

Pilot Action

Ecological Aspects of Microplastics

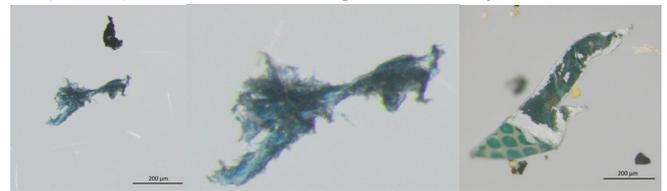
Background

Microplastics are persistent, ubiquitous and have a high potential to cause physical and toxicological harm. Microplastics have been identified as an artificial substrate which could affect ecological processes and facilitate transportation of invasive species.

However, knowledge about the origin, abundance and distribution of microplastics in marine systems is still limited. Furthermore, the toxicological and ecological effects on marine organisms and ultimately on human health are also insufficiently studied. Hence, for the protection of marine habitats and the safety of marine resources and seafood, JPI Oceans Member Countries decided to launch a pilot action in the field.

Objectives

- Validation and harmonisation of research methodologies and protocols in an emerging field.
- Improving the capacity to identify and quantify microplastic particles in the marine environment.
- Furthering the understanding of the (ecotoxicological) effects of plastic particles on marine organisms and systems.



Microplastic particles extracted from marine sediments in Belgium. Credit: Ludoth Van Cauwenbergh, Ghent University, Belgium

Progress

Bibliometric Study

JPI Oceans conducted a bibliometric study which revealed a map of strong national research clusters connected in international and global networks. The study was performed as a scoping tool and to provide a baseline for further monitoring of the expanding research field

Foresight exercise in microplastics

In order to support the development of the pilot action, the CSA Oceans project conducted a thematic foresight exercise in microplastics. The exercise developed a roadmap for microplastics research for Europe, identifying four research areas, which were used to inform the scientific orientation of the Pilot Action.

Best practice guidelines

On behalf of JPI Oceans, Ghent University, with the support of the Flemish Government, hosted an international scientific experts workshop on microplastics in January 2015. The workshop reviewed the current state of science and identified best practices for methodologies, in particular with a view to developing a risk assessment framework.

Joint Call on microplastics

Ten Member Countries of JPI Oceans launched a joint call on microplastics in January 2015 with an overall budget of approx. €7.5m. The call comprises three main themes:



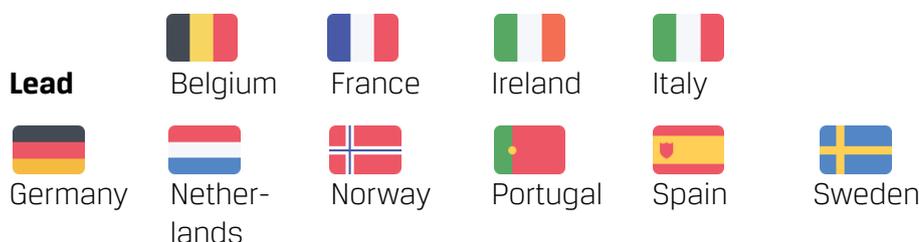
- Validation and harmonisation of analytical methods (interlaboratory study)
- Identification and quantification of microplastics
- Eco-toxicological effects of microplastic - impact on marine organisms

Projects under this call will be funded from 1 December 2015 for a period of up to 36 months. While the member countries each finance the participation of national researchers in the projects researchers from other countries are encouraged to participate in consortia through in-kind contributions.

Next Steps

Once scientific results have been produced, they will be communicated to stakeholders and policy-makers to provide scientific advice. In particular, the pilot action will seek to link up with international processes in the field, such as the G7 which have placed marine litter high on their agenda.

Countries Involved



Find Out More

