OTTERS
Citizen Science for Water Stewardship

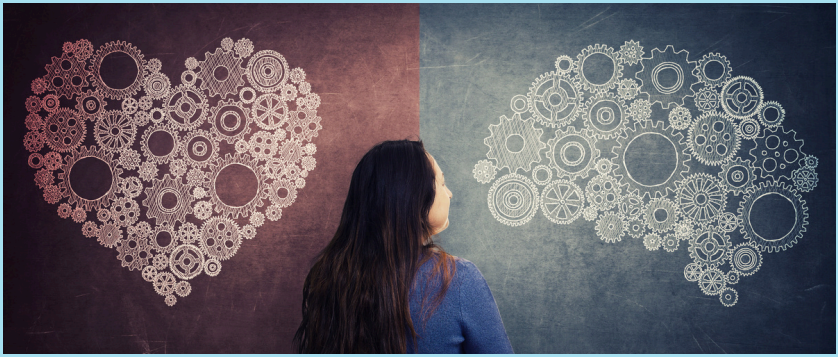
OTTERS CO-CREATION TOOLKIT

https://otters-eu.aua.am

Intro

OTTERS project aims to promote societal transformation for marine and freshwater stewardship through scaling up citizen science (CS). One of the focuses of the OTTERS project is to co-design CS campaigns that will foster a sense of agency in water stewardship.

The present OTTERS Co-Creation Toolkit is the first of two toolkits to be developed in the framework of the project. It will create an initial input to the Final OTTERS CS Toolkit, to be used as the basis of OTTERS Campaigns. Any interested stakeholders can use the co-creation toolkit to organise a co-creation session and afterward, a campaign that will change people's Hearts and Minds in terms of water stewardship.



The second and Final OTTERS CS Toolkit will be the result of all the co-creation sessions that were held and will comprise tailored messages and visuals per stakeholder group. It will aim to change hearts and minds by integrating citizen science components that engage citizens, empower younger and older generations to take action, promote the practice of social innovation, and achieve social transformation.

01 **OTTERS Co-creation Toolkit**

02 **Final OTTERS CS Toolkit**

* To be published in June 2025

Changing Hearts and Minds!

Steps to co-design a campaign

1. Read the OTTERS co-creation toolkit.
2. Run online and/or offline co-creation events with different stakeholders
3. Capture all the answers to the questions from all the co-creation sessions.
4. Send the answers to the OTTERS team.

   https://otters-eu.aua.am/contact-us/
5. OTTERS team will create the Final OTTERS CS Toolkit with messages and visuals tailored for each stakeholder group.
6. Use the marketing collateral prepared by the OTTERS team to run the Change Hearts and Minds campaign.

Tips for a successful co-creation event

1 Decide:

Decide to run a co-creation event and understand the audience. Know who the attendees are and what their interests are.

2 Objectives:

Define the objectives, identify the issues that should be solved, choose an OTTERS toolkit and clarify the outcomes of the event.

3 Prepare:

Set up the offline (i.e. room) or online environment (i.e. Zoom, etc.), and include the questions in Slido.

4 Promote:

Use online and offline marketing channels to attract attendees, create excitement, and raise awareness on the issues that will be discussed.

5 Execute:

Run the offline or online co-creation event. On the day of the event, ensure everything runs smoothly and all the tools are tested prior to the event.

6 Certificate:

Recognise participants' efforts through a certificate.

7 Feedback:

Send the answers that were captured during the co-creation session to the OTTERS team.

Co-creation Toolkit for Portugal

Clean Beaches

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Table of Contents

The Paradigm

AROUND WHAT CS CAMPAIGN COULD BE BUILT

- Excessive **seaweed** accumulation on European beaches is a growing concern due to its environmental, health, and economic impact. The decomposing seaweed releases hydrogen sulphide gas, which is potentially lethal to fish and can cause eye irritation and respiratory problems in humans.

- In Europe, half of the **litter** items found on beaches are single-use plastics. 85% of marine litter is plastic waste [1].

- Addressing the root causes of excessive seaweed accumulation requires comprehensive approaches, including the minimization of fertilizers' use in cropping through sustainable agricultural practices, the use of nature-based solutions for urban wastewater treatment, and international cooperation against pollution at a watershed level.

[1] eea.europa.eu

The Portugal Example

Portuguese beaches, particularly in the Algarve region, are grappling with an influx of **seaweed** and **litter**, which poses environmental and aesthetic challenges. Too many seaweeds may be an abnormal situation resulting from excess of nutrients from urban effluent discharge or fertilization in agriculture. When seaweeds grow in excess, they can harm biodiversity, fisheries, and the environmental quality of the beach.

In some areas, these **seaweed** barriers can reach up to 1.20 meters high, potentially impacting tourism and fishing activities [1]. While the Portuguese Environmental Agency (APA) has assured that the seaweed does not pose health risks, the foul smell and unsightly appearance can detract from the beach experience [2].

A study by the University of Porto found that on some northern beaches, there was more **waste** than sargassum, a type of brown seaweed, highlighting the severity of the litter problem [1].

[1] theportugalnews.com
[2] portugalresident.com

CLEAN BEACHES

Your help is invaluable!

The Policies

To address several environmental and health concerns, the European Commission (EC) implemented a range of policies and recommendations on plastics:

- European Plastics Strategy, certain single-use plastics are banned.
- Water Framework Directive (WFD), Urban Waste Treatment Directive (UWWTD), Nitrates Directive
- Habitats Directive, Bathing Water Directive (BWD) have provided guidelines and rules for stepwise reduction of coastal marine eutrophication.
- 2008/56/EC, Marine Strategy Framework Directive. Establishes a framework for community action in the field of marine environmental policy.
- Circular Economy Action Plan recognises the harm caused by plastic, but also its high potential for circularity

Policies alone won't solve the problem...
We all need to contribute!

Can Citizen Science (CS) Help?

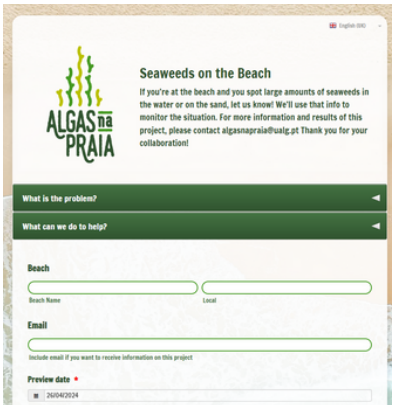
Citizen science (CS) is a collaborative effort where members of the general public voluntarily contribute to scientific research. CS can help address different problems and involve various tasks such as data collection, analysis, and reporting, often in collaboration with professional scientists.

The goal of CS is to expand scientific knowledge and engage the public in hands-on learning about the scientific process.

One of the aims of the OTTERS project, is to scale up citizen science and foster a sense of agency in water stewardship.

Current CS Approaches

CS projects are addressing the problems, and contribute to the solution by involving and educating citizens. Below we present some CS platforms and apps used in Portugal.



Algas na Praia, Citizen science form created by a consortium (University of Algarve, CCMAR Algarve, Cresc Algarve 2020, Portugal 2020, National Maritime Authority etc.). Users can share information on the excessive accumulations of seaweeds on beaches.

Marine Litter platform is a citizen science project developed by researchers from the Center for Marine and Environmental Sciences – University of Coimbra in partnership with Associação Portuguesa do Lixo Marinho. The project aims to produce statistical data and raising awareness about the marine litter.

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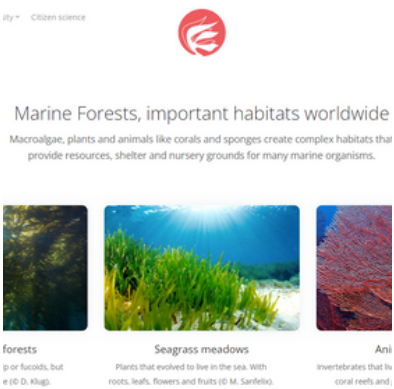

Marine Forests is a citizen science platform where users can report the occurrence of seaweed, seagrass, corals, and other forest-forming species to reach worldwide maps with distribution records.

GelAvista is a citizen science program responsible for monitoring gelatinous organisms along the entire Portuguese coast.

Next Steps

IDEAS FOR MAKING A DIFFERENCE

Buy products like backpacks, sunglasses, yarns etc. from recycled litter like plastic.

Shift to a circular economy and eliminate waste by design. The effectiveness of the circular economy model hinges on prioritizing the design phase to prevent waste, as opposed to addressing waste after a product's lifecycle has ended.

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Have Your Say!

FOR INDIVIDUALS

- What are the biggest water-related challenges in your area?
- How could future CS projects help solve water-related challenges?
- Did you find the current CS solutions efficient?
- What would you propose as next steps for reducing the seaweed and litter on the beaches? (i.e. more face-to-face activities, better apps, better local promotion etc.)

**If you need help setting up a Slido to capture the answers please contact us at https://otters-eu.aua.am/contact-us/*

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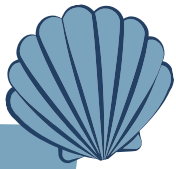
Have Your Say!

FOR PROJECTS

- What are the biggest water-related challenges that you encountered in your project?
- Which is the best way to exchange CS data?
- Do you think there is a need to standardise CS?
- Would a Resource Hub for CS in marine and freshwater domains help your work?

**If you need help setting up a Slido to capture the answers please contact us at https://otters-eu.aua.am/contact-us/*



Inspirational Message

Join hands with us as we embark on a journey to restore the beauty of our beaches. Each grain of sand counts, just like every helping hand. Your efforts ripple across the ocean of change, inspiring others to follow the tide. Let's unite for the shores we adore, turning the tide against pollution. Be the wave that brings a sea of change!

CLEAN BEACHES

These visuals can be used to promote participation in the co-creation sessions.

Initial Messages & Visuals

For the Citizens

This project has received funding from the European Commission's Horizon Europe Coordination and Support Actions programme under grant agreement No. 101094041.

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Get involved!

Preserve the Pristine: Respect, Protect, and Enjoy Our Beaches!

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JOIN US NOW!

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Initial Messages & Visuals

For the Public Authorities

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United for the Shore: Clean Beaches, Safe Communities, Sustainable Futures.

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OTTERS Consortium

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ecsa

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