the training, they collected and characterized soil samples from an agricultural field, set up a long-term degradation experiment using various mulching films in soil-filled jars, and received comprehensive training on NTA, LDIR, and FTIR instruments. They utilized FTIR to characterize the films included in our study, providing vital insights into their composition. This exchange has equipped researchers with invaluable hands-on expertise, significantly advancing their research on the environmental impacts of plastic mulching films. The detailed description of the training and its outcomes can be found in D3.1.


*Figure 24. Capacity building activities of JSI and AUA at DTU*

**Training on Chemical Migration from Agricultural and Food Packaging Plastics**

Dr. Majda Nikezić (JSI) participated in a specialized training and staff exchange at the National Food Institute, Technical University of Denmark (DTU) under the supervision of Dr. Katrin Löschner and Dr. Bina Bhattarai. The training focused on the analysis of potentially toxic organic and inorganic

substances migrating from plastic materials used in agriculture and food packaging, particularly mulching films and strawberry packaging materials. The work involved the investigation of conventional polyethylene films (black and transparent) and biodegradable films composed of PBAT and corn starch, with the aim of evaluating potential chemical migration into strawberries. Analytical activities included total dissolution tests to assess leachable substances from plastics and migration tests simulating the transfer of chemicals from plastic materials into food products.

During the training, Dr. Nikezić gained hands-on experience with advanced analytical instrumentation used for detecting plastic-associated chemicals, including LC-qTOF-MS for non-targeted analysis of organic additives and iCAP-TQ ICP-MS for the determination of inorganic elements such as heavy metals. These methodologies enable a comprehensive assessment of substances migrating from plastics into food simulants and contribute to strengthening the analytical capabilities of the InPlasTwin consortium in the area of plastic-associated chemical contamination and food safety. The detailed description of the training and its outcomes can be found in D6.1.


*Figure 25 Capacity building activities of JSI at DTU: Training on Chemical Migration from Agricultural and Food Packaging Plastics*

**Training on Extraction and Analysis of Micro- and Nanoplastics from Environmental Soil Samples at VITO**

Dr. Janja Vidmar (JSI) and Dr. Dimitrios Savvas (AUA) participated in a research training hosted by the Flemish Institute for Technological Research (VITO) in Mol, Belgium. The main aim of the activity was to strengthen scientific knowledge and laboratory expertise related to the preparation and analysis of environmental soil samples for the extraction and characterization of micro- and nanoplastics. The purpose of the training was to support capacity building, foster knowledge exchange, and contribute to the development of robust, reproducible protocols that can be implemented within the InPlasTwin project and beyond.

During the training, Dr. Vidmar and Dr. Savvas worked in close collaboration with VITO researchers to optimize and refine existing extraction protocols. These protocols involve several key steps:

- Density separation of plastic particles from soil matrices,
- Chemical degradation of organic matter using the Fenton reaction,
- Filtration for particle isolation.

In order to evaluate the efficiency of the extraction process and ensure protocol reproducibility, the team employed a spike recovery approach, whereby a known quantity of microplastics was intentionally added to agricultural soil samples. Dr. Vidmar also received specialized training in cryo-milling techniques, used to produce microplastic particles from conventional polyethylene (PE) mulching films by cryo-milling.

The developed protocol was then applied to real-world environmental samples—agricultural soils collected from the western Peloponnese region in Greece, where PE mulching films are widely used in strawberry farming. This application allowed for testing the method under practical, field-relevant conditions and assessing the presence and distribution of MNP in intensively cultivated soils.

In addition to method development and sample processing, they were trained in advanced analytical techniques employed at VITO for MNP identification and quantification. This included hands-on use of pyrolysis-GC-MS for polymer identification of extracted microplastics, as well as elemental analysis of mulching films (both polyethylene and biodegradable types) using microwave-assisted digestion followed by ICP-MS (Inductively Coupled Plasma Mass Spectrometry). The detailed description of the training and its outcomes can be found in D4.1.


*Figure 26 Capacity building activities of JSI and AUA: Training on sample preparation at VITO*

**Training on Analytical Methods for Micro- and Nanoplastic Detection in Soil**

Between August 18 and 29, 2025, Pia Leban, a young researcher from the Department of Environmental Sciences (JSI), took part in a two-week training program at VITO (Flemish Institute for Technological Research). The main goal of the visit was to improve knowledge on the analysis of MNPs with mass spectrometric and spectroscopic techniques, focusing on pyrolysis-GC-MS and Raman spectroscopy. In collaboration with VITO researchers (Dr. Quynh Nhu Phan Le and Dr. Milica Velimirovic), Pia Leban acquired new expertise in applying two analytical methods for the detection, identification, and characterization of microplastics and nanoplastics. She learned how to prepare samples for analysis for both techniques through filtration. As part of the training, she used py-GC-MS to analyze extracted microplastic samples from soil samples (spike recovery tests, in which agricultural soils were intentionally spiked with microplastic particles obtained by cryo-milling conventional polyethylene (PE) mulching films at a known concentration). She also analyzed extracted samples from real environmental soil samples collected from agricultural fields in western Peloponnese (Greece), where mulching films are commonly used in strawberry cultivation. Using Raman spectroscopy, she analyzed a polystyrene standard microplastic sample to assess the accuracy of the method, as well as microplastic particles from conventional PE mulching films prepared at VITO by cryo-milling. In addition to sample preparation for both techniques, Pia Leban

also gained knowledge in processing data obtained with these analytical methods. The detailed description of the training and its outcomes can be found in D5.1.


*Figure 27 Capacity building activities of Pia Leban from JSI to VITO*

**Training on Microplastic Characterization Using ATR-FTIR and LDIR**

The three-week training (27 October to 14 November 2025) at DTU Sustain aimed to provide the trainees (Dr. Janja Vidmar from JSI and Dr. Filippa Maniou from AUA) with practical skills for investigating the degradation, fragmentation, and formation of microplastics from conventional and biodegradable mulching films under controlled, environmentally relevant conditions. Microplastics generated during a six-month soil degradation experiment with these films were characterized both quantitatively and chemically (polymer identification). To achieve this, the trainees gained hands-on experience in visually inspecting plastic particles smaller than 2 mm, applying ATR-FTIR measurements (to characterize microplastics visible to the naked eye), and using a stereoscopic microscope (to detect microplastics not visible to the naked eye). In addition, the oleo-based extraction method was further refined during the training to enable the recovery of smaller microplastics from soil, which were subsequently analyzed using LDIR measurements. Through this process, the trainees also acquired practical expertise in conducting LDIR analyses as well as in processing and presenting the obtained results. The detailed description of the training and its outcomes can be found in D3.1.

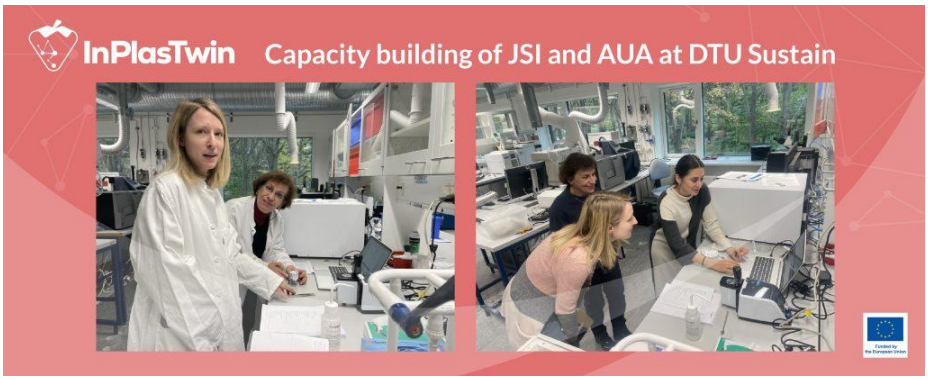


*Figure 28 Capacity building activities of JSI and AUA training at DTU*

**Training on Spectroscopic and Mass Spectrometric Techniques for MNP Analysis**

Between 1 October and 28 November 2025, four researchers, Dr. Janja Vidmar and Dr. Majda Nikezić from JSI, and Evangelos N. Karousis and Dr. Dimitrios Savvas from AUA, participated in a training within

the InPlasTwin project at the Institute of Marine Research (IMR) in Bergen, Norway, under the main supervision of Dr. André Marcel Bienfait.

The overall objective of this two-month knowledge exchange was to strengthen the analytical capacity of JSI and AUA by providing advanced theoretical and practical training in the analysis of micro- and nanoplastics (MNPs) in environmental and food matrices, using both spectroscopic and mass-spectrometric approaches. During the training, participants received in-depth instruction and hands-on experience with spectroscopic techniques, including ATR-FTIR, FTIR microscopy, and QCL-IR microscopy. The programme also covered training on obtaining high-quality hyperspectral imaging datasets and the use of machine learning (AI-based) tools for processing complex spectroscopic datasets. Moreover, training in mass-spectrometric methods was focused on py-GC-MS.

Practical work was performed on samples of conventional (polyethylene) and biodegradable mulching films, as well as on nano- and microplastic particles generated from these materials through cryo-milling. The trainees also analyzed MNPs in strawberry samples. In addition to laboratory activities, the staff exchange visit also provided an opportunity to learn about the research activities and infrastructure of IMR, including laboratories, instruments, and the participating researchers and experts who directly or indirectly contribute to the InPlasTwin project. The detailed description of the training and its outcomes can be found in D5.1.


*Figure 29 Capacity building activities of JSI and AUA at IMR*

**Cross-visit and knowledge exchange with the Agricultural University of Athens**

A one-week staff exchange visit of Dr. Janja Vidmar (Jožef Stefan Institute, Slovenia) to Greece was carried out from 7–14 December 2025 within the framework of the InPlasTwin project. The visit included activities in Athens, Western Peloponnese (Ilia Regional Unit), and Nafplio and aimed to review the ongoing field experiment on plastic mulching systems in strawberry cultivation, exchange knowledge on early strawberry production techniques, and strengthen collaboration between researchers and agricultural stakeholders.

The visit was hosted by Prof. Dimitrios Savvas from the Laboratory of Vegetable Production at the Agricultural University of Athens (AUA) and involved researchers from AUA as well as collaborating growers and companies in Western Peloponnese. A major part of the programme focused on the InPlasTwin field experiment conducted in commercial greenhouses in Varda (Ilia Regional Unit) at the facilities of Mr. Georgios Dimopoulos, where different types of plastic mulching materials are being evaluated in strawberry cultivation. During the on-site inspection, discussions were held on the

experimental design, crop management practices, and preliminary observations of plant responses to different mulching materials. The visit also enabled direct interaction with growers, who shared practical insights on the role of mulching films in soil temperature regulation, moisture conservation, weed control, and economic aspects of different materials.

The programme additionally included visits to a local recycling facility in Varda, where used mulching films are processed and recycled into new products, providing insight into end-of-life management options for agricultural plastics, and to the strawberry breeding company BerryPlasma World, where soil-based and soilless cultivation systems and different strawberry genotypes were presented. At the Agricultural University of Athens, Dr. Vidmar visited research laboratories and experimental greenhouses and participated in technical discussions regarding the planned InPlasTwin soilless strawberry experiment scheduled to start in January 2026. During her stay, she also delivered a lecture entitled *"Hidden Hazards: Microplastic Pollution in Agriculture and Its Risks for Horticultural Crops"* to AUA master's students and research staff, ensuring knowledge transfer of InPlasTwin results to the mentioned target groups.

Overall, the visit strengthened collaboration between JSI, AUA, agricultural producers, and industry stakeholders, supported knowledge exchange between research and practice, and contributed to aligning InPlasTwin experimental activities with real agricultural production systems.

**Training on analytical techniques for plastic additive analysis at DTU Food**

The main aim of this training was to improve knowledge on analytical techniques for the analysis of plastic additives (inorganic and organic) in mulching films. This involved the training of MSc. Aikaterini Spanoudaki (AUA), Dr. Stefan Marković and Dr. Majda Nikezić (JSI) at DTU Food under the supervision of Dr. Bina Bhattarai and Dr. Katrin Löschner, with support from laboratory staff. A scientist from IMR, Dr. Are Sæle Bruvold, with special expertise in data handling, joined the training to support the mass-spectrometric data analysis. The training provided a complete overview of the analytical process for the trainee, which is a part of the capacity building for future analytical work. The short-term staff exchange equipped the trainees with specialized knowledge and hands-on skills in the analysis of plastic additives using techniques based on gas and liquid chromatography coupled to mass spectrometry (GC-MS and LC-MS) for organic additives and inductively coupled plasma-mass spectrometry (ICP-MS) for inorganic additives. Further, it led to the development of a sample preparation protocol for extracting plastic additives from the strawberry matrix. The detailed description of the training and its outcomes can be found in D6.1.


*Figure 30 Training of JSI and AUA at DTU Food with participation of IMR*

**Short-term exchange at AUA**

Between 23 and 27 February 2026, Dr. Janja Vidmar (JSI) was hosted by Prof. Dimitrios Savvas at the Laboratory of Vegetable Production, Agricultural University of Athens (AUA). The main objective of the visit was to review and finalize the experimental design of an ongoing hydroponic strawberry cultivation experiment conducted under controlled greenhouse conditions at AUA.

The experiment, which started in January 2026 with the planting of 300 strawberry seedlings, investigates the potential uptake of micro- and nanoplastic particles and associated plastic additives into the edible parts of strawberries. The study also aims to evaluate the potential impact of plastic use in agriculture, particularly plastic mulching films, on strawberry production and food safety. During the visit, the experimental design and implementation procedures were discussed in detail. In the experiment, half of the plants are irrigated with a standard nutrient solution (control group) until the end of May, while the remaining plants receive a nutrient solution supplemented with 1 mg/L of micro- and nanoplastic particles for a period of two months. The study includes two strawberry cultivars grown on two commonly used substrates, coconut coir and rock wool, enabling the evaluation of the influence of cultivar type and substrate on the uptake of micro- and nanoplastics as well as on key strawberry quality parameters.

Following the completion of the experiment, the collected plant and substrate samples will be analyzed by InPlasTwin project partners using advanced analytical techniques in order to assess the presence of micro- and nanoplastics and associated chemical compounds. The visit contributed to strengthening collaboration between project partners and ensured the proper coordination and implementation of this key experimental activity within the InPlasTwin research framework.

## 5.8. Virtual training activities WP3, WP4, WP5, WP6

Ecosystem-building activities within the InPlasTwin project are closely linked with the implementation of several technical and coordination tasks across different work packages, particularly **WP3, WP4, WP5, and WP6**. These linkages ensure that knowledge generated within the project is effectively

shared among partners and translated into collaborative research activities, methodological development, and stakeholder engagement.

Regular coordination meetings and cross-work package discussions were organized to facilitate communication and knowledge exchange among project partners. A virtual training session was conducted within Task 3.1 to present and discuss the results of the staff exchange at DTU Sustain, focusing on methodologies for investigating microplastic release from biodegradable mulching films. The training covered key aspects of experimental design, including soil characterization, accelerated weathering conditions, and degradation experiments under controlled environmental parameters. In addition, analytical techniques such as FTIR and complementary methods for the characterization of microplastics were introduced. The session facilitated knowledge transfer among partners and supported the consolidation of methodological approaches for studying microplastic generation and degradation processes. Furthermore, virtual training on knowledge transfer activities conducted under Task 4.1, focusing on the development and application of protocols for the extraction of polyethylene (PE) microplastics from soil samples were presented. The training included hands-on demonstration of microplastic generation from mulching films, soil preparation and spiking procedures, density separation, Fenton digestion, and subsequent analysis using pyGC-MS. These activities contributed to the standardization of extraction methodologies and strengthened analytical capacity across partners and are also reported in Deliverable D4.2. In addition, virtual consultations and training sessions were organized under Task 6.3 to enhance knowledge exchange on the leaching and migration of plastic additives from micro- and nanoplastics (MNPs). These sessions addressed analytical approaches for both organic and inorganic additives using advanced chromatographic and spectrometric techniques (e.g., LC-qTOF-MS and ICP-MS), as well as the design of migration experiments in food simulants in accordance with regulatory frameworks. The training also facilitated discussion of experimental setups, analytical challenges, and preliminary results, strengthening the capacity of partners to assess potential environmental and food safety risks associated with plastic materials. These activities were also reported in Deliverable D6.2.

In addition, **cross-sectoral meetings was organized within WP5** (Task 5.3) to present the main learning outcomes on 27 January 2026, where Janja Vidmar (JSI) and Majda Nikezić (JSI) shared their experiences from the training at IMR. They highlighted insights into emerging spectroscopic and mass spectrometric techniques and provided a critical comparison of different analytical methods, including their applicable size ranges, types of information generated, strengths, and limitations.

Through these interactions, the project promotes interdisciplinary dialogue and supports the development of joint cross-project task forces aimed at advancing research on micro- and nanoplastics.

Overall, the integration of ecosystem-building activities with technical and coordination tasks across multiple work packages strengthens collaboration within the consortium and contributes to the development of a broader European research and innovation ecosystem addressing plastic pollution in agricultural and environmental systems.

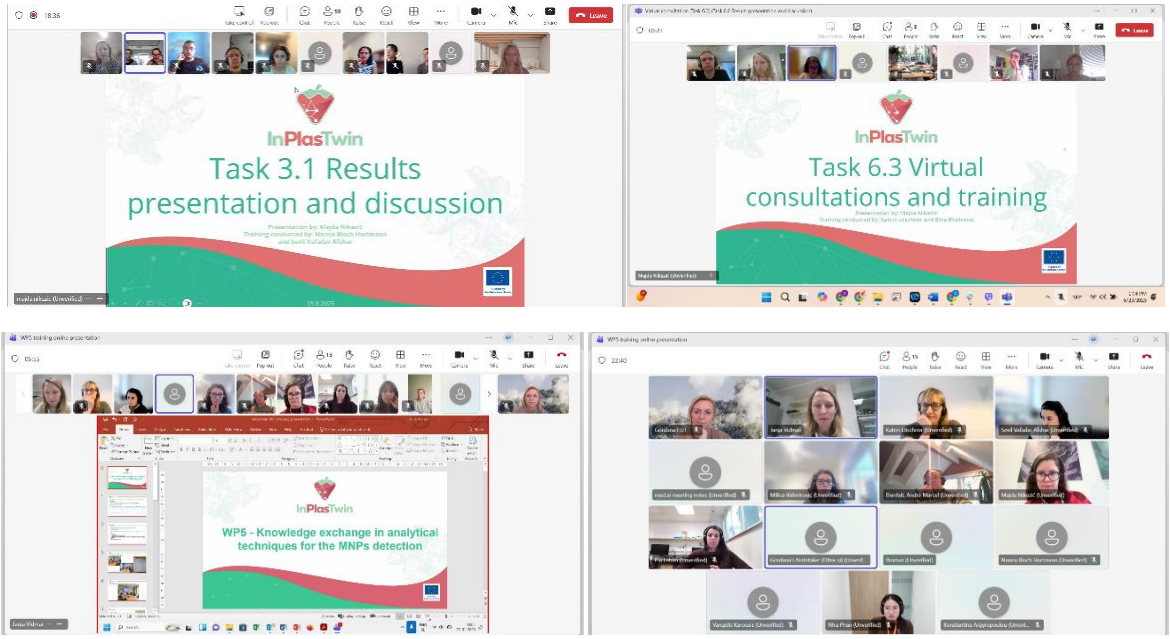


*Figure 31 Cross-work package coordination meeting linking T3.1, WP4, WP5 and WP6*

## 5.9. Featured Articles in Professional and Media Outlets

As part of the project's dissemination and ecosystem-building activities, the InPlasTwin consortium actively promoted project objectives and research topics through featured articles in professional magazines and institutional publications. These publications contribute to raising awareness of the project among agricultural stakeholders, the scientific community, and the broader public, while supporting knowledge exchange on issues related to environmental protection, sustainable agriculture, and plastic pollution.

In particular, the **Foodscale Hub (FSH)** published two articles in the Serbian agricultural magazine **"Poljoprivrednik"**, which focuses on agricultural innovation and sustainable practices. The first article was published on **26 May 2025** and presented Foodscale Hub's activities and projects, such as InPlasTwin, at the Novi Sad Agricultural Fair, highlighting discussions on innovation, sustainability, and collaborative initiatives addressing environmental challenges. The second article, published on **26 June 2025**, highlighted the role of collaborative research projects in promoting healthier ecosystems and sustainable solutions.

Additionally, the **Jožef Stefan Institute (JSI)** contributed to project dissemination through an article published in the institutional magazine **"Časopis IJS"** on **14 April 2025**. This publication presented research activities and initiatives carried out within the institute, including topics related to micro- and nanoplastics and environmental monitoring.

These featured articles contribute to strengthening the visibility of the InPlasTwin project and promoting dialogue between researchers, agricultural stakeholders, and the broader public, thereby supporting the development of a collaborative knowledge ecosystem addressing plastic pollution and sustainable food systems.

## 5.10. Media Coverage and Broadcast Appearances

The activities and research topics related to the InPlasTwin project also received visibility through broadcast media. Foodscale Hub was featured on Radio-televizija Vojvodine (RTV), where representatives of the centre presented its ongoing projects and innovation activities. During the programme, Foodscale Hub colleagues Tamara Trninić Gondi and Sandra Kolarić discussed the CrackSense project and highlighted several additional initiatives in which the centre is actively involved, **including InPlasTwin.**


*Figure 32 National TV Coverage*

Within this media appearance, the InPlasTwin project was presented in the context of research investigating the impact of microplastics on strawberries, focusing on how soil contamination may influence plant development, fruit quality, and long-term agricultural sustainability. The broadcast contributed to increasing national visibility of the project and supporting broader discussions on science, innovation, and the future of sustainable agriculture. The full TV segment is available at: https://lnkd.in/ddEFVDJZ

# 6. Monitoring of Synergetic links and Ecosystem building Activities

Monitoring and evaluation are essential to ensure that InPlasTwin's collaborations with Projects, Initiatives, and Platforms are purposeful, strategic, and contribute to the overall impact of the project. To that end, WP7 will implement a structured system for tracking engagement activities and assessing their effectiveness. This system will help maintain alignment with project objectives, foster transparency across the consortium, and support timely decision-making for ongoing and future interactions.

## 6.1 Monitoring and Tracking

All interactions with PIPs will be systematically monitored using a centralized engagement tracking tool, developed and maintained by WP7. In a shared repository, all information will be updated regularly and provide a clear overview of all contacted leads, achieved collaborations and joint activities. So far, collaborations have been initiated with the following PIPs:

**GREENLand** – Twinning Microplastic-free Environment, a Horizon Europe project (Jan 2023 – Dec 2025, ID: 101079267) is an innovative strategy for transforming to a digital Cloud-Based System with the education of staff for research of microplastics in soil, water, and microorganisms, as well as networking with the excellent institutions and stakeholders who are interested in the results of scientific research.

The essence of GREENLand is to change the system in which a great contribution will be made to the planet without plastic by working on preventive measures, innovations, and a plan for remediation. Trained professional staff will be able to be more efficient with the help of new digital tools, which will result in the establishment of strong cooperation with institutions and industry.

GREENLand will benefit EU citizens and beyond because the baseline of the project is the creation of a microplastics-free environment and food for the future, with the objective to reach zero-microplastics pollution and zero-hungry goals in an eco-friendly environment.

Website: https://project-greenland.com/

**ECONUTRI,** Innovative concepts and technologies for Ecologically sustainable Nutrient management in agriculture aiming to prevent, mitigate and eliminate pollution in soils, water and air (November 2022-April 2026, Grant agreement ID: 101081858), is an EU funded, Horizon Europe project which aims to optimize validate and demonstrate at commercial level nutrient management technologies that minimize or even eliminate nitrogen (N) and phosphorus (P) pollution by limiting N emissions to soil, water and air and P emissions to water resources. Such a challenge follows the EU's Green Deal having as a target to reduce fertilizer use by at least 20% by 2030, thereby reducing 50%the losses of nutrients to the benefit of the farmers and the environment. ECONUTRI is partnering with six Chinese institutions to complement activities between the EU and China and strengthen scientific and technological ties.

Website: https://econutri-project.eu/

**PUREEF-Y** "Past, present, and future status and mitigation for Cyprus shallow-water reef biodiversity and functioning under global change" is a Horizon Europe Twinning project (July 2024 – June 2027, Grant agreement ID: 101158830) that aims to strengthen research capacities in Cyprus, focusing on the impacts of climate change and anthropogenic stressors, including marine pollutants such as microplastics, on marine ecosystems and biodiversity in the Eastern Mediterranean region. Through collaboration with leading partners from Israel Oceanographic and Limnological Research (IOLR) and the Universitat Autònoma de Barcelona (UAB), the Cyprus Marine and Maritime Institute (CMMI) will build capacities to assess: (1) physicochemical parameters in sediments and waters affected by climate change and ocean acidification; (2) marine pollution levels, focusing on microplastics analysis of coastal sediments and waters at key sites around Cyprus, as well as heavy metal analysis; and (3) the health of ecologically important shallow benthic and planktonic habitats. The collected data will feed into experiments designed to evaluate habitat functions and metabolic roles of native and alien species under both normal and stressor-driven conditions. Findings will support the development of monitoring, conservation, restoration, and policy measures.

Website: https://pureefy.eu/

MINAGRIS, MIcro- and NAno-Plastics in AGRIcultural Soils: Sources, environmental fate and impacts on ecosystem services and overall sustainability, (September 2021- September 2026, Grant agreement 101000407) is an EU Horizon project exploring the impact of micro- and nanoplastics in agricultural soils, specifically soil biodiversity, plant productivity, and ecosystem services and their transport and degradation in the environment.

The project uses a collaborative approach to raise awareness, reduce contamination, and promote sustainable plastic use, ultimately enhancing Europe's food systems. We will provide tools and recommendations for the sustainable use of plastic in agriculture at the farm and field levels for ensuring safe and economically viable food systems in Europe.

Website: https://minagris.eu/

**SPECTRA** – Twinning Coordination for Enhanced Scientific Capacity in Water Quality, Food Safety, Traceability, and Authenticity is a Horizon Europe Coordination and Support Action (October 2024 – September 2027, Grant Agreement No. 101158453) funded under the Widening Participation programme. The project aims to strengthen the research and innovation capacity, international visibility, and scientific excellence of Aristotle University of Thessaloniki (AUTH) in the interconnected fields of water quality and food safety, quality, traceability, and authenticity: areas of growing importance under climate and environmental change.

SPECTRA adopts a twinning approach that combines targeted research activities with hands-on training, staff exchanges, mobility schemes, workshops, and courses. Through collaboration with leading European partners from Italy, Slovenia, Spain, and Ireland, the project reinforces analytical, digital, and organizational capabilities while fostering stronger links between academia, industry, and policy stakeholders.

Scientifically, SPECTRA advances the use of state-of-the-art analytical techniques, such as mass spectrometry, spectroscopy, chromatography, and intelligent data systems, to improve monitoring and assessment of water and food quality. These capacities complement initiatives such as InPlasTwin by supporting high-quality data generation, interpretation, and evidence-based decision-making related to environmental pollutants, including microplastics.

Overall, SPECTRA contributes to improved water and food safety governance, increased consumer confidence, and stronger integration of widening institutions into the European Research Area.

Website: spectra-project.eu/

MiCoS, an ERC-funded research proposal (May 2023 – April 2028) studies the effects of micro- and nanoplastics on soil and plant health. The project moves from risk assessment to risk analysis and eventually risk reduction. A cost-efficient, relatively fast extraction and visualization procedure for microplastics out of soil has been developed. This method is currently used to measure the microplastic concentration in 240 agricultural fields in Belgium, the Netherlands, and Luxembourg. Furthermore, pot trials will be designed to study the effect on plant (biomass, disease resistance) and soil (differences in microbial community and diversity) health by microplastics. Eventually, we aim to reduce current pollution levels by actively screening for plastic-degrading organisms

Website: https://www.micos.ugent.be/en

Microplastics for Breakfast (MP4B) is an independently and privately initiated interdisciplinary initiative founded in 2023 that emerged from microplastics research in the Adriatic Sea and the broader Adriatic region. MP4B connects researchers, policymakers, industry, and civil society to strengthen regional collaboration, exchange knowledge on micro- and nanoplastics across environmental compartments, and promote informed action through community building and dedicated events.
Website: microplasticsforbreakfast.com

*Table 3. Other possible relevant synergies*

| | |
|---|---|
| NanoPlasticHub (https://u-szeged.hu/nanoplasthub/) | NanoPlastHub is an interdisciplinary research platform established in 2024 at the University of Szeged, dedicated to the science-based investigation and management of micro- and nanoplastic contamination. Our mission is to examine, within a unified scientific framework, the detection, environmental distribution, biological mechanisms, physiological effects, and regulatory implications of plastic particles in the submicron size range. |
| PLASTIX https://www.interregeurope.eu/plastix | PLASTIX facilitates industrial transition towards a resource-efficient economy, circular economy growth, and eco-innovations in participating regions and in other European regions. The project tackles the growing problem of plastic waste, its recyclability, and its replaceability as a part of the transition towards a more circular economy. All European regions are facing similar plastics challenges: consumption of huge amounts of plastics, their recyclability, reusability, and replaceability with bio-based raw materials, as well as microplastics and the impact of plastic waste on the climate and water. |
| CRC 1357 Microplastics (https://www.sfb-mikroplastik.uni-bayreuth.de/en/index.html) | The Collaborative Research Center (CRC) 1357 "Microplastics" was established in 2019 at the University of Bayreuth. The CRC investigates the increasing contamination of the environment by plastics worldwide and develops innovative solutions to counteract the resulting ecological, health, and economic risks. The close linking of interdisciplinary basic research with problem-related application research will enable well-founded risk assessments and further strengthen the transfer of knowledge to the public. The goal of future research projects of the CRC "Microplastics" is to gain a fundamental understanding of the processes and mechanisms that 1) condition biological effects of MP in limnetic and terrestrial ecosystems as a function of the physical and chemical properties of the particles, 2) influence the migration behavior of MP particles and 3) cause the formation of MP starting from macroscopic plastics, based on model systems for plastics, organisms, and environmental compartments. These findings provide a scientifically sound basis for assessing the environmental risks of MP, as well as for developing environmentally friendly plastics and processes to prevent the emission of MP into the environment. |
| Planterastics https://planterastics.fkkt.uni-lj.si/ | PLANTERASTICS is a group of researchers who are very enthusiastic about microplastic research, and they work together at the Faculty of Chemistry and Chemical Technology, University of Ljubljana, Slovenia, under the supervision of Dr. Gabriela Kalčikova. |

| | |
|---|---|
| ICPLASTICS https://www.icplastic.eu/ | ICPLASTIC is an ambitious research network with a transformative goal of developing efficient and reproducible protocols and equipment for micro and nanoplastic sampling, sample preparation and analysis to both support the application of ISO standards and water quality legislation and close knowledge gaps in risk analysis and occurrence. |

One example of good practice is a cross-project meeting with PUREEF-Y project on the preparation of workshops and technical discussion on both project workflows.

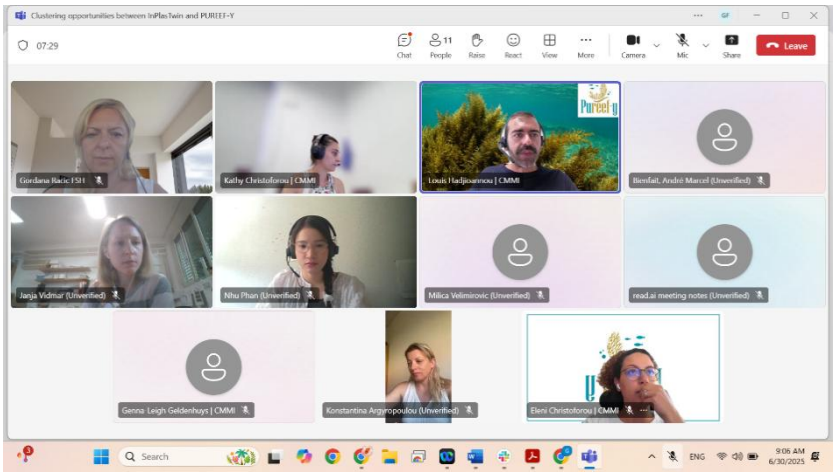


*Figure 33 Cross-project meeting with the PUREEF-Y project*

## 6.2. Reporting

Reporting on PIP-related activities will occur at both internal and external levels. Internally, WP9 and WP10 will produce periodic summaries (aligned with project reporting periods) to inform the Project Coordinator and relevant Work Packages about the status and outcomes of ongoing collaborations. These reports will include quantitative indicators (e.g., number of active PIPs, events co-organized, data exchanges conducted) and qualitative assessments (e.g. perceived value, policy relevance, stakeholder feedback).

Externally, highlights of successful collaborations and key lessons learned will be integrated into public deliverables, newsletters, social media updates, and policy briefs. In particular, WP9 will ensure that results from joint activities are properly disseminated and that synergies are communicated to wider audiences, including policymakers and civil society.

This continuous monitoring and reporting process will help InPlasTwin maintain a high standard of engagement, demonstrate the added value of its networked approach, and ensure accountability across its collaboration ecosystem.

# 7. Next Steps

1. **Strengthen collaboration with identified Projects, Initiatives and Platforms (PIPs)** by continuing engagement with sister projects and relevant R&I initiatives working on micro- and nanoplastics, environmental monitoring, sustainable agriculture, and food safety.
2. **Maintain and regularly update the inventory of relevant initiatives and stakeholders** by collecting inputs from consortium partners, monitoring emerging projects and networks, and documenting collaboration opportunities in the shared repository.
3. **Organize and implement joint dissemination and knowledge exchange activities**, including webinars, workshops, conference sessions, and networking events aimed at sharing project findings, methodologies, lessons learned, and best practices.
4. **Promote and disseminate project results through targeted communication activities**, including the development of engaging digital content, scientific publications, conference presentations, and contributions to European knowledge platforms and networks.
5. **Strengthen the InPlasTwin innovation ecosystem** by expanding engagement with a diverse group of stakeholders, including researchers, educators, students, farmers, policymakers, industry representatives, and environmental organizations.
6. **Support capacity building and knowledge exchange opportunities for widening partners, early-career researchers, and PhD students**, ensuring the development of interdisciplinary skills relevant to micro- and nanoplastics research in environmental and agri-food systems.
7. **Facilitate multi-actor collaboration and dialogue** through workshops, stakeholder meetings, and collaborative activities that connect research with policy, industry, and agricultural practice.
8. **Contribute to the development of joint recommendations and policy-relevant insights**, supporting evidence-based decision-making related to plastic pollution, sustainable agricultural practices, and environmental protection.
9. **Develop a strategy for the long-term sustainability of the InPlasTwin network**, ensuring that partnerships, collaboration mechanisms, and knowledge exchange activities established during the project continue beyond its completion.
10. **Integrate the outcomes of networking and collaboration activities into future project outputs**, including dissemination materials, policy recommendations, and strategies for strengthening research excellence and cooperation between widening and non-widening countries.

# 8. Conclusions

This deliverable presents a structured approach to establishing and strengthening synergetic links and ecosystem-building activities within the InPlasTwin project. Through the systematic identification and engagement of relevant projects, initiatives, platforms, and stakeholders, the report outlines how collaboration and knowledge exchange can enhance the visibility, scientific excellence, and overall impact of the project. By mapping complementary initiatives and defining mechanisms for cooperation, the project establishes a solid foundation for building meaningful partnerships that extend beyond the immediate consortium.

Through networking activities, participation in scientific events, joint workshops, and stakeholder engagement initiatives, InPlasTwin contributes to strengthening collaboration across the European research and innovation landscape, addressing micro- and nanoplastics, environmental pollution, and sustainable agri-food systems. These activities support the exchange of expertise, promote

methodological alignment, and facilitate the dissemination of project findings to a broad community of researchers, policymakers, industry stakeholders, and agricultural practitioners.

The ecosystem-building approach adopted in the project encourages interdisciplinary collaboration and multi-actor engagement, ensuring that research outcomes are communicated effectively and translated into knowledge that can support environmental monitoring, sustainable agricultural practices, and policy development. At the same time, capacity-building activities and collaborative initiatives strengthen the research and innovation capabilities of the participating institutions, particularly those from widening countries.

Overall, the actions described in this deliverable provide a strong basis for the continued development of the InPlasTwin innovation ecosystem. By maintaining and expanding collaborations with relevant research and innovation initiatives, supporting knowledge exchange, and promoting the dissemination of project outcomes, the project will contribute to strengthening European cooperation in the field of micro- and nanoplastics research and to advancing sustainable solutions addressing plastic pollution in environmental and agri-food systems.