

# Platform presentations – 08 April, Afternoon

8 April

Abstract Belgium II (60 people)  
ID

14:15-15:55 A1. Harmonization and advances in the detection and characterisation of plastic pollution in the agrifood chain

		<b>Chairs: Nicolas Beriot (Wageningen University), Bert Van Bavel (NIVA)</b>
14:15		Brief section intro
14:18		<b>Keynote: Bert Van Bavel (NIVA)</b>
14:37	77	A multi-technique approach to detect microplastics in soil <i>Pierofrancesco Cerruti (Institute of Polymers, Composites and Biomaterials, National Research Council of Italy)</i> *
14:50	50	Microplastics Analysis and the Infrared Spectrum: Is Spectral Range Selection Critical? <i>Wesam Alwan (Agilent Technologies, Inc.)</i>
15:03	74	Fluorescent Labelling of Polystyrene Microplastics for in Situ Detection in Soil <i>Shen Sesselle (Ghent University)</i>
15:16	73	Portable devices for the detection of plastic particles below 15 µm: application of Raman spectroscopy and optical/acoustical tweezers <i>Silvie Bernatova (Institute for chemical and physical processes (IPCF), National Research Council of Italy)</i>
15:29	33	Ensuring representative sample volume predictions in microplastic monitoring <i>Richard Cross (UK Centre for Ecology and Hydrology)</i>
15:42		Minipanel

15:55 - 16:25 Poster time with coffee

16:25-18:05 B1. Addressing sustainability of plastic in the agrifood sector

		<b>Chairs: Valentina Tartiu (NIVA) + Ildiko Heim (FiBL) + Giulia Carcasci (FAO)</b>
16:25		Brief section intro
16:28		<b>Keynote: Giulia Carcasci (FAO) (15 min + 3 min Q&amp;A)</b>
16:47	82	Circular economy pathways to address agriculture plastic waste in 7 countries – A research protocol <i>Ravinder Kumar (Natural Resources Institute, University of Greenwich, UK)</i>
17:00	44	Assessing the ecological and socio-economic impacts of Microplastics at field and farm level: Development of a holistic questionnaire and analysis of survey results in MINAGRIS project <i>Ildiko Heim (FiBL Austria)</i>
17:13	53	Mapping of Agricultural Plastics Pollution in Soil: case study of Italy, France and Norway <i>Ali Hachem (University of Bari Aldo Moro)</i>
17:26	84	Why biodegradable plastic polymers are not a nice to have but a must for certain applications <i>Christian Lott (HYDRA Marine Sciences GmbH)</i>
17:39	18	Safe and sustainable by design polyesters: integrating structural modeling, ecotoxicity and biodegradation studies for fast screening <i>Raffaele Bruschi (Università degli Studi di Trieste)</i>
17:52		Minipanel

18:05 End of day

8 April

Abstract Belgium III (120 people)  
ID

14:30-15:55 A2. Plastics and plastic additives in food: a One Health perspectives over plastic pollution

		<b>Chairs: Lev Neretin (FAO), France Collard (NIVA).</b>
14:15		Brief section intro
14:18		<b>Keynote: Richard C. Thompson (University of Plymouth) (15 min + 3 min Q&amp;A)</b>
14:37	6	Occurrence of microplastics and bisphenols in shellfish on the Croatian Adriatic coast (PLASTICSHELL project) <i>Sandra Petričević (Croatian Veterinary Institute)</i>
14:50	59	Human exposure to microplastic through cod consumption: a focus on Norway <i>France Collard (Norwegian institute for Water Research - NIVA)</i>
15:03	3	Exposure of U.S. Adults to Microplastics from Commonly-Consumed Proteins <i>Britta Baechler (Ocean Conservancy)</i>
15:16	86	Impact of Microplastics on Honey Bees and Honey Products <i>Parisa Gazerani (Oslo Metropolitan University)</i>
15:29	76	Migration of micro- and nanoparticles from reusable food contact material <i>Karla Parga (McGill University)</i>
15:42		Minipanel

15:55 - 16:25 Poster time with coffee

16:25-18:05 B2. Understanding the impact of plastics and associated contaminants in soil environments

		<b>Chairs: Lisa Joos (Ghent University), Melanie Braun (University of Bonn)</b>
16:25		Brief section intro
16:28		<b>Keynote: Edoardo Puglisi (Università Cattolica) (15 min + 3 min Q&amp;A)</b>
16:47	4	Conventional and biodegradable microplastics affect soil properties and microbial functions across a European pedoclimatic gradient <i>Klara Smidova (RECETOX, Masaryk University)</i>
17:00	21	Effects of microplastic contamination on soil respiration and carbon sequestration <i>Xiaomei Yang (Wageningen University)</i>
17:13	14	Effects of Conventional and Biobased Mulch Film Microplastics on Soil Bulk Density, Hydraulic Conductivity, and Water Retention in Two Soil Types Under Wetting-Drying Cycles <i>Špela Železnikar (University of Ljubljana)</i>
17:26	47	Interactions of microplastics with pesticides and veterinary drugs drive effects on ammonia oxidizers and nitrification in agricultural soils <i>Eleni Rafaila Lamprou (University of Thessaly)</i>
17:39	70	Biological Evaluation of Binding of Toxins to Microplastics <i>Elien Alderweireldt (Ghent University)</i>
17:52	57	Plastic legacy of a pandemic: the lingering impacts of personal protective equipment waste on agroecosystems <i>Gábor Feigl (Department of Plant Biology, University of Szeged)</i>

18:05 End of day

# Platform presentations – 09 April, Morning

9 April	
Belgium II (60)	
<b>09:00-10:30</b>	<b>C1a. Sources, distribution, fate and behaviour of plastics and associated chemical in soils</b>
	<b>Chairs: Rachel Hurley (Norwegian Institute for Water Research - NIVA), Christian Laforsch (Bayreuth University)</b>
09:00	Brief intro
09:03	<b>Keynote: Christian Laforsch (Bayreuth University)</b>
09:22	20 The MiCoS project: Monitoring of micro- and macroplastics in 240 arable fields in the Benelux <i>Lisa Joos (Ghent University)</i>
09:35	54 Microplastic contamination in agricultural soils: uFTIR method assessment and European survey of 220 fields <i>Nicolas Beriot (Wageningen University)</i>
09:48	32 Macro- and micro-plastic accumulation in soils under different intensive farming systems: A case study in Quzhou county, the North China Plain <i>Hanyue Zhang (Wageningen University)</i>
10:01	49 Long-term urban compost application leads to coarse microplastics accumulation in agricultural soils <i>Gabin Colombini (IEES-Paris, Sorbonne University)</i>
10:14	52 Occurrence and Spatial Distribution of Microplastics in Soil and Potential Risks on Human Health <i>Amna Zia (Materials and Engineering Research Institute, Sheffield Hallam University)</i>
<b>10:30-10:45</b>	Coffee break
<b>10:45-12:35</b>	<b>C1b. Sources, distribution, fate and behaviour of plastics and associated chemical in soils</b>
	<b>Chairs: Rachel Hurley (NIVA), Christian Laforsch (Bayreuth University)</b>
10:45	<b>Keynote: Rachel Hurley (NIVA)</b>
11:04	69 Mobility and fate of biodegradable microplastics in agricultural soils <i>Cynthia Rieckhof Rivas (IMDEA Water Institute)</i>
11:17	68 The Distribution of Pristine and Aged Microplastics in Soil Aggregate Fractions <i>Patria Novita Kusumawardani (Ghent University)</i>
11:30	34 Microplastic incorporation into soil aggregates: Insights from two-year field experiments in European agricultural topsoils <i>Max Groß (Institute of Crop Science and Resource Conservation - Soil Science, University of Bonn)</i>
11:43	35 First experimental evidence of fast leaching of small (1.7 µm) microplastics added to soil in field conditions <i>Nick Krekelbergh (Ghent University)</i>
11:56	78 Rainfall-induced transport of microplastics in soils depends on soil pore structure <i>Jeongyeon Yun (Swedish University of Agricultural Sciences)</i>
12:09	56 Plastic additive fate in soil, earthworms and barley: A 2-year field study <i>Aristeidis Tsagkaris (University of Chemistry and Technology, Prague)</i>
12:22	16 Microplastic transport in soil by nematodes <i>Yin Liu (Ghent University)</i>
<b>12:35-14:15</b>	Lunch break & Poster time

9 April	
Belgium III (120)	
<b>09:00-10:30</b>	<b>C2a. Effects of plastic residues on plants</b>
	<b>Chairs: Luca Nizzetto (Norwegian Institute for Water Research - NIVA), Sannakajsa Velmala (Natural Resources Institute Finland - Luke)</b>
09:00	Brief Intro
09:03	<b>Keynote: Thijs Bosker &amp; Laura Zantis (Leiden University)</b>
09:22	22 Biodegradable microplastics induce changes in lettuce defence mechanisms and soil microbial activities <i>Sannakajsa Velmala (Natural Resources Institute Finland - Luke)</i>
09:35	23 Short-term impact of plastic and biodegradable mulches on soil health in blueberry plantation in Southern Portugal <i>Corina Carranca (INIAV)</i>
09:48	27 Effects of biodegradable plastics on the uptake of N by plants <i>Sara Guerrini (University of Bologna and NOVAMONT)</i>
10:01	38 Response of maize (Zea mays) growth to soil contaminated with microplastics under field conditions <i>Bin Guo (Wageningen University)</i>
10:14	2 Wood distillate enhances plant defences and yields in bioplastic-contaminated soils, while reducing reliance on chemical solutions <i>Silvia Celletti (University of Turin, Department of Agricultural, Forest and Food Sciences - DISAFA)</i>
<b>10:30-10:45</b>	Coffee break
<b>10:45-12:35</b>	<b>C2b. Effects of plastic residues on plants</b>
	<b>Chairs: Luca Nizzetto, Sannakajsa Velmala</b>
10:45	26 Comparative Impacts of Leached Chemicals from Conventional and Biodegradable Plastics on Crop Growth and Development <i>Laura Zantis (Leiden University)</i>
10:58	28 Transcriptomic analysis of durum wheat responses to polystyrene nanoplastics <i>Giuliana Bruno (University of Tuscia)</i>
11:11	29 Short-time exposure to microplastics: case study with potted blueberry plants <i>Ana Mafalda Tendeiro (ITQB NOVA)</i>
11:24	42 Polystyrene nanoplastics drive metabolic shifts in pasta wheat towards high sugar accumulation through osmotic stress mechanisms, posing risks to crop yield and food security <i>Benedetta Pizziconi (Università Campus Bio-Medico di Roma)</i>
11:37	63 The defence response of plant cells as an effect of polystyrene nanoparticles in in vitro culture media <i>Slawomir Sowa (Plant Breeding and Acclimatization Institute, Poland)</i>
11:50	88 Impact of Polyethylene Nanoplastics on Plant-Rhizosphere Interactions in Lettuce (cv. Canasta) and tomato (cv. Microtom): A Multi-Omics Approach <i>Leilei Zhang (Università Cattolica del Sacro Cuore)</i>
12:03	Panel discussion
12:16	
<b>12:35-14:15</b>	Lunch break & Poster Time

# Platform presentations – 09 April, Afternoon

9 April

Belgium II (60)

14:15-16:00		D1a. Behaviour and transformations of plastic and associated chemical pollution in soils
<b>Chairs: Raffaella Meffe &amp; María de las Virtudes Martínez Hernández (IMDEA Water Institute)</b>		
14:15		Brief intro
14:18	37	<b>Keynote: Caroline De Tender (Ghent University)</b>
14:37	40	Co-occurrence of multiple contaminants: unentangling adsorption behaviour in agricultural soils <i>Gaowei Tan (Wageningen University)</i>
14:50	72	Advancing Microplastic Fate Assessment: Incorporating Size Analysis and Abiotic Degradation in Regulatory Testing <i>Philipp Dalkmann (Bayer AG - Crop Science Division)</i>
15:03	9	Investigating the Degradation of Biodegradable Mulch Films in Agricultural Soil: A Molecular Approach <i>Giuseppe Proietto Salantri (IPCB-CNR ss Catania &amp; University of Bologna)</i>
15:16	60	Comparative disintegration/biodegradation of biodegradable in soil mulching films under field conditions in South and North Europe <i>Christina Pyromali (Agricultural University of Athens)</i>
15:29	61	The fate of chemical additives released in agricultural soil from biodegradable mulching films <i>Demetres Briassoulis (Agricultural University of Athens)</i>
15:42		Minipanel

15:55-16:30 Poster time with coffee

16:30-18:00		D1b. Integrating data and knowledge from plastic pollution monitoring
<b>Chairs: Caroline de Tender (Ghent University) and Violette Geissen (Wageningen University)</b>		
16:30	5	The Global AgriPlastics project: Assessing the societal benefits and risks of plastic film mulch use <i>Dave Chadwick (Bangor University)</i>
16:43	12	Characterizing Microplastics emissions impacts in Life Cycle Assessment of agricultural production <i>Anne-Marie Boulay (CIRAIG Polytechnique Montreal)</i>
16:56	58	Ecological risk assessment of microplastics in urban farmland soils. A case of Mabibo Bonde la Mchicha Farm, Dar es Salaam, Tanzania <i>Emmanuel Kato (University of Dar es Salaam)</i> *
17:09	7	The PLASTIMPACT ENLIGHT thematic network: building a community of scientists and citizens around plastic pollution <i>Caroline De Tender (Ghent University)</i>
17:22		Minipanel

17:35-17:45 Break

9 April

Belgium III (120)

14:15-16:00		D2a. Unravelling plastic impacts in agrifood systems and beyond
<b>Chairs: Salla Sellonen (SYKE), Kees Van Gestel (Vrije Universiteit Amsterdam)</b>		
14:15		Brief section intro
14:18		<b>Keynote: Esperanza Huerta Lwanga (Wageningen University) (15 min + 3 min Q&amp;A)</b>
14:37	17	The effects of mulching film-derived microplastics on plants, soil organisms and microbial communities in a mesocosm study <i>Sam van Loon (Vrije Universiteit Amsterdam)</i>
14:50	64	Exploring the influence of organic matter on microplastic toxicity in agricultural soil using earthworms as bioindicators <i>Iteb Boughattas (Regional Field Crops Research Center of Beja, Tunisia)</i>
15:03	55	A Systematic Approach for a Holistic Ecotoxicological Assessment Strategy of Polymers <i>Marie Winter (Fraunhofer Institute for Molecular Biology and Applied Ecology IME)</i>
15:16	36	Human Health effect factor for Micro- and nano-plastic exposure via ingestion in LCA <i>Anne-Marie Boulay (CIRAIG Polytechnique Montreal)</i>
15:29	19	Impact of polyethylene terephthalate microplastics on feed digestive efficiency in ruminants <i>Sonia Tassone (Department Agricultural, Forest and Food Sciences, University of Turin)</i>
15:42	31	Adverse effects of nanoplastics in bovine granulosa cells that accumulate 100 nm and 250 nm polystyrene particles in vitro <i>Anja Baufeld (Research Institute for Farm Animal Biology - FBN)</i>

15:55-16:30 Poster time with coffee

16:30-18:00		D2b. Unravelling plastic impacts in agrifood systems and beyond
<b>Chairs: Sam Van Loon (Vrije University Amsterdam), Esperanza Huerta Lwanga (Wageningen University)</b>		
16:30	46	Effects of conventional and biodegradable microplastics on earthworm <i>Eisenia andrei</i> in two generations <i>Vilii Saartama (Finnish environment institute - SYKE)</i>
16:43	11	Effects of microplastics from mulching films on soil invertebrate communities in agricultural field plots from three different geographical regions <i>Kees van Gestel (Vrije Universiteit Amsterdam)</i>
16:56	62	Role of biodegradable and non-biodegradable microplastic in modulating the toxicological effects of organic pollutants in the soil organism <i>Folsomia candida</i> <i>Ilaria Negri (Università Cattolica del Sacro Cuore)</i>
17:09	66	Reproductive and behavioural responses of four soil invertebrate species to two types of polypropylene microplastics originating from agricultural plastics <i>Salla Selonen (Finnish Environment Institute - SYKE)</i>
17:22		Minipanel

17:35-17:45 Break

17:45	Plenary	Closing remarks (Luc Vernet, Edoardo Puglisi, Luca Nizzetto, Violette Geissen)
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# Posters

## 8 April

Poster slot num.	Abstract ID	Session	Title
D1P1	41	A1	Optimizing methods for quantification of microplastics in agricultural soils <i>Joana Antunes (INIAV)</i>
D1P2	43	A1	Application of Raman microspectroscopy for the characterization of microplastics in clam <i>Chamelea gallina</i> <i>Rosaria Aloia (Istituto Zooprofilattico Sperimentale dell'Abruzzo e del Molise, Via Campo Boario, Italy)</i>
D1P3	71	A1	The InPlasTwin project: Increasing expertise in micro- and nanoplastics analysis through twinning action <i>Milica Velimirovic (Flemish Institute for Technological Research)</i>
D1P4	51	A1	Method development for analysis of nanoplastics in drinking water and milk using transmission electron microscopy (TEM) <i>Charlotte Wouters (Trace Elements and Nanomaterials, Sciensano)</i>
D1P5	81	B1	Microplastic persistence & environmental impact of non- vs. biodegradable polymers in a conceptual model as a tool combining desired material properties & reduction of accumulation in the environment <i>Miriam Weber (HYDRA Marine Sciences GmbH)</i>
D1P6	93	B1	Microplastics in agricultural soils – awareness, knowledge and biodegradable product alternatives <i>Claudia Preininger (AIT Austrian Institute of Technology)</i>
D1P7	94	B1	Holistic and circular approaches for plastic management in agriculture <i>Noora Räsänen (MTK-Pohjois-Savo)</i>
D1P8	48	B2	Exploring the role of Plastisphere as a hotspot of Microbial Evolution for New Catabolic and Antibiotic Resistance Traits <i>Eustathios (Stathis) Lagos (Department of Biochemistry and Biotechnology, University of Thessaly, Larissa, Greece)</i>
D1P9	101	B2	Microplastics in soil: Long-term persistence, Transfer Risks, and Implications for Agroecosystems and Food Safety <i>Parisa Gazerani (Oslo Metropolitan University)</i>

## 9 April

Poster Slot num.	Abstract ID	Session	Title
D2P1	39	C1	Microplastic vertical migration in Antarctic soils under successive freezing-thawing cycles <i>Caik Oliveira de Miranda (Wageningen University and Research)</i>
D2P2	67	C1	Trophic transfer of microplastics from soil via earthworms ( <i>Eisenia fetida</i> ) to ground beetles ( <i>Poecilus cupreus</i> ) <i>Sarmite Kernchen (University of Bayreuth)</i>
D2P3	92	C1	Microplastic background levels in German soils <i>Zacharias Steinmetz (RPTU Kaiserslautern-Landau, IES Landau)</i>
D2P4	1	C2	Effects of microplastics on wheat performance in sewage sludge-amended soils <i>Anna Charatzidou (University of Sheffield)</i>
D2P5	10	C2	Microplastics from disposable plastic bags induce changes in soil properties and drought-like stress in sunflower <i>Anita Jemec Kokalj (University of Ljubljana, Biotechnical faculty)</i>
D2P6	15	D1	Biodegradability of microplastics from mulching films: Conventional vs. biodegradable materials in the open environment <i>Gabriela Kalčíková (University of Ljubljana, Faculty of Chemistry and Chemical Technology)</i>
D2P7	87	D1	Fragmentation of soil-biodegradable mulch film: The difference between fragments released from certified soil-biodegradable products and persistent microplastics <i>Patrizia Pfohl (BASF SE)</i>
D2P8	25	D2	Inhalation of nanoplastics in the mouse model: tissue bio-distribution and effects on the olfactory system <i>Giorgio Prosperi (Institute of Biochemistry and Cell Biology, National Research Council Monterotondo (Rome), Italy)</i>
D2P9	65	D2	Harnessing multi-omics insights to investigate environmental microplastic effects in marine polychaetes <i>Filippo Vaccari (Università Cattolica del Sacro Cuore)</i>
D2P10	79	D2	The effect of pollution on the electrophysiology of epithelium – insights from Caco-2 cell model <i>Gabriela Węglińska (Department of Physics and Biophysics, Institute of Biology, Warsaw University of Life Sciences)</i>
D2P11	89	D2	Differential toxicological and microbial interactions of compostable and conventional microplastics in zebrafish <i>Omayma Missawi (University of Namur, Belgium)</i>