

Science Communication for Marine Microplastic Pollution: Six Recommendations

Background:

Science communication is the “organized, explicit, and intended actions that aim to communicate scientific knowledge, methodology, processes, or practices in settings where non-scientists are a recognized part of the audiences” (Horst *et al.*, 2016, p.883). An effective science communication strategy involves: i) identifying the specific elements of science-based knowledge to be communicated; ii) defining the target audience for whom the message is intended; iii) tailoring the message to suit the target audience; iv) selecting an appropriate medium and channel to communicate the message, and v) evaluating the communication and impact of the strategy (see Figure 1).



Figure 1. Communication Strategy

A comprehensive literature review conducted as part of the RESPONSE¹ project revealed a significant knowledge gap in relation to what we know about the communication of scientific-based evidence on marine microplastic pollution, particularly in an increasingly digitalised society. To address this issue RESPONSE undertook two workshops to gain insight into the experiences of scientists, and policy and decision makers to co-develop recommendations on navigating science communication challenges and misinformation in the public domain.

Response Workshops:

The two workshops conducted as part of the Response investigation into **Communicating Microplastics: Identifying Inaccuracies, Barriers and Best Practice** are outlined below (see Box 1.).

Workshop 1 was held with microplastic experts from within the RESPONSE consortium to ascertain their experiences in communicating research about microplastic pollution and make recommendations on how policy and decision makers and funding bodies can best support researchers and scientists in their ongoing communication efforts.

Workshop 2 was undertaken with policy and decision makers and representatives of RESPONSE’s funding bodies. Participants of Workshop 2 were presented with the recommendations from Workshop 1, which gave participants the opportunity to reflect on the perspectives shared by scientists, and to develop additional recommendations from the perspectives of policy and decision makers.

Box 1: Response Workshops



‘Plastic Bombing’ (Image Credit: Simone Bava, EPHEMARE Photo Competition, 2017)

Recommendations for Communicating Microplastics:

- I. Increased awareness raising about existing and potential miscommunication and misperception concerning microplastic pollution to support mitigation efforts across the communicator-science-policy-society interface.
- II. Clear communication of uncertainties to foster critical thinking and informed decision making.
- III. A global entity that provides scientific-based information to support the informed development of international agreements that address microplastic pollution.
- IV. Consideration to the geographical and socio-economic settings to effectively address misperceptions and miscommunications about microplastic pollution.
- V. Direct collaboration and workshops between stakeholders to address miscommunication around plastic pollution and microplastics in the public domain
- VI. The establishment of networks between funding bodies, decision and policymakers, microplastic research experts, and science communicators to support the development of effective and adequately resourced science communication about microplastic pollution.

Recommended Reading:



Agnew, S., Kopke, K., Dozier, A., Power, O-P., Fitzgerald, E., Mateos-Cárdenas, A., Regoli, F. (2023). *Science Communication of Marine Plastic Pollution. JPI Oceans-funded RESPONSE project.*

¹This work was conducted as part of RESPONSE-Towards a Risk-Based Assessment of Microplastic Pollution in Marine Ecosystems.

You can learn more about RESPONSE at: www.response-jpioceans.eu