



## This is 6th WASTEREDUCE Newsletter

Dear Readers,  
We are delighted to share our 6th Newsletter with you!

Each of our newsletters focuses on a timely and important topic, paired with educational content, to keep you informed. We also highlight recent project activities and provide updates on upcoming initiatives. To strengthen cross-border and regional collaboration, each edition features a "Region in Focus" section, where we shine a spotlight on one of the regions involved in the project.

This issue is dedicated to **Behavioral Strategies in Waste Management** – a topic we believe is crucial. Environmental psychology offers valuable insights into how we can inspire and encourage pro-environmental behaviors among the public and key stakeholders. We invite you to dive into this edition of our newsletter, where we share the results of our recent survey and highlight key activities. Discover how our respondents perceive the challenges of waste management in protected areas – and what that might mean for shaping more effective, human-centered solutions.

Additionally, we will provide an overview of the past period of the WASTEREDUCE project, including our activities and what lies ahead. This issue's "Region in Focus" will feature the **Veneto** in Italy.

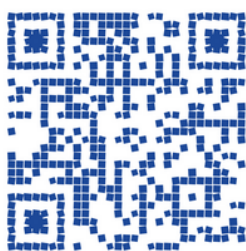
We hope you will enjoy reading!

Your WASTEREDUCE Team

Partnership  
IT - 4  
HR - 4

01/02/2024  
31/07/2026

Total budget  
1.657.742,23  
EUR



### WASTEREDUCE

is an EU funded project in collaboration with eight partners. Together, we will tackle waste management challenges in protected and Natura 2000 areas across Italy and Croatia. Our goal is to enhance waste prevention, reduce environmental impacts, and improve cooperation among stakeholders.



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FOR WASTE?

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## Behavioral Strategies in Waste Management

Effective waste reduction and management requires a synergistic effort that includes both structural and individual measures. For example, waste reduction can be achieved through both the elimination of unnecessary packaging and the individual's decision to use reusable containers. Similarly, more appropriate waste disposal is linked to both the availability of appropriate facilities and structures, such as collection points, recycling bins and waste containers, and the willingness of individuals to dispose of their waste in an appropriate manner. It is therefore important to consider both the structural and the individual level when planning measures or interventions to improve waste reduction and management in natural protected areas.

Environmental psychology investigates how to promote pro-environmental behaviors, defined as behaviors that can have a positive impact on the environment or at least reduce the negative impact of humans on the environment. Research in this area has shown that appropriate intentions and behaviors are predicted by cognitive factors such as problem awareness, emotional factors such as guilt, and social factors such as perceived norms of the reference group. Research has also shown that the appropriate placement of bins and dumpsters, together with appropriate incentives, is an effective way to encourage recycling in the urban environment. In general, it seems that making the appropriate behavior easier to perform, thanks to supportive structural and environmental changes, appears to be an effective strategy to promote pro-environmental behaviors in the domain of waste management. Carefully designed communication measures based on psychological research can also be helpful.

Despite the existing knowledge, very little is known about how to promote more responsible waste-related behaviors **in natural protected areas**, as there is little research in this specific setting. Therefore, an important part of the applied research within the Wastereduce project is dedicated to identifying strategies to promote these behaviors.

Completed activities include:

- (1) **a visitor survey** to understand the cognitive, emotional, and social factors that predict waste-related habits and intentions of visitors in natural protected areas;
- (2) **field observations** in the pilot areas to assess the consequences of waste-related behaviors and the degree of environmental support (e.g., presence and condition of bins, signs);
- (3) **interviews with stakeholders** to acquire informed viewpoints on the status of the pilot areas.

We also asked visitors and stakeholders to provide their views on the potential effectiveness of a range of informational/educational and structural waste-related strategies specifically tailored to natural protected areas. This work will be complemented by an ongoing **systematic review and meta-analysis** of scientific studies to assess the effectiveness of strategies already in use in natural environments. Overall, this work will provide guidance for the development of more effective structural and behavioral strategies for waste reduction and management.

## The Role of Behavioral Studies in Environmental Projects: The Case of WASTEREDUCE

Understanding human behavior is essential for designing effective environmental strategies, particularly in areas such as waste reduction, where personal action significantly impacts ecological outcomes. Behavioral studies help uncover the psychological, social, and contextual factors that influence how people interact with the environment, providing valuable insights that go beyond infrastructural or policy-based solutions.

For the WASTEREDUCE project, which focuses on integrated waste reduction strategies in protected and Natura 2000 areas, behavioral analysis is especially important. The project's success depends not only on technical interventions but also on fostering sustainable habits among visitors and stakeholders. By understanding what motivates or hinders individuals from engaging in responsible waste behaviors, the project can develop more targeted and effective measures. In the following section, we present part of the project that specifically addresses this aspect.

### Behavioral Studies in WASTEREDUCE: Overview, Methodology, and Results

The specific activity within WASTEREDUCE project involves conducting in-depth interviews, surveys, and behavioral observations to explore stakeholders and citizens views on waste-related practices in Wastereduce pilot areas. This was achieved through online surveys targeting visitors of natural and protected areas and interviews with stakeholders in project pilot areas. The objective is to assess both current waste management practices and the psychological drivers behind individual behavior.

### Methodology

The methodology for this activity involved the design and the implementation of the **visitor survey**, **semi-structured stakeholder interviews**, and **observations in three pilot areas of the project**.

#### Survey

The first goal of the online survey was to understand visitors' perceptions, evaluations, and behaviors related to waste reduction and disposal in natural and protected areas in Croatia and North-East Italy and in the pilot areas of the project. The survey provides useful information about waste-related behaviors in those areas, visitors' satisfaction with current waste management, and suggestions for new or improved waste-reduction measures.

The second goal of the survey was to identify individual and environmental factors playing important roles in promoting or hindering correct waste-related behaviors in natural protected areas and in pilot areas.

Two separate surveys were administered: one focusing on natural protected areas in general, and the other on specific WASTEREDUCE pilot areas. A total of 248 participants completed the general survey, and 258 responded to the pilot area survey.

Questions covered visit habits, satisfaction with the environment, waste-related behaviors, and the perceived effectiveness of educational and structural interventions.

#### Interviews

Semi-structured interviews were conducted with representatives of the institutions managing Natura 2000 sites and local stakeholders. In particular, fifteen stakeholders (public institution managing waste in the pilot area, private organization with economic interests in the pilot area, non-profit association, and other type of organization) completed the interview (8 from Sakarun area, 4 regarding the Middle Brenta area, and 3 regarding the Coasts of Istria area). The aim of the interviews was to understand the perceptions and opinions of stakeholders about waste-related behavior and management in the pilot areas.

#### Observations

Observation sessions were carried out to acquire information of the actual consequences of visitors' littering and waste-abandonment behaviors in specific zones of pilot areas. Together with other information gained through other methods (e.g., remote sensing), observation sessions are useful for understanding waste-related problems in pilot areas and suggesting potential interventions.

For each pilot area, at least two days of observation sessions were carried out in locations and observation zones identified as particularly problematic by project partners and local stakeholders. This procedure allows keeping track of the consequences of binning and waste-related behavior in different locations of the target site in relation to the placement and status of bins and waste-related services, via systematical note and picture taking.

## Key findings

Visitors showed strong support for responsible waste behaviors such as using reusable containers, recycling, and taking personal litter away—actions that were perceived as easy, useful, and environmentally impactful. Conversely, behaviors like picking up or reporting others' waste were seen as beneficial but difficult and less common.

Behavioral intentions were most strongly predicted by past behavior and perceived ease (behavioral control). Environmental concern and moral obligation played a secondary role. Notably, participants believed others were less likely to behave responsibly, indicating a perception gap that may hinder collective action.

Among interventions, **structural strategies**, such as increasing the number and improving the placement of waste bins, were rated as the most effective. **Information-based strategies** like clear disposal instructions were also appreciated, though rated slightly lower. Educational programs and moral appeals had the least perceived impact. These findings were echoed in stakeholder interviews, where the importance of enforcement, monitoring, and infrastructure improvements was also emphasized.

## Conclusion

Overall, the results suggest that **enabling and simplifying responsible behavior through targeted structural and informational strategies is key to increasing pro-environmental actions**. Tailoring interventions to specific local conditions further enhances their effectiveness. The integration of behavioral insights into WASTEREDUCE supports a more comprehensive and human-centered approach to waste reduction in protected areas.

*Interested in the details? Check them out in the illustrations below.*

WE ASKED PROTECTED AREAS VISITORS...

# WHO IS REALLY RESPONSIBLE FOR WASTE?

Do waste reduction activities make sense?  
Can I change anything?

Visitors are generally highly satisfied with their experiences in natural protected areas and in the pilot areas, finding them attractive and restorative.

Oh, yes!  
It is beautiful!

Visitors reported to frequently engage in responsible waste-related behaviors, such as using reusable containers, recycling when bins were available, and taking their waste with them when bins were not present.

I am  
responsible!

Waste disposal in mixed-waste bins was also common but perceived as less environmentally beneficial.

Mixed-waste  
bins?  
OK...but meh...

Littering, occasional waste, and accumulations of natural origins are widespread problems.

But,  
not clean  
enough!

Participants estimated that only about half of other visitors engaged in such behaviors.

But others...  
not so...

Actions like picking up or signaling others' waste, through considered highly useful and beneficial for the environment, were rarely performed and they were perceived as more difficult to implement.

Signaling and  
picking up  
others' waste?  
Uhhhh...



# FUTURE COMMITMENT

Knowing WHY helps,  
but not as much as knowing HOW

Participants expressed strong intentions to engage in responsible waste behaviors.

I will do it!

If it's easy and familiar, I'll keep doing it.

Perceived ease and past frequency strongly influenced future intentions.

Learning why proper waste management matters helps, but it's not as motivating as clear instructions.

Clear instructions make waste disposal simple.

If there are more bins in the right places, I'll dispose of waste properly.

More waste bins and better placement were rated as the most effective solutions.

Efficient waste collection and cleaning make responsible behavior easier for everyone.

Better collection keeps waste under control.

Action beats education

Different places need different solutions, but practical changes often work better than education alone.



WE ASKED STAKEHOLDERS...

# CAN BETTER RULES AND BINS SOLVE OUR WASTE ISSUES?

## Who's to Blame and What Can Be Done?

Stakeholders stress that both educational efforts and structural improvements are necessary for better waste management.

**Solutions matter!**

Providing clear disposal instructions, increasing the number of garbage bins, and improving waste collection services are seen as key solutions

**Good info and better infrastructure help.**

Monitoring waste disposal more closely and imposing higher fines could help reduce improper waste practices.

**Stronger rules - less waste!**

Some stakeholders advocate for "no trace" policies, encouraging visitors to take their waste with them when leaving natural areas.

**Leave No Trace!**

**I see the same waste issues as others...**

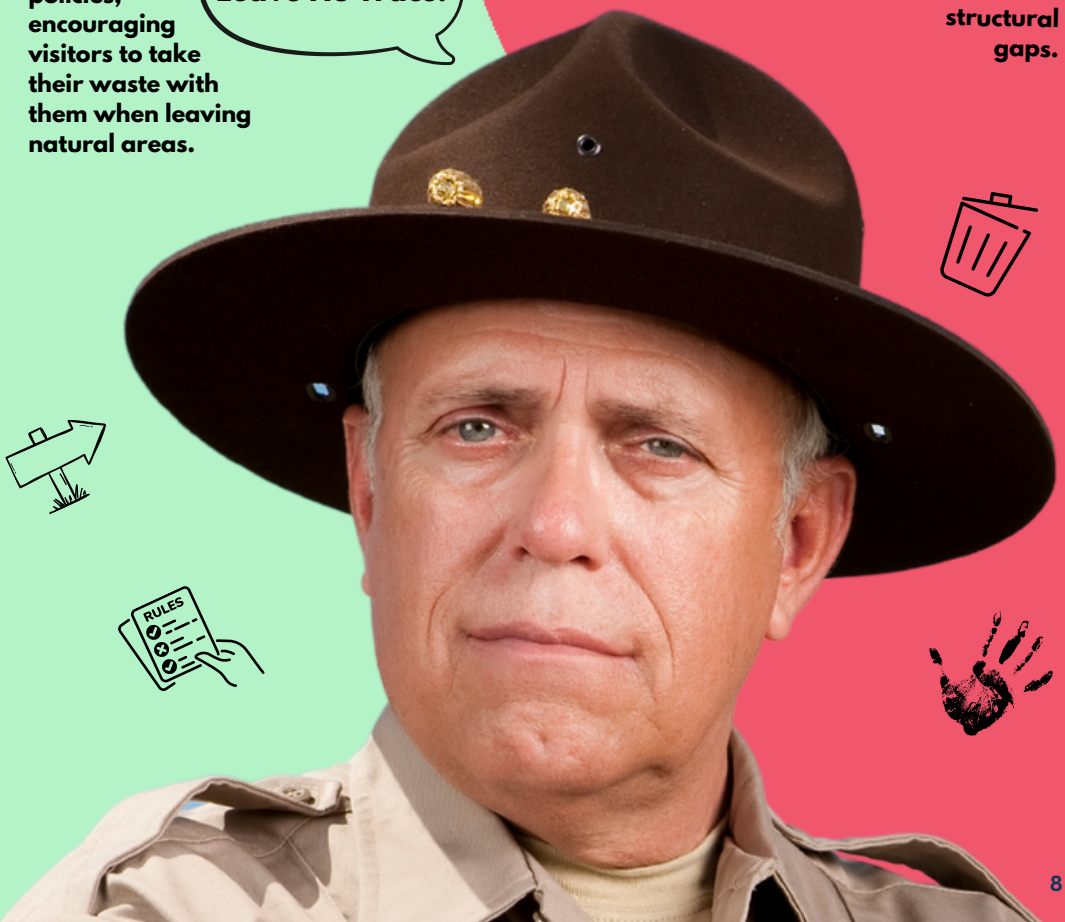
Stakeholders agree with visitors - both recognize littering, occasional waste, and natural debris as major issues in the pilot areas.

**Visitors litter, but locals dump illegally.**

Stakeholders see visitors as the main source of littering, while residents are more often held responsible for illegal dumping.

**Lack of education and weak enforcement make waste worse.**

Waste issues stem from poor education, weak enforcement, and structural gaps.



## Region in Focus

### Veneto

Veneto is one of the most populous and developed regions of Italy, located in the northeastern part of the country. It covers an area of approximately 18,400 km<sup>2</sup>, making it the **eighth-largest region in Italy**. It borders Austria to the north, Trentino-Alto Adige and Lombardy to the west, Emilia-Romagna to the south, and Friuli-Venezia Giulia and the Adriatic Sea to the east. With a population of about **4.8 million people**, it is among the most densely populated regions, after Lombardy, Campania, and Lazio.

#### Protected Areas

Veneto is an extraordinary region, not only for its cultural and historical heritage but also for the diversity of its natural landscapes. From the UNESCO-listed Dolomites to the Venetian Lagoon, passing through hills, rivers, and plains, the region hosts a unique biodiversity. Veneto boasts numerous protected areas, including national and regional parks, nature reserves, and WWF oases. The Dolomiti Bellunesi National Park and regional parks such as the Po Delta and Colli Euganei are just a few examples of the natural wonders that the region protects and promotes.



In Veneto, a total of **130 Natura 2000 sites** have been identified, including **67 Special Protection Areas (SPAs)** covering **359,869 hectares** and **104 Sites of Community Importance (SCIs)** covering **373,282 hectares**, of which **2 are marine sites** (3,278 hectares). The total protected area, excluding overlaps, amounts to **418,157 hectares**, representing **22.5% of the regional land territory** (compared to the national average of **19.3%**).

#### Waste management

Veneto stands out for its highly efficient waste management system, achieving a separate waste collection rate of 77.6% in 2023. This surpasses both the national average of 65.2% and the 71.2% average for northern Italian regions. This result highlights the region's commitment to promoting sustainable practices and exceeding the 65% target set by national regulations. Furthermore, provinces such as Treviso excel even more, reaching almost 90% separate waste collection. As of today, according to the data from the Waste Registry managed by ISPRA (Istituto Superiore per la Protezione e la Ricerca Ambientale), Veneto has 112 authorized landfills.



Regarding special waste, a total of **17.8 million tons** of waste were managed in 2022, with over **15 million tons** directed to recovery plants and nearly **2.8 million tons** allocated to preliminary treatments and final disposal.

To monitor and analyze waste management in detail, the Veneto Region provides tools such as the **Urban Waste Geoportal**, which offers detailed data on separate waste collection at the municipal and provincial levels.

## Veneto Region

Here is the list of protected areas of Veneto Region (Source: Federparchi):

Dolomiti Bellunesi  
Colli Euganei  
Veneto Po Delta  
Sile River  
Dolomiti di Ampezzo, Lessinia  
Adige  
Bus della Genziana  
Campo di Mezzo - Pian Parrocchia  
Monte Pavione  
Monti del Sole  
Piani Eterni - Errera - Val Falcina  
Piazza del Diavolo  
Western Schiara  
Somadida  
Val Tovanella  
Valle Imperina  
Valle Scura  
Vette Feltrine  
Vincheto di Cellarda  
Monte Faverghera  
Bocche di Po  
Bosco Nordio  
Eastern Garda  
Lastoni Selva Pezzi  
Piaie Longhe - Millifret  
Pian di Landro Baldassa - Colli Euganei  
Po Delta  
Monte Grappa  
Po Grande  
WWF Oasis Valle Averso  
Bosco delle Fontane  
Oasis Cave Gaggio  
Oasis Cà Roman  
Busatello Marsh  
Brusà Marsh  
Onara Marsh  
Valle Averso



### Sources:

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<https://www.snpambiente.it/snpa/arpa-veneto/produzione-e-gestione-rifiuti-speciali-nel-veneto-edizione-2024-dati-anno-2022/>

<https://www.arpa.veneto.it/temi-ambientali/rifiuti/rifiuti-urbani/rifiuti-urbani-2023>

<https://www.ilnordest.it/cronaca/rapporto-rifiuti-urbani-ispra-veneto-friuli-venezia-giulia-nord-est-b4abgubl>

## News

### Dissemination evening: “Shades of Plastic”

On Wednesday **2 April** at the Fisheries Museum in **Treviso (IT)** a popular dissemination evening, called: “Shades of Plastic” was held. During the evening, Dott.ssa Marta Moranzio from ARPAV had a speech dedicated to dissemination actions carried out by European projects, taking the Interreg IT-HR Wastereduce Project as an example.



IPTPO Wastereduce team marked the **Global Recycling Day** on **April 3rd** in collaboration with the kindergarten „101 Dalmatinac“ in Poreč, Croatia. Read more [here](#).



### Pilot area visit - Sakarun Bay:

On **May 12th and 13th, 2025**, with excellent organization by the association Sunce, WASTEREDUCE project partners gathered on Dugi Otok to visit one of the project's pilot sites – the breathtaking Sakarun Bay. Read more [here](#).

## Announcements

### Upcoming Event – BAM! Europe, June 6-8, Piazzola sul Brenta (IT)

From **June 6-8**, the Wastereduce project will be represented by ETRA, Etifor|Valuing Nature and ARPAV at BAM! Europe, the international gathering of bicycle travelers. A stand will be set up to share information on slow tourism, waste reduction, sustainability, and environmental protection. Arpav will be present with virtual reality headsets, which will be made available for viewing the video produced as part of the now-completed MARLESS project (...), to explore the journey of a plastic bottle—whether it is properly disposed of in a bin or abandoned and thrown into the river. Additionally, a bike-based waste collection along the Brenta cycle paths will be organized with the support of Italian associations. We look forward to seeing you there with waste-themed games and opportunities to share ideas!

📌 Event details: [BAM! Europe](#)



On **May 25**, the Wastereduce team from IPTPO will organize a workshop focused on sustainable waste management at the Scientific-Educational Center Kontija. This event is part of our ongoing efforts to promote environmentally responsible practices and will also mark our celebration of the International **Biological Diversity Day 2025**. Through interactive sessions for children and adults, the workshop will highlight the important connection between effective waste management and the protection of biodiversity.

### Visit to the Middle Brenta pilot area (IT)

The visit to the Middle Brenta pilot area for project partners will be organized on **June 4-5**.

PI Natura Histrica is set to organise **clean-up actions, plogging races, and an educational tour in Istrian pilot areas**, with dates to be announced.