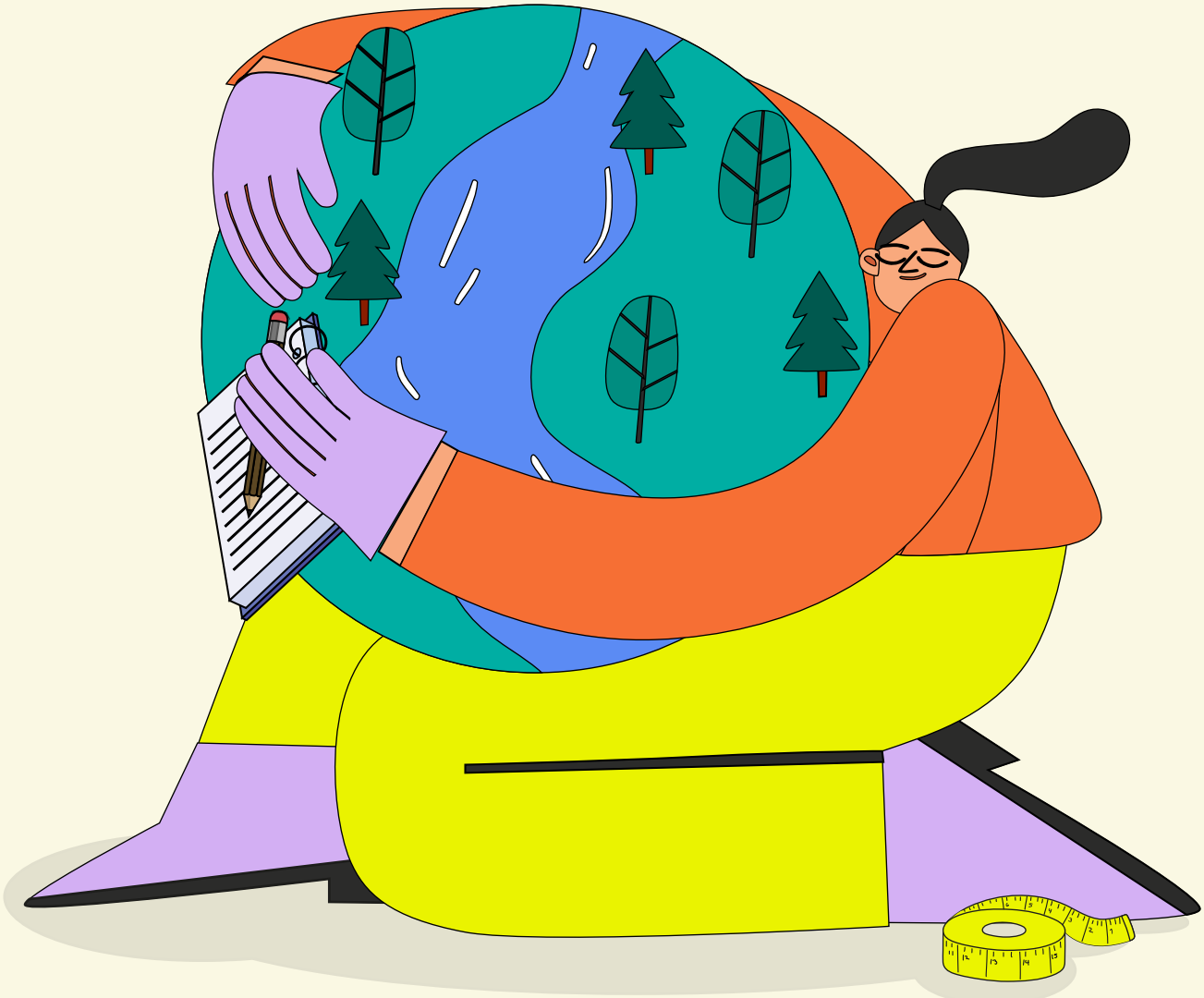
THE RIVER-OSPAR PROTOCOL

5 Key Steps

for a successful implementation



SURFRIDER FOUNDATION

INTRODUCTION

The trash found in the oceans is mainly carried there by waterways; however, it does not make a straightforward journey to get there. Adrift in the current and pushed along by the wind, some washes up on riverbanks, where it can remain and accumulate over long periods.

Collecting data on this waste helps us better understand river pollution by:

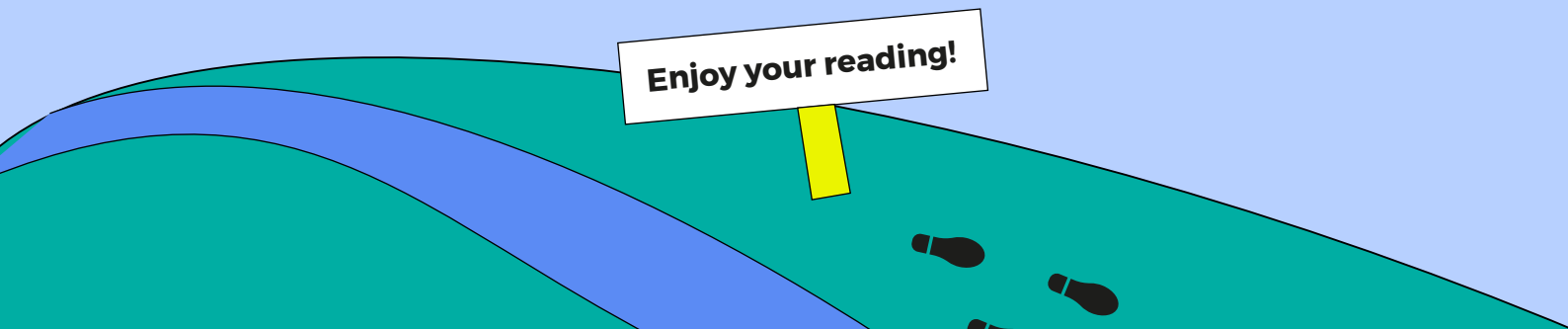
- **Improving our knowledge** of the type of waste, the overall amounts, and how it is distributed;
- **Helping define clear targets** (for example, the current objective is to get under 20 pieces of litter per 100 meters of coastline);
- **Guiding the implementation** of local solutions while strengthening our advocacy at the European level;
- **Assessing the effectiveness** of existing measures.

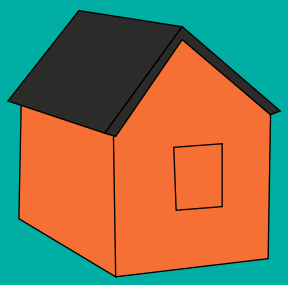
For all these reasons, the Surfrider Foundation, which has been operating the OSPAR marine litter monitoring network along the coastline since 2010, is now working to expand this network to rivers. Surfrider's local groups can help to enrich our knowledge at the European scale.

Citizen science is at the heart of our approach, and this guide is designed to support you in the best possible way in the implementation of this protocol, alongside personalized guidance from our team.

Thank you for your commitment and energy, your involvement keeps Surfrider Foundation's projects alive and thriving within this incredible volunteer community.

Together, we can build an ambitious and impactful monitoring network!





1

UNDERSTANDING THE CONTEXT

- The European Framework
- Waste
- Monitoring
- OSPAR

2

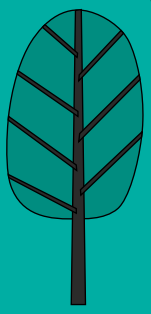
THE SEARCH FOR AN IDEAL SITE

- Location
- Accessibility
- Security

3

BEFORE GETTING STARTED

- To Do list
- Authorizations
- Reference Points



4

ORGANIZING WASTE COLLECTION

- Planning
- Collecting Litter
- 4 times / year

5

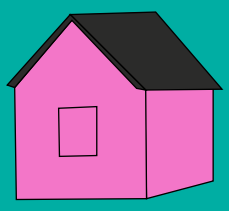
SORTING THE COLLECTED WASTE

- Categorizing
- Materials
- Weighing

6

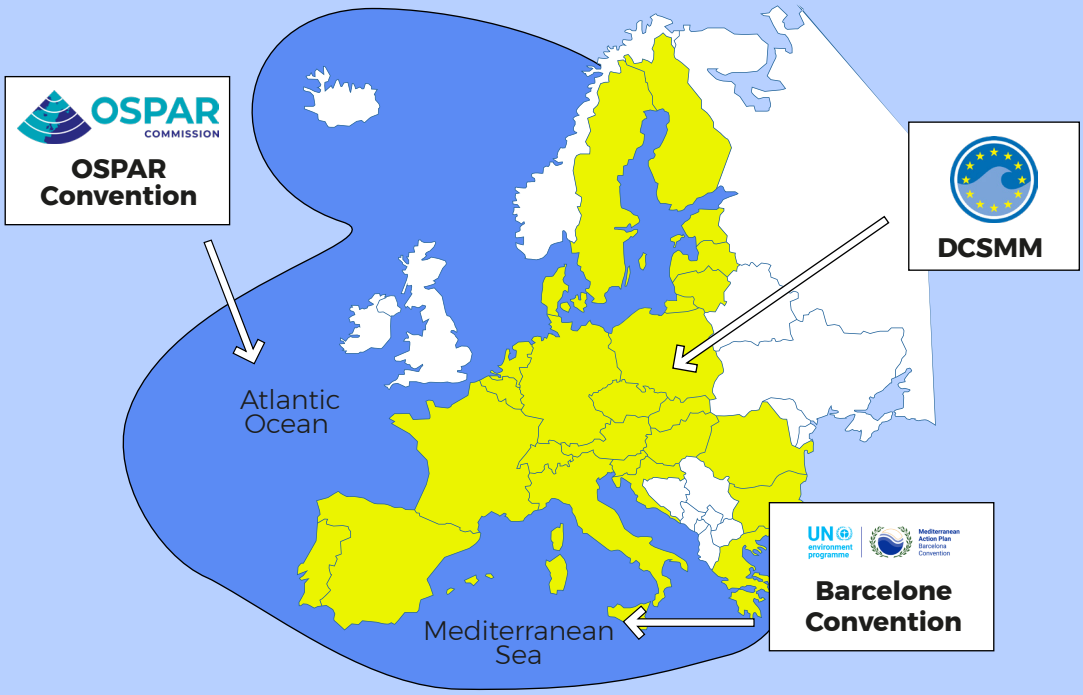
EXAMPLE: SURFRIDER'S SITE ON THE NIVE RIVER

- Testimony
- Photos



1 UNDERSTANDING THE CONTEXT

MAP OF THE EUROPEAN CONTEXT



Studying the spread of macro-waste pollution in rivers is a relatively new field, and available data is still quite limited.

Currently, the main legislative framework addressing aquatic waste pollution comes from a European directive designed for the marine environment: the Marine Strategy Framework Directive (MSFD)*.

Alongside this directive, two regional maritime conventions play a key role in coordinating action:

- The OSPAR Convention, focused on protecting the North-East Atlantic
- The Barcelona Convention, for conservation of the Mediterranean Sea.

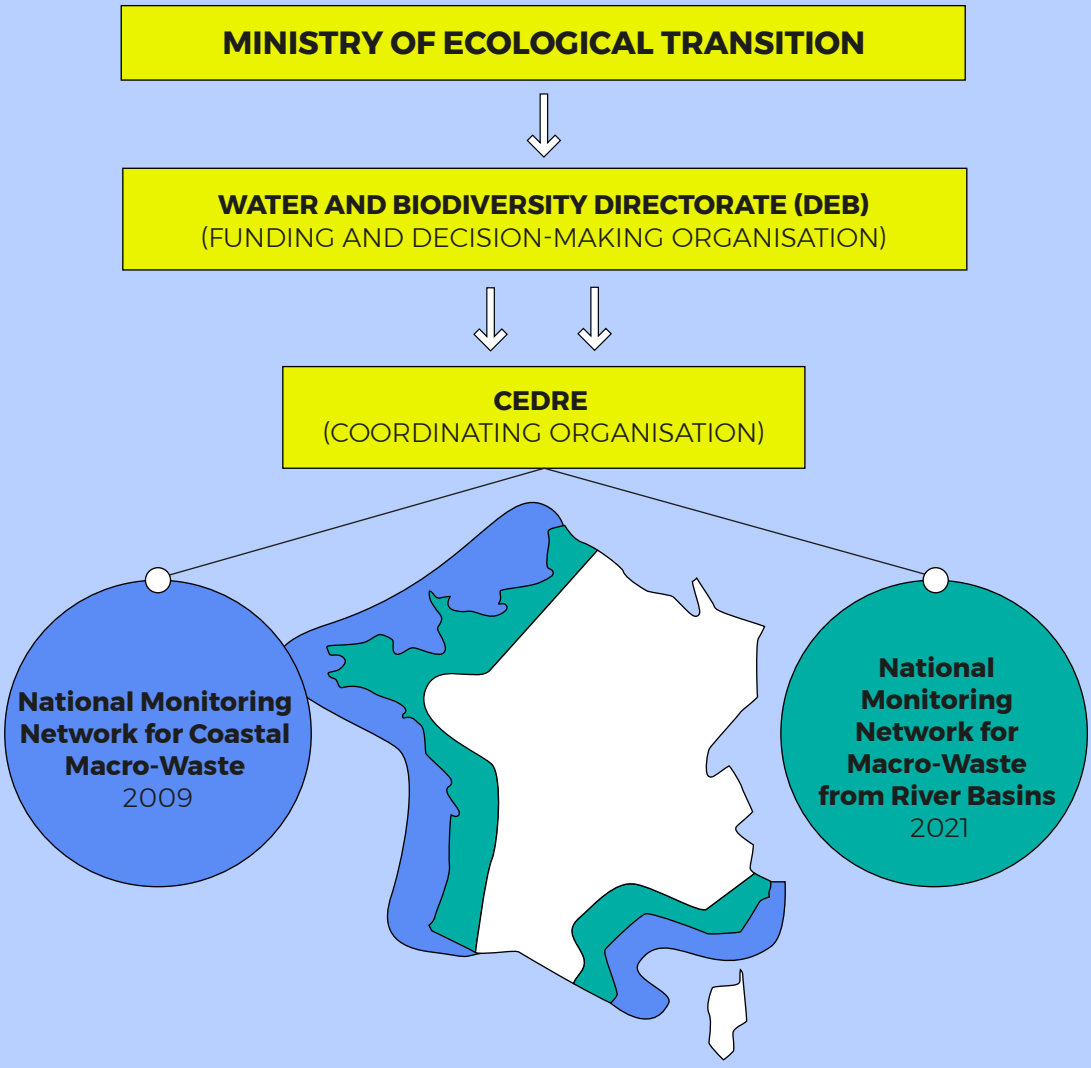
These conventions support coordinated measures between countries, including the implementation of a standardized waste monitoring protocol known as the OSPAR Protocol.
Its methodology is based on the systematic collection and detailed characterization of waste found at specific sites over the long term.

*Adopted in 2008, this was the first policy to formally recognize that waste directly impacts the environmental status of water bodies. It sets shared goals for EU countries to protect the ocean.

The overarching goal of this part of the OSPAR Convention is to reduce the amount of trash entering the ocean to levels that do not put the environment at risk. In 2022, the Second Regional Action Plan on Marine Litter (RAP ML 2) was adopted. One of its key objectives for 2030, formalized in Action A.3.1., is to expand monitoring efforts to include **macro-waste** (particles larger than 5 mm) in **hydrographic networks** (rivers!).

Several European countries, including the Netherlands, Belgium, and France, have already experimented with riverine litter monitoring. The OSPAR Protocol could serve as a valuable international reference in standardizing these efforts.

In France, the National River Macro-Waste Monitoring Network was established to complement existing coastal monitoring programs. This initiative is piloted by the CEDRE (Centre de Documentation, de Recherche et d'Expérimentation sur les Pollutions Accidentelles de l'Eau/ Center for Documentation, Research, and Experimentation on Accidental Water Pollution), however, it only accounts for sections of rivers close to estuaries.



We believe extending OSPAR monitoring sites along the entire length of European rivers is important. Doing so would allow us to gather critical data now and demonstrate the importance of waste monitoring even upstream of estuaries.

2 THE SEARCH FOR AN IDEAL SITE

TO KEEP IN MIND FROM THE BEGINNING

1. Safety is the number one consideration! Do not prospect in dangerous areas, avoid high-flow areas, rapids, and the like.

2. Look along one or more waterways within a reasonable distance of your usual meeting place. The drive to the site should not represent the longest part of an OSPAR Protocol day.

DESIRABLE CHARACTERISTICS TO LOOK FOR IN A SITE

DO

Surface

- ✓ Length: Minimum 50 m, ideally 100 m.
- ✓ Width:
  - Lower limit: waterline or unstable substrate (mud)
  - Upper limit: embankment, riprap, high water marks*, or towpath
- ✓ Accessible year-round, considering seasonal fluctuations of water level.

Safe access

- ✓ Easy access by car for waste pick up.
- ✓ Risk-free access on foot: *caution around ripraps, muddy areas, and steep embankments.*

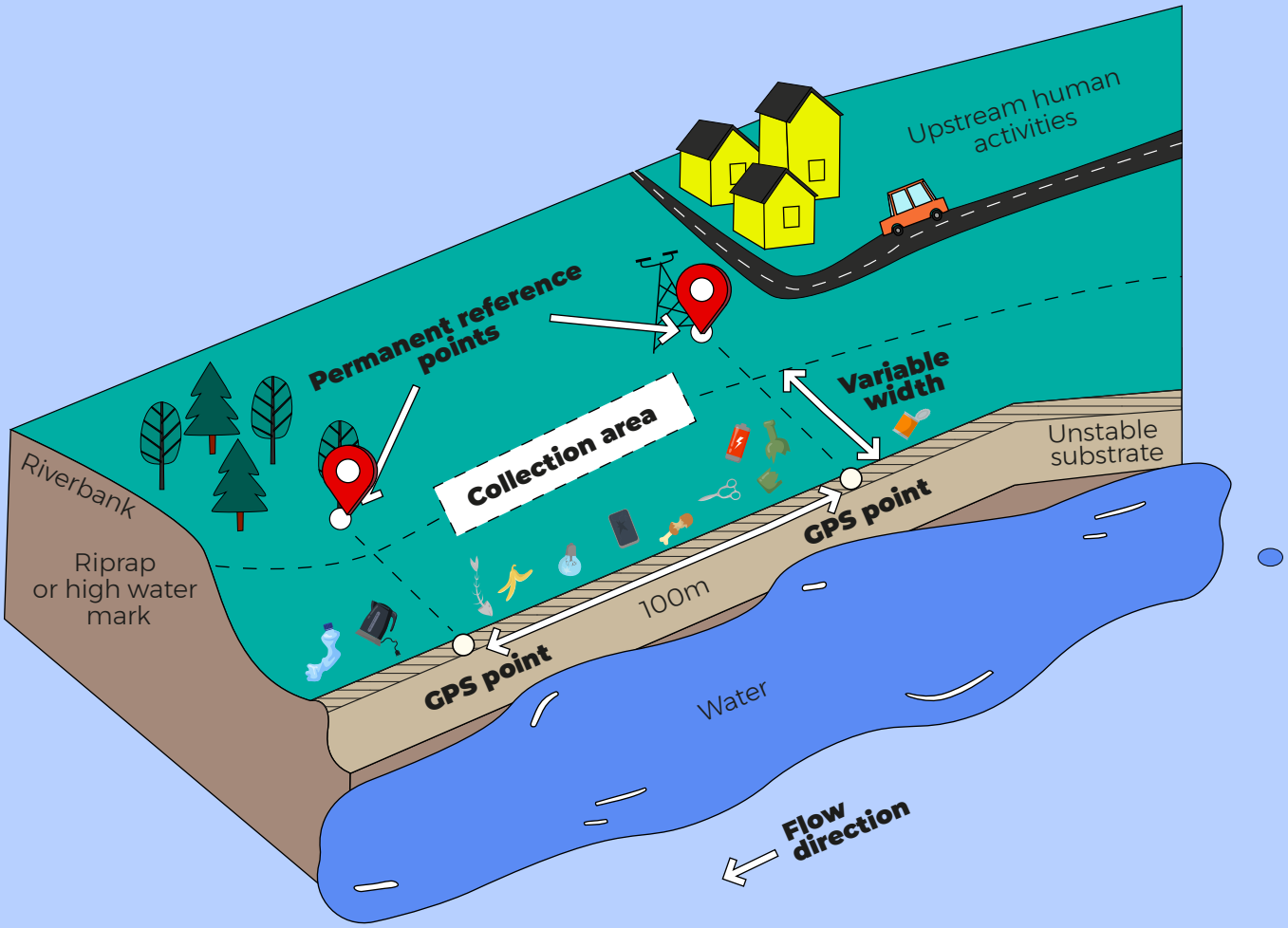
Presence of waste

- ✓ There is trash that has been accumulating over a more or less long period.
- ✓ Area downstream from an area with economic activity (farming, urban areas, industrial sites...).

DON'T

- X Overabundant vegetation in the spring/summer, that could impede the collection protocol.
- X Known clean-up operations between sampling efforts.

*** WHAT IS A HIGH-WATER MARK?**
Just like the high-tide mark can be visible on beaches, high water mark is the trace left on riverbanks when water levels drop. You'll often find loads of organic material there – and sometimes trash too!



HOW TO FIND A SITE?

1. **Scout out suitable areas with aerial imagery** (with Google Maps, Google Earth, etc.), looking for:

- **Accessible riverbanks.**
- **Meandering (snakelike)** sections of the river, where waste tends to accumulate.

Be aware that aerial imagery can be misleading: if there is no riverbank visible, it may simply be hidden under treetops or be submerged by a high tide in places under tidal influence.

TIPS !

Use **Streetview** on **Google Maps** if it is available in the area. It may reveal clear riverbanks that are not visible with satellite imagery.

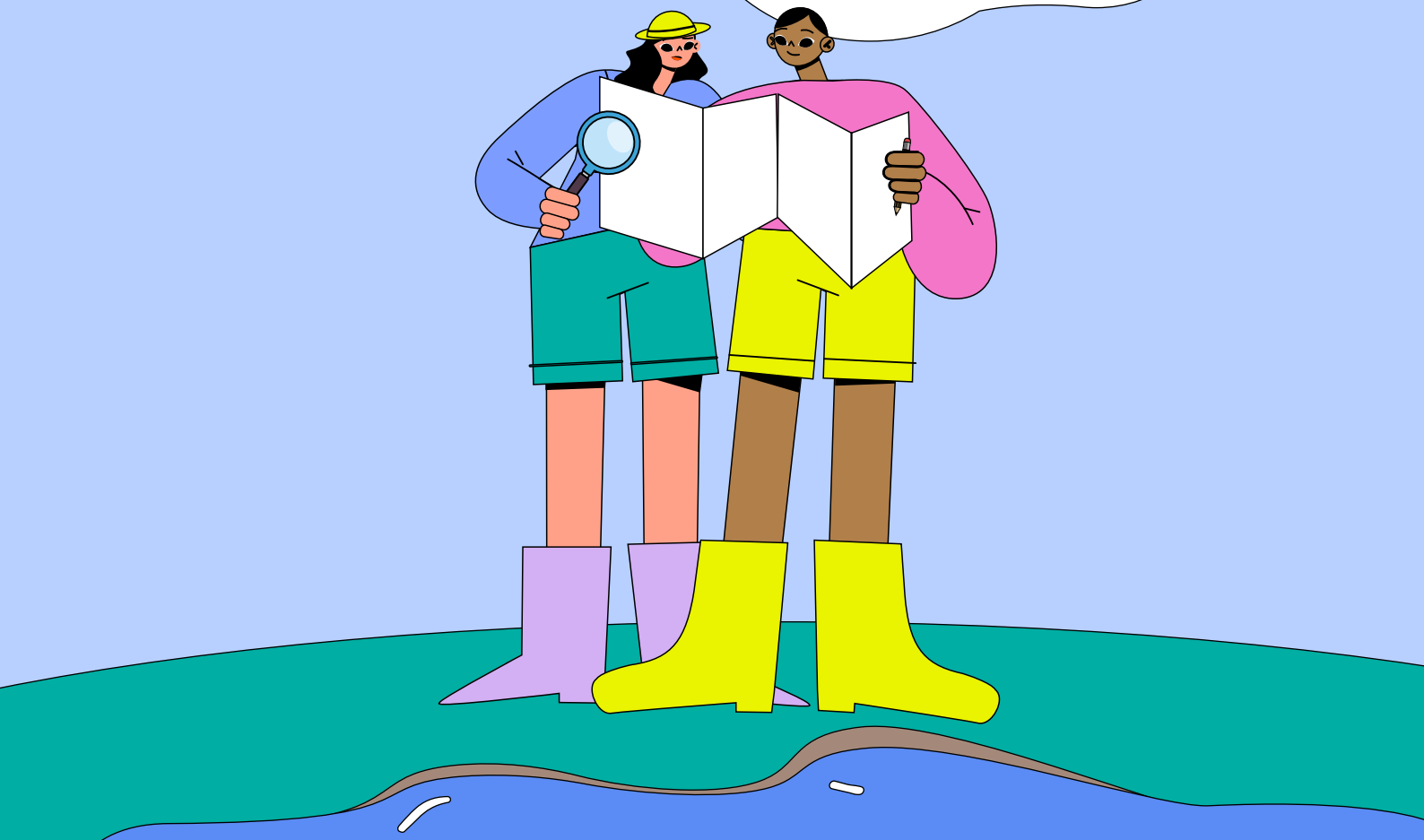
2. Visit the area to confirm your observations and assess accessibility, safety, and the presence of rubbish. Depending on the conditions, you can explore the area by:

- ○ **Bicycle** along a towpath: facilitated view on the opposite riverbank.
- ○ **Canoe** with a supervisor : facilitated view on both riverbanks.
- ○ **Car** and on **foot**.

IS THIS A GOOD STUDY SITE?

Ask us:
share photos and a description of the site and we can discuss and select sites together.

It is worth scouting over the course of a year to track seasonal changes of the site (variations of water level, riverbank alteration, accessibility, and plant growth in the spring and summer. This will make it clearer to see if the site is suitable for selection for long-term monitoring, or if other places may be more advantageous.



3 BEFORE GETTING STARTED

CHARACTERIZING THE SITE

- **Define permanent landmarks or reference points** (specific trees, a signpost) as upstream and downstream limits. Record their GPS coordinates.

TIPS !

On **Google Maps**, you can mark a spot on the map and save it to a list. It is a good way to keep track of GPS coordinates and visualize your marks on a map.

TIPS !

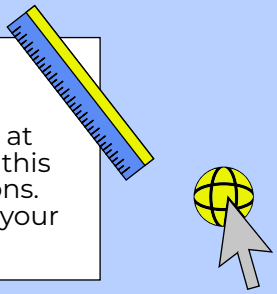
Waste should always be collected from the exact same stretch between the two predetermined limits. This allows for a standardized protocol. However, t**he width of the stretch can vary according to the conditions**. One key metric that enables comparison between sites is the "number of waste items per 100 meters". Consistency is length is thus the most important criteria to remember.

- **Fill out the site description form:** record slope, type of substrate (sand, mud, rocks, gravel...), **and the main economic activity in the surrounding area.**

- **Determine the water level that will submerge the site.**

TIPS !

In France, the website **vigicrues.gouv.fr** provides real-time water level data at specific locations. You can compare this data with your own field observations. Check if similar tools are available in your area.



- **If the site is affected by tidal fluctuations,** note the time difference between low tide at the nearest port and low tide at your monitoring site.

- **Take photographs.**

SETTING UP THE PROJECT

If access to the riverbank requires going through private property where no public paths exist, obtain written permission from the landowner.

Inform the local authorities (e.g., the town hall) by email about the implementation of the monitoring protocol.

TIPS !

We can provide **email templates** on request for contacting landowners or local authorities to introduce the project.

Plan four missions per year, one for each season: January-March, April-June, July-September, and October-December.

TIPS !

Schedule the collection **early in the season** to allow flexibility in case weather or river conditions require rescheduling.

Carry out the first clean-up and wasting sorting session with experienced Surfrider staff or volunteers so that you can become operators of this protocol.

Unlike the Ocean Initiative program, these are purely **scientific** endeavors and should not involve a public to raise awareness. To ensure **data consistency**, only the team that has received training should carry out the protocol.

PLANNING THE DAY OF THE PROTOCOL

- **Organize the mission several weeks ahead** to make sure the team is available. Allocate half a day for each step (waste collection and subsequent sorting and data recording).

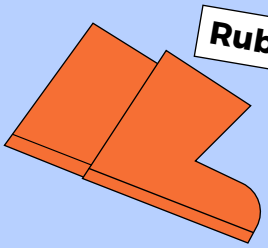
- **For the waste collection,** if the site is tidal, come around low tide to collect the waste items left by the receding water.

- **Keep an eye on weather and water conditions during the week leading up to the event:** will the site be above water level? Will conditions in the field allow it?

4 ORGANIZING WASTE COLLECTION

Expect 30 minutes to 1.5 hours of waste collection with a 2 to 6-person team.

EQUIPMENT NEEDED

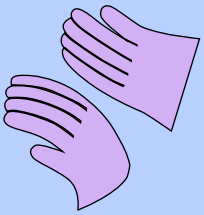


Rubber boots or **waders**

Rigid container *

Gloves

Heavy-duty plastic bags



Hanging scale and **string**

*such as a medical waste box for sharp or otherwise dangerous objects (glass, syringes).

COLLECTING THE WASTE

1. **As a team, define the study area according to the day's conditions** (water level, riverbank exposure).

2. **The team should start from one end of the site, form a line, and walk parallel to the waterway.** Make at least one trip in each direction: every part of the segment must be observed from both angles.

DO

I can collect...

- ✓ Waste items larger than 5 mm. Smaller items can be collected, but should not be counted.
- ✓ Waste items on the riverbank and stuck in vegetation.

DON'T

I can't collect...

- X Buried or underwater waste items.
- X Organic waste: plant debris or animal residues such as bones.

HANDLING BULKY WASTE

Bulky objects include waste items that are too large or heavy to be moved: wooden beams, car tires or batteries, bikes, household appliances...

What information should you record?

- Take **photos**.
- Estimate its **volume** and, if possible, **weigh** it on site.
- **Record details** on the collection form.

What should you do with bulky objects?

- If possible, **remove them from the site and take them to disposal centers.**
- If not, move them as far from the water as possible to **avoid transportation further downstream**. Ideally, put them in a location that is accessible for a waste disposal service.
- If no **safe** removal options exist, leave it where it is.

5 SORTING THE COLLECTED WASTE

**Expect this step to take 1 to 3 hours with a 2 to 6-person team. **

MATÉRIEL DE TRI

If you have access to a covered outdoor space or a garage, transporting the collected waste there for the sorting process may be more convenient.

Otherwise, the sorting process can take place on-site.

TIPS !

Covering a table with a protective tarp allows for sorting without excessive bending, making the process more ergonomic.

THE *OFFICIAL* OSPAR CLASSIFICATION SYSTEM

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Categories, Is That All?!

The list may seem very specific, but it helps standardize the collection of data across Europe. When you organize your first mission, Surfrider staff will participate and provide helpful guidance to help you use the system in an organized and effective manner. Over time, as you become more familiar with the method, sorting will become second nature.

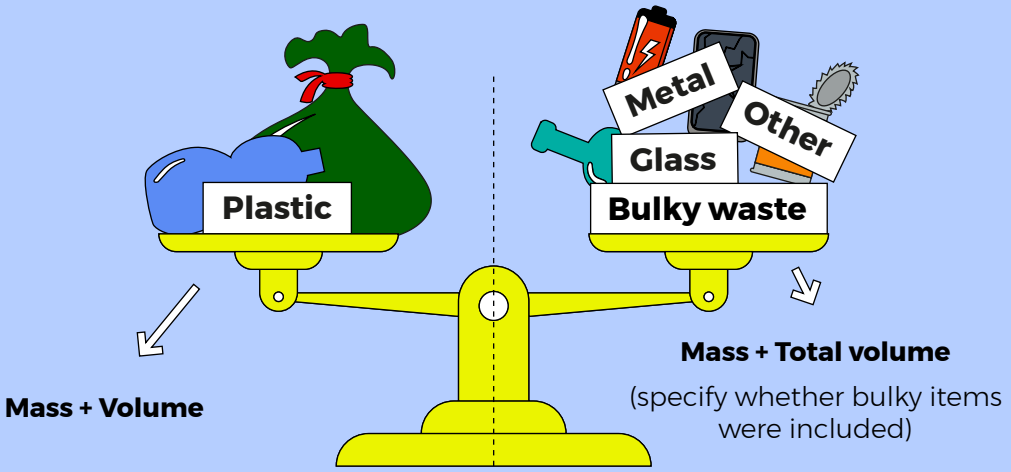
The classification is divided into:

- **7 broad categories** according to the primary material the waste is made out of: plastic polymers, metal, processed wood, paper and cardboard, glass and ceramics, textiles, and chemical products.
- **Subcategories** based on the intended use of the item (food packaging, hygiene products, recreational activities, construction material...).
- **Unidentified fragments**, categorized according to material and size when the original use is no longer recognizable.

FILLING OUT THE COLLECTION FORM

- **Categorize** each **item.**
- If you are hesitant about how to classify an item, write a description in the "comments" section of the most **appropriate category.**
- Do not hesitate to **contact us** or send us pictures of the items and we may be able to help identify it.
- If the items do not fit in any of the categories: describe them at the end of the form in the comments section. If uncategorized items are being found regularly, the list may be adjusted accordingly.

In the "**Summary**" section for each type of waste item, record the **mass** and **volume** of the material. As indicated, weigh plastics separately.

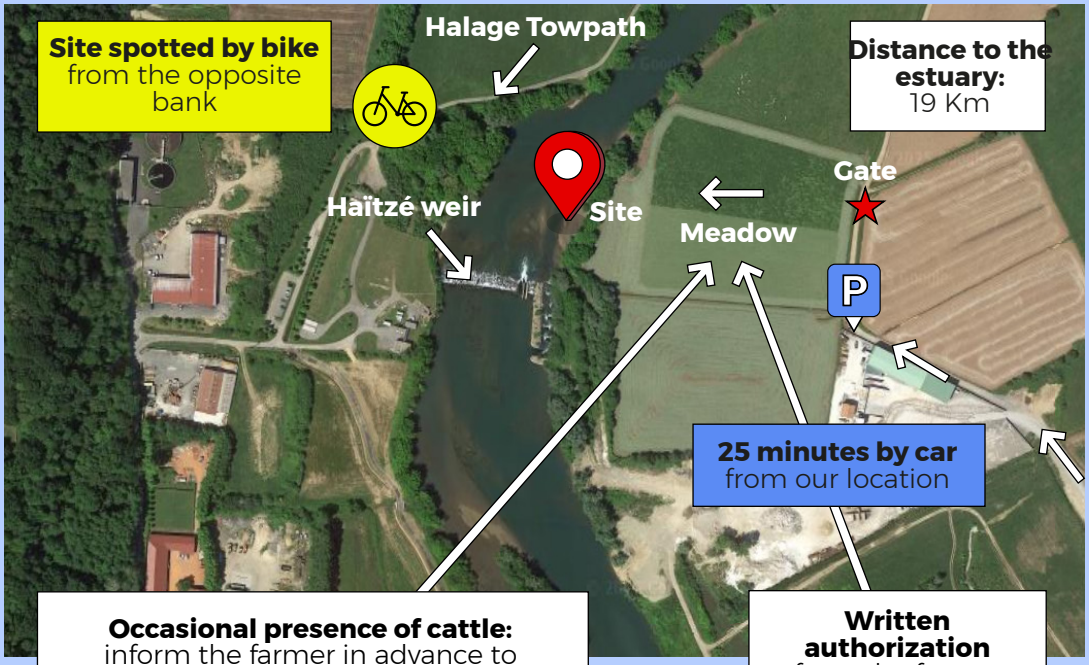


Note any **environmental** (heavy rains, winds, recent flooding) and **human** (construction, recent festivities in the area) **factors** that might influence the presence of waste items on the day of the mission, as well as any information that may be of relevance.

Send the forms to Sabine Allou (sallou@surfrider.eu).
The data will be reviewed and securely stored.

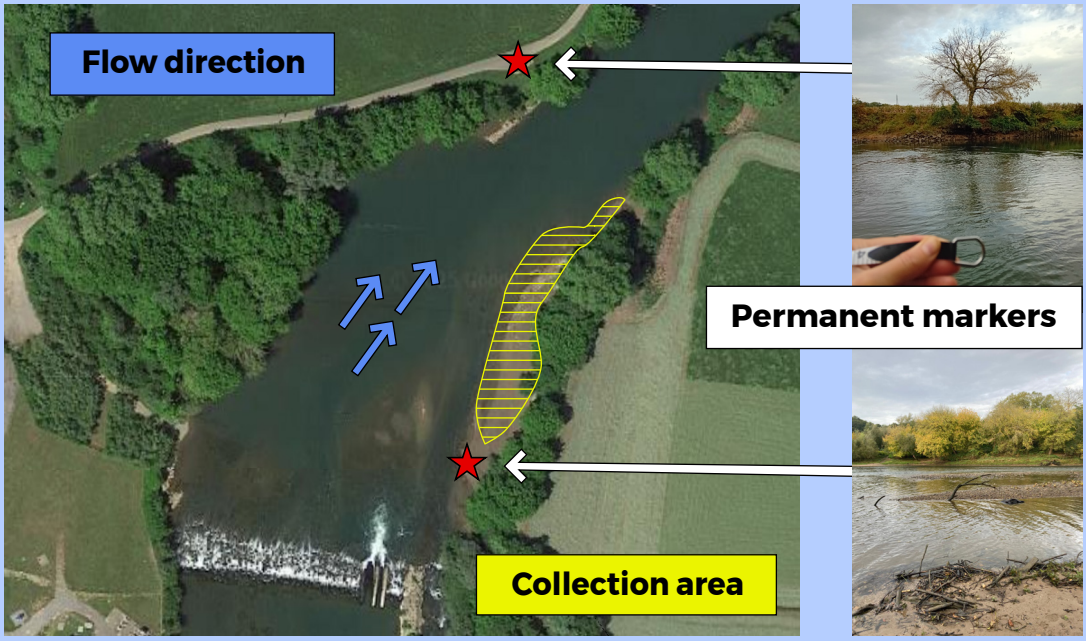
And that's it! The process is complete!

6 EXAMPLE: SURFRIDER'S SITE ON THE NIVE RIVER



KEY INFORMATION

- Site selected in **autumn 2024.**
- **Location**: Immediately downstream from a weir, in the municipality of **Ustaritz**.
- **Tidal influence:** The site is affected by tides, according to the French National Monitoring Network criteria
- **Length:** 100 meters.
- **Width:** Varies between 15 and 45 meters, depending on the location, varying with tidal conditions and water levels.
- **Slope:** Low.
- **Substrate types:** A mix of pebbles, sand, and silt.
- **Vegetation layers:** Includes herbaceous, shrub, and tree strata.



RESULTS OF THE FIRST COLLECTION

- **Date:** November 14, 2024
- **4-person team**
- **Start time:** 1 hour after low tide at sea (lowest water level at the site)
- **Water level:** 1.82 meters
- **Collection duration:** 1 hour
- **Sorting duration:** 1.5 hours
- **Waste Collected:**
  - 76.9 kg, including 41.7 kg of bulky waste and 20 kg of plastic waste.
  - This represents a total volume of 200 l of waste, including including 80 l of plastic waste.
  - Most common bulky items: wooden planks and 3 tires.
  - Large amounts of rubble and ceramic fragments on the pebble beach—now integrated into the sediment and not removed.
  - A large number of old shoes and soles were found. We investigated their origin by discussing with locals and learned that shoe factories were formerly located in the valley.

Our key takeaway?
Every site is unique, as long as there is a clear 100 m segment (or 50 m segment), an accumulation of rubbish, and a safe access point year-round - make it yours!

It's your turn!

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SURFRIDER FOUNDATION

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