



## Artificial intelligence services the protection of the Ocean: Surfrider Europe presents its new program, Plastic Origins

If some waste is dumped in the ocean, or directly on the coast, this represents only a tiny part of the origin of plastic pollution. The quantity of waste abandoned by users on the coast is estimated at 10%. Indeed, the major part of the waste, that is to say, 80%, comes from the interior of the grounds and is transported largely by the rivers.

In search of solutions to address the source of ocean pollution, Surfrider Foundation Europe today unveils its new project, Plastic Origins.

**The objective:** Apply participatory science and Artificial Intelligence technology to create a comprehensive map of river pollution.

### Artificial intelligence at the service of the environment

Each year **8 million tons of plastic waste** are released into the ocean. While the exact measure of this quantity is refined, its provenance is still too little known to address the problem at its source.

Many environmental initiatives are now recruiting the help of **Artificial Intelligence technology** to progress the movement.

How can the digital transition participate in an ecological transition?

**Technological advances, and in particular Artificial Intelligence**, have so far made it possible to **develop algorithms capable of providing essential solutions for the protection of the environment**. It is in this sense that **Surfrider Europe has joined forces with Microsoft**, to utilize its **advanced digital data analysis for the goal of Ocean protection**.

In the **pilot phase**, Plastic Origins will map plastic pollution in rivers in France, and then expand to tackling all of Europe. The IT tools engineered for this project (websites, databases, artificial intelligence, etc.) were made possible by **the passion and commitment of volunteers**.

*"Plastic pollution is everywhere. To more effectively address this problem, we need to know where to act first and be able to measure the effectiveness of our actions. Plastic Origins uses an artificial intelligence algorithm to detect and count the waste washed up on the banks of rivers. This AI allows us to generate reliable and robust data through a participatory science project."* Antoine Bruge, Surfrider Europe project manager.

### **The Plastic Origins application, how it works:**

Thanks to the involvement of volunteers across Europe, data is collected on the Plastic Origins app, available on [Android](#) and [IOS](#).

Volunteers are invited to record the banks of rivers as they navigate their course on foot, in kayaks, or by any other means, thanks to the application which uses a waste geolocation system.

Artificial intelligence then makes it possible to recognize waste and classify it according to its type (bottle, fragment, etc.).

In a **common effort** to preserve the Ocean, Surfrider Europe encourages all citizens to take part in this fun, active program that combines science with a passion for outdoor adventure. With more participation, the Plastic Origins team can refine the technology, improve it, and duplicate it, which is why the code is open-source (available on [Surfrider's GitHub page](#)), and that the data collected will be available and accessible to all online on the Plastic Origins site.

### **Surfrider Europe and Microsoft, the genesis of a human/machine collaboration**

In 2013, the Gave de Pau recorded a historic flood, sweeping away a large part of the waste from the old municipal landfill and resulting in unprecedented plastic pollution. Since this disaster, **Surfrider Europe has been testing and developing different methods to monitor and act against plastic pollution in rivers**.

Today, through its participation in the **Share AI program**, Surfrider Foundation Europe benefits from the **support of Microsoft and several companies in its ecosystems such as**

**the IA School, Heuritech, and Metsys.** Started nearly 2 years ago, this collaboration with Microsoft has enabled [Plastic Origins](#) to obtain the **contributions of entrepreneurs wishing to have a positive impact on the planet by making use of their plural skills, particularly in AI, databases, front-end, back-end, UX, etc.**

*“Without this large-scale collaboration, the association would not have had the means to develop automatic data collection capacities and quality collected data illustrating the plastic pollution of rivers.”* emphasizes Antoine Bruge, Surfrider Europe project manager

*“It is with the aim of putting Artificial Intelligence at the service of social entrepreneurs that Microsoft's Share AI skills sponsorship program was launched in February 2019,”* explains **Eneric Lopez - Director of Artificial Intelligence and Developers.** *“It has allowed us to meet structures such as Surfrider, which we have since supported by allowing them free access to cloud units and technical support to develop their solution. AI is helping accelerate and increase the positive impact of organizations shaping a more inclusive and sustainable world, and we are happy to work alongside Surfrider to preserve the oceans.”*

## Plastic Origins: acting upstream to stop plastic pollution at the source

Plastic Origins is a project initiated by Surfrider Europe and supported by **citizens, associations, scientists, and responsible companies.**

This project is powered by people with a **strong passion for the outdoors and a desire to protect it.** Indeed, thanks to the development of the Plastic Origins application, the **NGO invites lovers of outdoor sports to add an element of data collection to their next expedition.**

With a better understanding of the problem on the field, the **data** will make it possible to **establish a real-time observation of river pollution to:**

- Identify the most affected areas
- To offer solutions to local actors
- To measure the evolution of pollution over time

**Today Plastic Origins marks a decisive step forward in the fight for the protection of the environment. This is Surfrider Europe's first environmental project to harness the technological advances of Artificial Intelligence to tackle the problem at the source. By leveraging the data collected as well as the passion and investment of volunteers, Surfrider Foundation Europe has all the tools to reduce Ocean plastic pollution.**

To know more about [Plastic Origins](#):  
[#PlasticOrigins](#) [#SurfriderFoundationEurope](#)

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