

GAP ANALYSIS



PROBLEM ENCOUNTERED AND OBJECTIVE

Plastic food packaging (PFP) is essential for food preservation but contributes significantly to environmental pollution. Its impact on marine, terrestrial, and freshwater ecosystems remains underexplored, with limited research on its specific role in plastic waste. Key gaps include the lack of source attribution, insufficient studies on lower trophic organisms, and minimal research on aged and recycled PFP.

These gaps hinder effective mitigation strategies. This analysis aims to bridge these deficiencies, providing a foundation for future research to improve waste management, policy development, and sustainable packaging solutions.

MAIN RESULTS / OUTCOMES

The analysis identified key gaps in understanding the environmental impact of plastic food packaging (PFP) litter. There is limited data on source attribution, making it difficult to assess PFP's contribution to pollution. Research on toxicity mainly focuses on higher trophic organisms, neglecting lower-level species. Additionally, the environmental behaviour of aged and recycled PFP remains largely unexplored. Addressing these gaps is crucial for developing targeted policies, improving waste management strategies, and promoting sustainable packaging alternatives based on scientific evidence.

PRACTICAL RECOMMENDATIONS

To address knowledge gaps, research should improve source attribution using advanced tracing methods like chemical fingerprinting. Expanding toxicity studies to include lower trophic organisms is essential for understanding bioaccumulation effects. Investigating the environmental behaviour of aged and recycled PFP will help assess its long-term impact. Additionally, increased monitoring in terrestrial and freshwater ecosystems is needed, as current research is heavily marine-focused. Standardised sampling methods and interdisciplinary collaboration can enhance data reliability. Policymakers should use these insights to develop targeted regulations, while industry stakeholders should prioritise sustainable packaging innovations to reduce environmental harm and improve circular economy practices.



Further information

Link to the GAP Analysis: <https://stopp-project.eu/readiness-tools-resources/>

About this abstract

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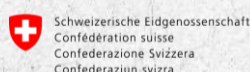
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STOPP is a Horizon Europe project aiming to transform food plastic packaging through the "5 Rs": Refuse, Reduce, Redesign, Reuse, and Recycle. Aligned with the EU's Packaging Directive, it develops training materials and strategies to promote circular economy solutions. Engaging stakeholders, STOPP advances recycling, reusable packaging, and consumer awareness for sustainable food packaging.



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