

# Plastic Origins Rhine Expedition 2021

Mapping river pollution through artificial intelligence and citizen commitment

21 August to 5 September 2021



On August 21st, the Surfrider Foundation Europe team will embark on an expedition on the Rhine from its source to its delta. This European operation will allow them to promote their Plastic Origins application, which can be used by everyone and allows them to map waste while practicing their favourite outdoor sport.

## A fun application, a real citizen science project

Waste, microplastics, chemical pollution... It is no longer necessary to prove that the ocean is under daily threat. However, 80% of the waste found in the ocean comes from inland and is transported in large part by rivers.

In search of solutions to shed light on this problem in a scientific and rigorous manner, Surfrider Foundation Europe has launched an innovative project: **Plastic Origins**. The aim : to combine citizen science and Artificial Intelligence technology to create a comprehensive map of river pollution. The collection of accurate data is essential to help Surfrider Foundation Europe's experts to have constructive discussions with the stakeholders involved (local, national or European authorities, companies causing pollution etc.).

The application was made possible thanks to a meeting with Microsoft teams in the framework of the Share AI Program and to the voluntary involvement of many engineers who joined the project.

How does it work?

Thanks to the involvement of volunteers throughout Europe, the data is collected directly on the Plastic Origins application, available on Android and IOS

Volunteers are invited to film the banks of the rivers using the application, which uses a geolocation system for waste, in a canoe, kayak, stand-up paddle or walking along the banks.

Artificial intelligence can then recognise the waste and classify it according to its type (bottle, fragment, etc.), thus feeding the European cartography.

## **An expedition on the Rhine to raise awareness and mobilise**

On 21 August, the Surfrider Foundation Europe project team will embark on a major expedition down the Rhine from its source to its delta. Accompanied by representatives of the Surfrider Foundation's year-round volunteer chapters in Switzerland, Germany, France and the Netherlands, the team will be collecting data on the app. After having reached the source by hiking to Lake Toma, the participants will embark on several stages of canoeing, rafting and kayaking to the mouth of the river ([see details in the press kit](#)).

The objectives of this expedition are multiple : beyond data collection, Surfrider Europe wishes to raise awareness of the real origins of plastics found in the ocean and to meet local actors to make them aware of issues that might seem remote from their territories. By choosing the Rhine, which crosses 6 countries, 4 of which Surfrider Europe works in on a daily basis thanks to its volunteer chapters, it is also a way for the team to underline the European dimension of the project, as the major environmental directives are decided at this level. For example, the European directive on single-use plastics officially came into force on 3 July.

The main challenge of this expedition is to make this innovative and fun participatory science programme known to sport and nature enthusiasts so as to encourage them to combine their leisure activities with the fight to protect the ocean. By being more and more numerous, the users of the app will create a vast map of the state of European rivers and help Surfrider Foundation Europe to reduce this pollution.

**[The full press kit is here](#). Please do not hesitate to contact us for any further information.**

Surfrider Foundation Europe, an NGO created in 1990, works to protect the oceans, the coastline, the waves and their users. For 30 years, with a team of experts and 49 volunteer branches in 12 European countries, the association has been working with stakeholders (citizens, private and public sectors) on several major issues: aquatic waste, coastal development, climate change, water quality and user health. Discover the association on <https://surfrider.eu/en>

**CONTACT :**

Lionel Cheylus | Media Relation Manager | +33 6 08 10 58 02 | [lcheyus@surfrider.eu](mailto:lcheyus@surfrider.eu)



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