

MICRO 2020

**FATE AND IMPACT OF MICROPLASTICS:
KNOWLEDGE AND RESPONSIBILITIES.**

CONFERENCE PROCEEDINGS

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MICRO2020

INTERNATIONAL CONFERENCE

23-27 NOVEMBER 2020 LANZAROTE AND BEYOND*



FATE AND IMPACTS OF MICROPLASTICS: KNOWLEDGE AND RESPONSIBILITIES



*MICRO** is a biannual international conference;
 a collaborative process coordinated by the scientific community and stakeholders.

MICRO 2020 is hosted by the Marine Sciences For Society researchers' network and the World Network of Island and Coastal Biosphere Reserves, under the patronage of UNESCO.

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Under COVID-19 conditions, MICRO 2020 was substantially online-based.

This 3rd edition of MICRO was a chance to contribute to fostering a collaborative effort among our continuously expanding MICRO community.

For this edition, **Local Nodes** played an invaluable role, they included:

Aalborg, Banyuls, Barcelona, Bastia, Bayreuth, Bouguenais, Boulogne sur mer, Braunschweig, Brussels, Bühl, Copenhagen, Créteil, Crozon, Exeter, Gran Canaria, Guyancourt, Helgoland, Ithaca, La Trinité sur Mer, Lanzarote, Leipzig, Madrid, Mallorca, Marne la Vallée, Mazatlán, Menorca, Oostende, Palavas, Plouzané, Plymouth, Rostock, Siena, Toronto, Trondheim, Urdaibai, Utrecht, Vigo and Wageningen.

We were more than 2000 authors thankful to be part of such an intense week. Hope the way we supported each other and our pursuits during the conference extends 'MICRO 2020: Lanzarote and Beyond' to 'MICRO 2022: OUTSIDE'

Authors, Speakers, Chairpersons, Scientific Committee, Technical Crew, Core Group, Nodes and ALL participants: SUCH A GREAT WEEK, accompanied throughout by Elinor Ostrom, Donella Meadows and Lynn Margulis.

THANKS Gaia !

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Core Group and Scientific Committee

The Core Group for MICRO 2020 was constituted by a team of 11 people who guaranteed the steps along the road to a successful MICRO 2020 in connection with the Scientific Committee. In alphabetical order they are:

Ana Carrasco, Andy Booth, Aquilino Miguelez, Arnaud Huvet, Bethany Jorgensen, Eva Cardona, Juan Baztan, Maria-Cristina Fossi, Melanie Bergmann, Richard C. Thompson and Sabine Pahl.

The Scientific Committee for MICRO 2020 was composed of 55 representatives from 37 institutions. They guaranteed the steps of the peer review process and supported the scientific quality and legitimacy of the work shared during the conference. In alphabetical order they are:

Amy Uhrin, National Oceanic and Atmospheric Administration;
Ana Carrasco, Cabildo de Lanzarote;
Ana Liria, Universidad de Las Palmas de Gran Canaria;
Ana-Carolina Ruiz, Universidad Nacional Autónoma de México;
Andreas Greiner, Universität Bayreuth;
Andy Booth, Stiftelsen for industriell og teknisk forskning;
Annika Jahnke, Helmholtz Centre for Environmental Research;
Aquilino Miguelez, Cabildo de Lanzarote;
Arnaud Huvet, Institut Français de Recherche pour l'Exploitation de la Mer;
Bart Koelmans, Wageningen University;
Bethany Jorgensen, Cornell University;
Bruno Tassin, École des Ponts ParisTech;
Carlie Herring, National Oceanic and Atmospheric Administration;
Carolin Völker, Institute for Social-Ecological Research;
Céline Surette, Université de Moncton;
Chelsea M. Rochman, University of Toronto;
Christian Laforsch, Universität Bayreuth;
Christophe Maes, Institut de Recherche pour le Développement;
Cristina Panti, Università degli Studi di Siena;
Elodie Martinez, Institut de Recherche pour le Développement;
Erik van Sebille, Utrecht University;
Fabienne Lagarde, Université du Maine;
François Galgani, Institut Français de Recherche pour l'Exploitation de la Mer;
Gunnar Gerds, Alfred Wegener Institute;
Heidi Savelli-Soderberg, United Nations Environment Programme;
Ika Paul-Pont, French National Centre for Scientific Research;
Jesús Gago, Instituto Español de Oceanografía;
Johan Robbens, Instituut voor Landbouw-en Visserijonderzoek;
Johnny Gasperi, Université Gustave Eiffel;
Juan Baztan, Marine Sciences For Society, CEARC;
Juliana-A. Ivar-do-Sul, Leibniz Institute for Baltic Sea Research;
Julie Forges, Université de Moncton;
Lisa Devriese, Flanders Marine Institute;
Lucía Viñas, Instituto Español de Oceanografía;

Maria-Cristina Fossi, Università degli Studi di Siena;
Maria-Helena Costa, Universidade Nova de Lisboa;
Marianne Krasny, Cornell University;
Martin Wagner, Norwegian University of Science and Technology.
Mateo Cordier, Université Paris-Saclay;
Matthew Cole, Plymouth Marine Laboratory;
Matthias Labrenz, Leibniz Institute for Baltic Sea Research;
Melanie Bergmann, Alfred Wegener Institute;
Monica Ferreira-da-Costa, Universidade Federal de Pernambuco;
Nanna Hartmann, Technical University of Denmark;
Nikolai Maximenko, University of Hawaii;
Omer Chouinard, Université de Moncton;
Patricia Ostiategui, Universidad de Las Palmas de Gran Canaria;
Paula Sobral, Universidade Nova de Lisboa;
Pennie Lindeque, Plymouth Marine Laboratory;
Raimonds Ernsteins, Latvijas Universitate;
Richard C. Thompson, Plymouth University;
Sabine Pahl, Plymouth University;
Salud Deudero, Instituto Español de Oceanografía;
Sonja Oberbeckmann, Leibniz Institute for Baltic Sea Research;
Thierry Huck, French National Centre for Scientific Research;
Yong-Sik Ok, Korea University.



Under the patronage of UNESCO

Chairpersons

The Chairpersons for MICRO 2020 were essential during the week-long conference, from facilitating smooth presentations to connecting the audience with the speakers. A very demanding week! In alphabetical order they are:

Adam Porter, Exeter;
Alex Cortada, Menorca;
Ana Liria, Gran Canaria;
Ana-Carolina Ruiz, Mazatlán;
Andy Booth, Trondheim;
Annika Jahnke, Leipzig;
Aquilino Miguelez, Lanzarote;
Arnaud Huvet, Plouzané;
Bart Koelmans, Wageningen;
Bénédicte Morin, Palavas;
Bethany Jorgensen, Ithaca;
Bruno Tassin, Marne la Vallée;
Isabelle Schulz, Brussels;
Chelsea M. Rochman, Toronto;
Chris Walkinshaw, Plymouth;
Christian Laforsch, Bayreuth;
Christophe Maes, Plouzané;
Cristina Panti, Siena;
Elke Brandes, Braunschweig;
Erik van Sebille, Utrecht;
Eva Cardona, Menorca;
Fan Liu, Aalborg;
Florence Parker-Jurd, Plymouth;
François Galgani, Bastia;
Guillaume Duflos, Boulogne sur mer;
Gunnar Gerdts, Helgoland;
Ignacio de Sobrino, Lanzarote;
Ika Paul-Pont, Plouzané;
Irene Brandts, Barcelona;
Jean-François Ghiglione, Banyuls;
Jesús Gago, Vigo;
Johnny Gasperi, Bouguenais;
Juan Baztan, Crozon;
Juliana-A. Ivar-do-Sul, Rostock;
Lisa Devriese, Oostende;
Manuel Monge-Ganuzas, Urdaibai;
Maria Cristina Fossi, Siena;
Maria Murcia, Menorca;
Marta Sales, Menorca;
Martin Loeder, Bayreuth;
Martin Wagner, Trondheim;
Mateo Cordier, Guyancourt;
Matthew Cole, Plymouth;
Matthias Völkl, Bayreuth;
Melanie Pöhlmann, Bayreuth;
Miguel Tamayo, Madrid;
Miriam Weber, Bühl;
Patricia Ostiategui, Gran Canaria;
Pennie Lindeque, Plymouth;
Rachel Coppock, Plymouth;
Rachid Dris, Créteil;
Richard C. Thompson, Plymouth;
Sabine Pahl, Plymouth;
Salud Deudero, Mallorca;
Sascha Müller, Copenhagen;
Seema Agarwal, Bayreuth;
Sonja Oberbeckmann, Rostock;
Stefan Peiffer, Bayreuth;
Sven Frei, Bayreuth;
Thierry Huck, Plouzané;
Winnie Courtene-Jones, Plymouth;
Xavier Cousin, Palavas;
Yannick Lerat, La Trinité sur Mer;
Zara Botterell, Plymouth.

Session 23.5_O. Chaired by Mateo Cordier, Guyancourt

Collaboration of scientists, NGOs and businesses for a plastic-free Mediterranean Sea

Courtial Lucile, Le Texier Marie, Mauvais Manon.

Paper number 334338

A freeware tool for the manufacturer independent analysis of microplastics: Systematic Identification of MicroPLastics in the Environment (siMPle)

Vollertsen Jes, Primpke Sebastian, Vianello Alvise, Gerdts Gunnar.

Paper number 334354

The necessity for monitoring of microplastics in Serbia

Teofilovic Vesna, Živković Milica, Stojić Nataša, Pucarević Mira, Miletić Srdan, Vrvić Miroslav.

Paper number 334526

Riverbank macrolitter in the Dutch Rhine-Meuse Delta

Van Emmerik Tim, Roebroek Caspar, De Winter Winnie, Vriend Paul, Boonstra Marijke, Hougee Merijn.

Paper number 334555

The necessity for monitoring of microplastics in Serbia

Teofilovic Vesna, Živković Milica, Stojić Nataša, Pucarević Mira, Miletić Srđan, Vrvić Miroslav.

Microplastics are silent pollutants present in the almost every corner of the planet, even the most isolated. European legislative has recognized the necessity for the monitoring of microparticles, which involves the establishment of monitoring programmes, enabling the assessment of the status of marine waters on a regular basis. Serbia continuously adopts and harmonizes laws and regulations with the regulations of the European Union (EU). Unfortunately, microplastics is not yet the subject of our Regulations. Main source of pollution of oceans with microplastics are rivers, therefore it is necessary to estimate river microplastic emissions to the world's oceans. Microplastics find the way to rivers, mostly from the waste waters from washing machines. Serbia is country with long network of freshwaters, including the second largest river in Europe – Danube. River that flows through many industrial cities, and carries great industrial and communal burden. By detail analysis of Serbian legislative, it was found that no law or regulative considers microplastics as pollutant. Therefore, the monitoring of microplastics is not obligatory. We consider that it is time that Serbia finally recognizes this environmental problem, and includes it in the existing legal framework. We propose that the microplastics in sewage waters are monitored on the regular basis, including tap and bottled waters, to see if there is contamination with microplastics. This information will contribute to establishment of monitoring programmes in Serbia and thus prevent further microplastic pollution.

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