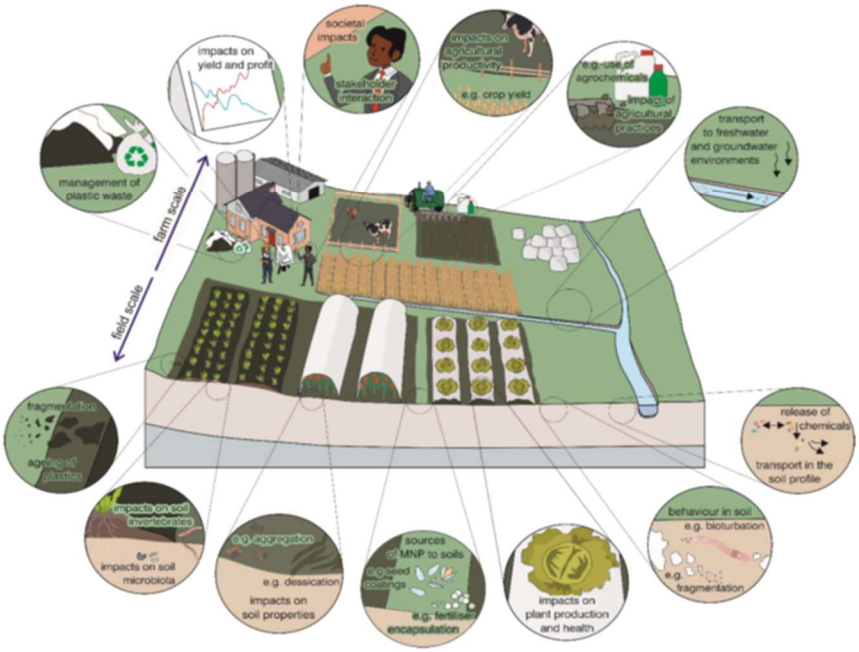
Annex1.a PAPILLONS flyer

Plastic in Agricultural Production:
Impacts, Lifecycles and LONg-term Sustainability

Plastics are becoming increasingly important in European agricultural production. There is a concern that this results in the release of micro and nanoplastics to soil. The long-term impacts of these materials on soil ecosystem and agricultural sustainability is unknown. Knowledge and understanding of mechanisms and processes controlling releases, behaviour and impacts of plastics, as well as their chemical additives, on soil ecosystem and its productivity is mostly missing. A consortium of 20 leading European research institutes coordinated by the Norwegian Institute for Water Research is competing for a European research grant to address these gaps and deliver knowledge useful for the development and implementation of European agricultural and environmental policy.

New PAPILLONS logo



PAPILLONS' overarching goal is to elucidate sustainability of plastic use in European agriculture in relation to releases and impacts of micro- and nano-plastics (MNPs) and their chemical additives in soil.

Through novel applications of state-of-the-art analytical chemistry, materials science, computer modelling and nanofabrication technologies, we will elucidate sources, behaviour and impacts of particles in both micro- and nano-scales. We will also deploy a multi-actor approach whereby scientists in the areas of agronomy, environmental science, ecology, chemistry, engineering, economics and social sciences meet a diverse group of actors in the farming, industry, services and policy sectors to convey and co-generate relevant knowledge for the future protection of farming ecosystems from the adverse impacts of MNPs. We will take advantage of the cross-disciplinary synergies by conducting surveys and experimental work at European level to elucidate releases on MNPs from the use of agricultural plastic, their accumulation in agricultural soils and their transport to other part of the ecosystem. We will also study the potential long-term impacts of MNP and their chemical additives on soil ecosystem. We will also assess the potential impacts on soil productivity, crop quality, agricultural yield and, ultimately, social and economic sustainability of agricultural plastics.

PAPILLONS aims at producing knowledge to inform the innovation agendas of farmers, industry and policy in Europe and beyond. We aim to support and positively impact the European chemical regulation (with regards to the use of plastics in agriculture) and the reform of the European Common Agricultural Policy.

Contact and logo of PAPILLONS partner responsible for the action

Annex1.b General information to participants

[name of the persons collecting information] are working with researchers from the PAPILLONS consortium on a new research project designed to explore the potential impacts of plastic pollution in agricultural soils. Micro and nanoplastics are very small fragments of plastics that can originate from multiple sources, including wastewater, erosion of coated surfaces, breaking down of plastic litter etc. They are pollutants and they continuous accumulation in soil can have adverse impacts on ecosystems (including, for example, on soil fertility). There is a demand to investigate how likely and important are these adverse effects for the environment and agriculture.

Plastic has several important applications in farming. Plastics films and coatings are, for example, used to improve soil conditions, protect seeds and crops and can also help to reduce the amount of artificial fertilizers and pesticides used to improve production. While beneficial for agricultural practices, these applications can unfortunately cause release of micro and nanoplastics to the environment. In order to ensure safe farming practices and crop, environmental health and long-term prosperity of farmers and farming communities, scientific research is needed to highlight potentially adverse consequences of plastic use in agriculture.

Our project is designed to answer these important questions through science and by collecting and analysing the perspective of people and organizations with different interests and roles. To achieve this, we will conduct a participatory research process involving representatives of authorities, farmers, industries linked to agricultural use of plastics, representatives of citizens of farming communities and environmental organizations. The information provided by this interaction with multiple stakeholder will enable a fair and objective analysis of costs and benefit provided by the use of plastics in farming. This knowledge, in turn is conceived to positively impact policies at European level and stimulate innovation towards better and safer products. Participation into this initiative will contribute toward the definition of sustainable agricultural practices. Hence, this task will produce several benefits for the society.

To implement this participatory approach, we are contacting research participants and stakeholders with an interest in this topic. We will run interviews and submit questionnaires. Each interaction will be systematically monitored and assessed throughout the duration of the project, so as to include a pre, during and post-performance assessment. This will allow us to identify and analyse possible positive impacts of this research on the participants (e.g. in terms of increased awareness and knowledge, as well as in terms of new and better-informed dialogues in policy, products, instruments and practices developments). The benefits of participating in the project include getting involved in a unique opportunity to contribute and influencing the development of the farming sector in Europe (and its broader policy and industrial context). The action is also oriented towards impacting future policies to prevent plastic pollution to soils, rivers and oceans. Participants will get first-hand access to scientific discoveries, inclusion into stakeholder fora with European authorities and other major industrial and agricultural organizations active in Europe and the access to digital atlas of agricultural plastic uses in Europe that will be developed during the project.

Participants will not be paid for participating in this study. Expenses for organizing workshops will be covered by PAPILLONS. Participants involved in the study will take part to interviews (either in physical

presence or in video conferences), participate to workshops and will be asked to contribute in written surveys. Interviews and workshop may be recorded (in video, audio of photography). Private and personal information will be obtained only to the scope of establishing contacts and send invitation to meetings. Personal information will not be included as material for data analysis and will not be delivered to any other organization within or outside Europe. The data and recordings generated in this study will be used for basic science research; it will not be used with any commercial purpose. Video and audio recording will be used only for scientific uses. All the procedures chosen for this study are widely used by social researchers and entail no risk to the participants. The Principal Investigator and other participants in the team have considerable experience with using these methods, having used them successfully in numerous earlier social science research projects. The PAPILLONS consortium will treat any personal information and data with the highest level of consideration, courtesy, privacy and ethical practice according to the corresponding national and European legal and ethical requirements.

4. Informed consent

Template of consent form for participation [Name of the action]

I hereby confirm my participation in "[Name of the Action]" to be held in the context of the PAPILLONS project. I have been informed by the head of research about the purpose of PAPILLONS and of the "[Name of the Action]".

I have been informed about the nature and scope of the data which will be recorded and stored and about the purpose for which it may be used.

I understand that my responses will be documented (via audio & video recordings, photographs, written reports) and will be stored until [Date of deletion; usually within 6 months].

I understand that I can request rectification or deletion of this data before this date.

My participation in the "[Name of the Action]" is voluntary and I understand that I can end my participation at any time.

I understand that I do not have to give reasons for ending my participation if I do not want to.

Tick if you agree:

☐ I have read the consent form and I agree to voluntary participation. ☐ I allow the use of resulting audio, video recordings and photographs in public presentations and publications.

Date and Place: _____

Name: _____

Signature: _____

Researcher Name/s: _____