

Interreg



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Italy – Croatia

 WASTEREDUCE



WASTEREDUCE

INTEGRATED WASTE REDUCTION STRATEGIES AND SOLUTIONS IN PROTECTED AND NATURA 2000 AREAS

Final Meeting & Conference

Poreč, 2 July 2026



Book of Abstracts



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WASTEREDUCE

is an EU funded project in collaboration with eight partners. Together, we 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.





BOOK OF ABSTRACTS

Chair Welcome

The WASTEREDUCE project is a two-and-a-half-year cross-border initiative dedicated to improving waste management in protected and Natura 2000 areas through innovative, integrated, and sustainable solutions. Recognising that waste pollution poses a significant threat to biodiversity, ecosystem services, and the quality of life of local communities and visitors, the project aims to develop new approaches for monitoring, preventing, reducing, and mitigating the impacts of waste in these environmentally valuable areas.

The project brings together a consortium of eight partners, four from Croatia and four from Italy, combining expertise from public authorities, protected area managers, regional institutions, and research organisations. Through intensive cooperation and knowledge exchange, the partnership seeks to strengthen waste management policies and practices, promote circular economy principles, increase public awareness, and encourage behavioural change among stakeholders and visitors.

The WASTEREDUCE approach is based on the impact mitigation hierarchy and is structured around four interconnected levels: measuring, avoiding and preventing, reducing, and mitigating the impacts of waste. The measuring phase focuses on monitoring waste accumulation, identifying critical hotspots, assessing the needs of institutions managing protected and Natura 2000 areas, and understanding human behaviour related to waste disposal and abandonment. Preventive actions aim to minimise waste generation through targeted strategies and awareness-raising activities. Reduction measures emphasise the decrease of single-use products and the promotion of recycling and circular solutions, while mitigation activities are designed to improve the efficiency of waste management systems and reduce the environmental impacts of waste in large and often remote protected areas.

A key innovation of the project lies in its landscape-level approach, which considers diffuse waste pollution across entire ecosystems rather than focusing solely on point sources of pollution. By integrating governance, socio-economic, technological, and cultural dimensions, WASTEREDUCE provides a comprehensive and transferable model for waste management in protected and Natura 2000 areas.

The project outcomes, including methodologies, tools, recommendations, and pilot actions, will contribute to the development of waste management strategies and plans at local, regional, national, and cross-border levels. Furthermore, the project partners are committed to ensuring the long-term sustainability and replication of the WASTEREDUCE approach in other protected areas beyond the project lifetime.

The abstracts presented in this Book of Abstracts showcase the knowledge, experiences, research findings, and innovative practices developed during the implementation of the WASTEREDUCE project and reflect the collective efforts of the partnership towards building cleaner, more resilient, and sustainable protected and Natura 2000 areas for future generations.



Barbara Sladonja
Conference Chair

WASTEREDUCE Project

Final Project Meeting & Final Conference

Date: 2 July 2026

Venue: Valamar Diamant Hotel (Lovor Hall), Brulo 1/1, Poreč, Croatia

Final Project Meeting

09:00 - 09:45 Final project meeting (Project partners only)

Final Conference

09:45 – 10:00 Registration

Session 1: Project Results and Achievements

10:00 – 10:10 Opening remarks

Igor Lukić, Assistant Director for Science (IPTPO)

Helena Brčić, Project Manager JS Interreg VI A Italy - Croatia
2021- 2027

10:10 – 10:25 An overview of the WASTEREDUCE project

Barbara Sladonja, Project Lead (IPTPO)

10:25 – 10:50 Project highlights from the partner's view

Project partners representatives

Session 2: Challenges of Marine and Land-Based Waste

10:50 – 11:20 Marine Litter – Microplastics and the Situation in the Northern Adriatic

Mirta Smodlaka Tanković (IRB, CIM)

11:20 – 11:50 Land-Based Waste in Protected Areas with a Focus on Underground Environments

Sandro Dujmović (Javna ustanova Natura Histrica)

11:50 – 12:10 Coffee Break

Session 3: Innovative Approaches and Future Perspectives

12:10 – 12:40 Behavioral Science – How Can It Help?

Fabio del Missier (UNITS)

12:40 – 13:10 Medio Brenta - New participatory strategies in Natura 2000 areas

Nicola Rosin (Consiglio di Bacino Brenta)

13:10 – 13:20 Closing remarks

13:20 – 14:30 Lunch

16:00 – 19:00 Study Visit and Networking for Project Partners

An overview of the WASTEREDUCE project

Barbara Sladonja

Institute of Agriculture and Tourism, Poreč, Croatia

The WASTEREDUCE project addresses waste management challenges in protected areas and Natura 2000 sites through an integrated, cross-border approach implemented within the Interreg Italy–Croatia Programme. The project combines innovative monitoring technologies, behavioural research, stakeholder engagement, and pilot actions to improve waste management practices and reduce the environmental impacts of waste. Its approach is based on four complementary pillars: monitoring waste hotspots, preventing waste through education and awareness-raising, reducing waste through targeted interventions, and mitigating impacts through continuous evaluation and community participation. Innovative tools, including remote sensing, drones, satellite imagery, and behavioural analysis, support evidence-based decision-making and the development of effective waste reduction measures. The project demonstrates that combining scientific monitoring, participatory governance, and public awareness activities can improve waste management, strengthen biodiversity conservation, and promote sustainable tourism in protected areas while providing transferable solutions for other Natura 2000 sites.

INVITED LECTURE

Microplastics and the Situation in the Northern Adriatic

Mirta Smodlaka

Ruđer Bošković Institute, Center for Marine Research, Rovinj, Croatia

The Northern Adriatic is particularly vulnerable to microplastic pollution due to its semi-enclosed basin, high population density, intensive maritime activities, tourism, and significant riverine inputs. Microplastics have been detected throughout the marine environment, including seawater, sediments, and marine organisms, raising concerns about their ecological impacts and long-term accumulation.

Recent research and long-term monitoring have improved our understanding of the distribution, sources, and fate of microplastics in the Northern Adriatic, while also highlighting the need for harmonized monitoring approaches and transnational cooperation. Advancing scientific knowledge and integrating innovative monitoring methods are essential for supporting effective management strategies and reducing plastic pollution in this highly valuable and sensitive marine ecosystem.

INVITED LECTURE

Land-Based Waste in Protected Areas with a Focus on Underground Environments

Andrea Deklić, Sandro Dujmović

Public Institution Natura Histrica. Pula, Croatia

The presentation focuses on the problem of land-based waste in protected areas, with particular emphasis on illegal waste dumping in caves and other underground karst environments in Istria County. These ecosystems are highly sensitive, support numerous endemic species, and play a crucial role in protecting groundwater resources used for public drinking water supply.

Several cleanup initiatives carried out over the past two decades are presented, demonstrating a long-term commitment to protecting underground habitats. These activities include scientific research, environmental monitoring and the removal of large quantities of illegally dumped waste from caves and pits throughout Istria.

The presentation also highlights two notable case studies. The first describes the deepest cave cleanup ever carried out in Croatia, at Rašpor Pit, where more than 8.5 m³ of waste was removed through a technically demanding speleological operation. The second presents Croatia's first successful legal case in which the offender responsible for illegal cave dumping was identified through evidence recovered from the waste and subsequently fined.

The presentation concludes that, while cleanup actions are essential for mitigating environmental damage, they are not sufficient on their own. Long-term protection of underground ecosystems requires stronger prevention measures, effective law enforcement, public awareness and continued cooperation among institutions, researchers, caving organizations and local communities.

INVITED LECTURE

Behavioral science. How can it help?

Fabio Del Missier

University of Trieste, Department of Life Sciences, Trieste, Italy

The presentation describes the application of behavioral science methods and their results in the Wastereduce project, highlights the main insights gained, and indicates new applied research directions. Field observations, visitor surveys, and stakeholder interviews significantly contributed to understanding the status of the pilot areas and supported the formulation of informed hypotheses about waste and littering sources. The information acquired, together with the results of a meta-analysis on the effectiveness of behavioral interventions, supported the planning of Wastereduce strategies to prevent and reduce littering and illegal waste dumping and the design of strategy monitoring procedures. Future directions include field evaluation of interventions, combining behavioral strategies, and supporting the development of positive habits through a mix of behavioral methods, including the provision of external supports.

INVITED LECTURE

Medio Brenta - New participatory strategies in Natura 2000 areas

Nicola Rosin

Consiglio di Bacino Brenta, Cittadella, Italy

The Middle Brenta River Natura 2000 site represents one of the most valuable freshwater ecosystems in the Veneto Region, while simultaneously facing increasing pressures from intensive recreational use, urbanization, and illegal waste disposal. Following the LIFE Brenta 2030 project, the Brenta Basin Council became the managing authority of the protected area, introducing an integrated governance model based on participatory management and cross-sectoral cooperation.

Within this framework, the Interreg Italy-Croatia WASTEREDUCE project aims to improve waste management in protected areas through monitoring, prevention, mitigation, and stakeholder engagement. The project combines systematic waste mapping and collection with awareness-raising activities targeting residents, schools, tourists, and local authorities. A coordinated network of municipalities, environmental agencies, research institutions, and public service providers supports the implementation of joint actions, including cleanup campaigns, surveillance, educational materials, and citizen participation initiatives.

Initial results demonstrate the effectiveness of coordinated governance in addressing waste-related environmental pressures. Since the establishment of the new management framework, significant quantities of waste have been removed, monitoring capacity has been strengthened, and public awareness has increased through targeted educational campaigns. The project highlights how integrated management and active stakeholder involvement can contribute to the long-term conservation of Natura 2000 sites while promoting sustainable tourism and responsible environmental behaviour.

Project in Brief

WASTEREDUCE is first Italian-Croatian Interreg project to support EU and local environmental protection policies and practices related to waste management in protected and Natura 2000 areas. WASTEREDUCE is not only a waste management project but also an innovation laboratory that combines science, technology, and social change.

WASTEREDUCE's Distinctive Features

The project is developing, testing and implementing a new, integrated, participatory and holistic approach to waste management, adapted to the specificities of protected and Natura 2000 areas, in order to minimize the harmful effects of waste, especially with regard to rivers and coastal areas, which are most affected by anthropogenic waste.



The approach was tested on three pilot areas – one in Italy and two in Croatia.

WASTEREDUCE brought together eight key public and private partners from Italy and Croatia. The partnership worked synergistically to tackle pollution and indirectly preserve ecosystems.

Fundamental to the project's success was the active involvement of citizens, to whom education and awareness-raising actions are dedicated. Their feedback was crucial to guide the waste management policies developed by the responsible bodies and project partners.

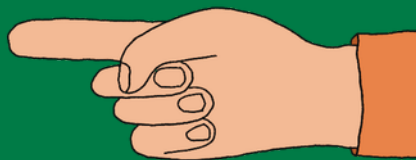
WASTEREDUCE's Distinctive Features



Project Objectives

TO:

- improve waste management in protected and Natura 2000 areas
- improve existing waste management policies and practices
- raise awareness and change the behavior of visitors and other stakeholders
- use environmental psychology to understand how to encourage more responsible, conscious, and eco-friendly behavior
- reduce the environmental and socio-economic costs of waste management and associated impacts
- use innovative strategies (remote sensing) in waste management in pilot areas
- improve cooperation between stakeholders at transboundary, national, regional and local levels in the field of waste management



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