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WASTEREDUCE

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This is 10th WASTEREDUCE Newsletter

Dear Readers,
Welcome to the 10th edition of the WASTEREDUCE Newsletter!

In this issue, we focus on a topic that lies at the heart of today's environmental challenges: ***The Impact of Waste on Climate Change.*** *Waste generation and management are closely interconnected with climate dynamics, influencing greenhouse gas emissions, resource depletion, and the resilience of waste systems themselves. Understanding these links is essential for designing effective, climate-conscious waste prevention strategies.*

Partnership
IT - 4
HR - 4

01/02/2024
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Total budget
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EUR

This edition explores the topic through several key perspectives. We examine how landfills act as significant contributors to global warming, the complex relationship between plastics and climate change, and how climate change negatively affects waste management systems, increasing operational risks and environmental pressures. We also highlight the role of the circular economy as a powerful approach to mitigating climate impacts by reducing waste, conserving resources, and lowering emissions across value chains.
As always, this issue features a dedicated News and Announcements section, covering the period 1 December 2025 to 31 January 2026.

We hope this edition provides valuable insights into the waste–climate nexus and inspires collective action toward more resilient, low-carbon, and circular waste systems.

Warm regards,
The WASTEREDUCE Team

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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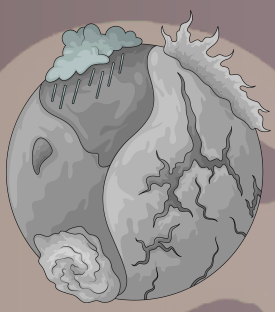

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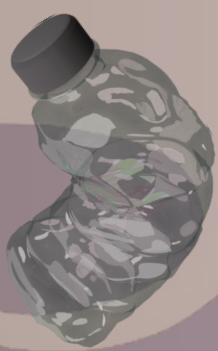

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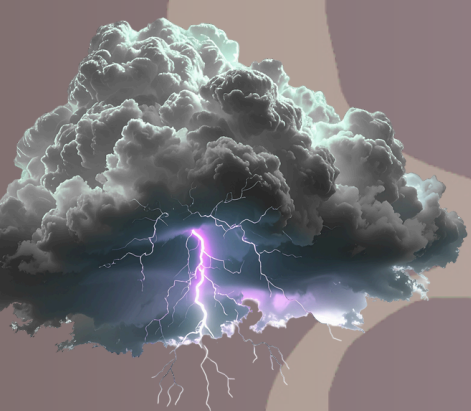

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News and Announcements

The Impact of Waste on Climate Change

Waste and climate change are mutually reinforcing challenges: poor waste management drives greenhouse gas emissions, while climate change increasingly undermines waste systems, making waste reduction and circularity essential climate actions at both EU and global level.

The Impact of Waste on Climate Change

Waste is often perceived as a local environmental or waste management issue, yet its impacts extend far beyond disposal sites and national borders. From methane emissions released by landfills to the energy-intensive production of short-lived goods, waste generation and treatment significantly contribute to greenhouse gas emissions and accelerate climate change.

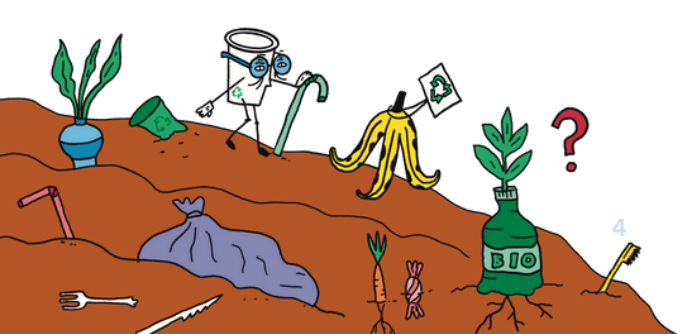
At the same time, climate change increasingly affects the performance of waste management systems, exposing vulnerabilities in infrastructure, increasing operational risks, and amplifying environmental and public health impacts. This mutual influence creates a reinforcing cycle in which poor waste management fuels climate change, while climate change further complicates waste prevention and treatment efforts.

Reducing waste is a powerful climate action: it cuts greenhouse gas emissions, strengthens climate resilience, and supports global and EU climate goals through circular economy solutions.

Recognising this interdependence, waste reduction has become a key element of global and European climate action. At global level, initiatives such as the Paris Agreement, the UN Sustainable Development Goals (especially SDG 12 on responsible consumption and production), and ongoing negotiations on a global plastics treaty underline the importance of waste prevention, circularity, and resource efficiency in achieving climate targets.

Within the European Union, waste reduction is firmly embedded in climate policy through the **European Green Deal**, the **EU Circular Economy Action Plan**, and the **Fit for 55 package**, which together aim to cut emissions by reducing waste generation, diverting waste from landfills, and keeping materials in use for longer. These initiatives highlight that effective waste prevention is not only an environmental necessity, but also a strategic climate mitigation and adaptation measure.

By exploring the impact of waste on climate change, this edition highlights why addressing waste is essential for achieving climate neutrality, building resilient systems, and enabling a more sustainable, circular future.



Landfills: The Hidden Climate Hotspots

Landfills are a major source of methane emissions, making the reduction of biodegradable waste disposal a critical climate action addressed through increasingly ambitious EU waste legislation.

Landfills: A Significant Contributor to Global Warming and the Path to Better Waste Management

Landfills, often out of sight and out of mind, are silent but significant contributors to global warming. As organic waste, such as food scraps, garden waste, and other biodegradable materials, breaks down in these massive sites in the absence of oxygen, it produces a potent cocktail of gases known as landfill gas. The most concerning component is methane (CH_4), a greenhouse gas with a warming potential more than 27 times greater than carbon dioxide over a 100-year period. Consequently, **controlling landfill gas emissions is not just an environmental best practice, but a critical imperative in the fight against climate change.**

Uncontrolled methane release from landfills exacerbates the greenhouse effect, trapping heat in the Earth's atmosphere and accelerating global warming. Recognizing this profound impact, legislative bodies, particularly in the European Union, have enacted measures aimed at drastically reducing the amount of putrescible (biodegradable) waste sent to disposal sites. Building on earlier directives, the EU has recently strengthened its approach through significant amendments to the **Waste Framework Directive.**

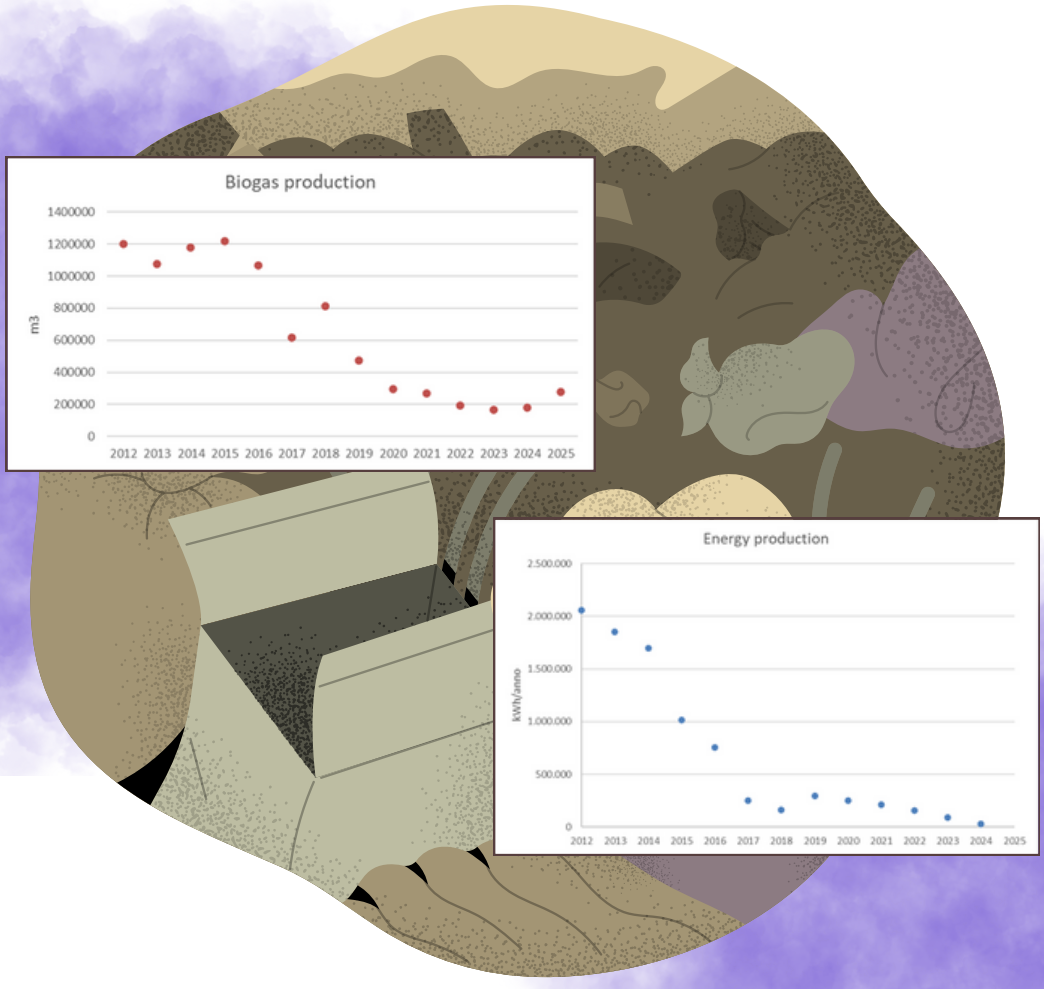
These ambitious targets are designed to prevent biodegradable material from ever reaching landfills. By diverting organic waste toward more sustainable management options like composting, anaerobic digestion for biogas production, and food donation redistribution, the EU aims to slash methane emissions from the waste sector. This preventive strategy is reinforced by a broader long-term goal: **by 2035, member states must ensure that no more than 10% of their total municipal waste is sent to landfills.** This comprehensive legislative framework underscores a clear shift from simple disposal to a circular economy model, where waste is treated as a resource, and the environmental footprint of its management is minimized.

By diverting organic waste from landfills and limiting disposal to 10% of municipal waste by 2035, the EU is targeting methane emissions at their source and accelerating the shift to a circular economy.

A Focus on the Campodarsego Landfill

The landfill located in **Sant'Andrea, Campodarsego (PD, IT)**, has undergone a significant transformation over the last few decades. Originally activated in the 1970s, in June 2009 the landfill was taken over by Etra Spa Società Benefit and it continued operations until July 11, 2012. Following the completion of final capping and safety works, the Province of Padua formally authorized the closure and the start of the post-operational management phase.

During its operational life and the early years of post-management, the landfill was a source of renewable energy. A network of extraction wells captured landfill gas, which was sent to a cogeneration plant to produce electricity. The figures represent the production of biogas and its valorisation in the cogeneration unit during the post-operational phase. Both variables have shown decreasing trends. Once the resulting gas volume is insufficient to power a continuous cogenerator, the remaining gas is directed to an emergency flare. This process oxidizes methane (CH_4) into (mainly) biogenic CO_2, drastically reducing the site's overall global warming potential.



As the landfill body stabilizes and differential settlements reduce, the site is being prepared for a new life as a renewable energy plant. Above the Campodarsego landfill the construction of a photovoltaic park is under evaluation with a capacity up to 4.5 MW. This initiative transforms a formerly unproductive "brownfield" into a "greenfield" for clean energy; with the production of 4.800 MWh, this best practice is aligning with European circular economy goals.

Plastics and Climate Change: A Fossil Fuel Legacy

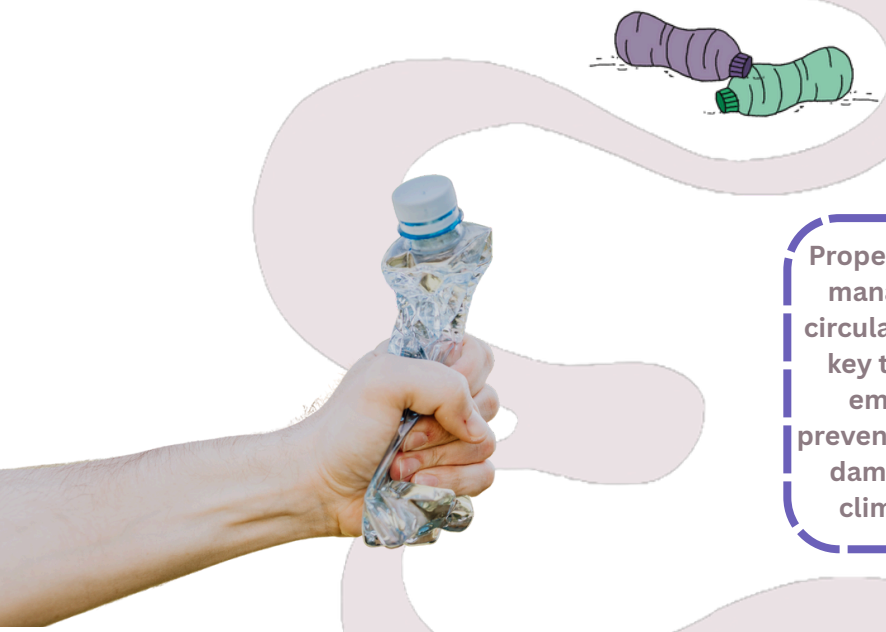
Because plastics are derived from fossil fuels and emit greenhouse gases throughout their entire lifecycle, plastic waste represents a significant and often overlooked driver of climate change.

Plastics and Climate Change: A Fossil Fuel Legacy

Plastic and climate change are deeply intertwined. According to the United Nations plastics generated 1.8 billion tonnes of greenhouse gas emissions in 2019, which is 3.4 % of the world's total emissions, a number that is set to grow considerably as the production of plastics is expected to triple by 2060. They warn that 98% of single-use plastic produced today is made of components derived from oil and gas. Their production, extraction and transport of fossil fuels, and use and disposal of plastics, all generate significant carbon emissions that contribute to global warming.

Plastic pollution therefore not only harms biodiversity but also undermines efforts to mitigate harmful effects of climate change.

The EU is responding through measures such as the **Single-Use Plastics Directive (EU) 2019/904**, the **Plastics Strategy**, and new rules under the **Packaging and Packaging Waste Regulation (PPWR)**. These initiatives aim to reduce plastic consumption, boost recyclability, and cut emissions by keeping materials in use longer.



Proper plastic waste management and circular solutions are key to minimizing emissions and preventing ecosystem damage linked to climate change.

Reducing plastic production and improving waste management can cut fossil fuel use, protect carbon-sequestering ecosystems, and lower climate emissions at every stage of the plastic lifecycle.

Best Practice from Croatia: Plastic Smart Cities – Dubrovnik and Trogir

The Association Sunce, a WASTEREDUCE partner, in cooperation with WWF Mediterranean, implemented the Plastic Smart Cities Croatia project, aimed at reducing plastic waste in the sea and promoting sustainable alternatives to single-use plastics. The two-year project engaged coastal cities across Dalmatia, with **Dubrovnik** and **Trogir** selected as pilot partners to lead by example.

Following an assessment of local waste management systems, the project developed **Action Plans to Reduce Plastic Pollution (2021–2026)** for both cities.

The cities committed to reducing disposed plastic waste by 30% in pilot areas by 2022 and by 55% citywide by 2025, supported through measures such as door-to-door collection, promoting reusable alternatives, and improving management of biodegradable and compostable plastics. Dubrovnik's plan also includes the design and implementation of a Reuse Centre, expected to further reduce biodegradable waste.

This example shows how local governments, guided by structured action plans and collaborative projects, can drive plastic waste reduction, marine protection, and climate mitigation, demonstrating that well-planned local initiatives contribute to broader environmental and climate goals.

Climate Change as a Stress Test for Waste Management Systems

Climate change is increasingly testing the resilience of waste management systems, as extreme weather events disrupt infrastructure, operations, and environmental safety.

Climate Change Undermining Waste Management Systems

Climate change does not only result from poor waste management — it actively undermines it. Floods, storms, heatwaves, and wildfires increasingly disrupt waste collection, treatment facilities, and logistics, damaging landfills, recycling plants, and incinerators and spreading waste and pollutants into surrounding ecosystems.

Extreme weather events raise operational risks, contaminate soil and water, threaten worker safety, and reduce the efficiency of waste collection and treatment. In urban areas, heatwaves affect working conditions and system performance, while coastal waste facilities face rising sea levels and storm surges. Many waste infrastructures were not designed to withstand current or future climate conditions, exposing critical vulnerabilities.

Without climate-resilient waste systems, extreme weather events will continue to disrupt services, increase pollution risks, and undermine environmental and public health.

Recognising these risks, EU policy increasingly addresses climate resilience in waste management through the **EU Climate Adaptation Strategy**, the **European Green Deal**, and targeted funding instruments that support resilient, climate-proof infrastructure. Integrating climate risk assessments into waste planning is becoming essential for protecting environmental and public health.

Circular Economy: Turning Waste Reduction into Climate Action

By keeping materials in use for longer, the circular economy directly reduces greenhouse gas emissions and transforms waste reduction into an effective climate solution.

Circular Economy: Turning Waste Reduction into Climate Action

The circular economy offers one of the most effective pathways to tackle both waste generation and climate change. By prioritising waste prevention, reuse, repair, and high-quality recycling, circular systems reduce the demand for raw material extraction and energy-intensive production — two major sources of greenhouse gas emissions.

Keeping materials in circulation not only cuts emissions across value chains but also strengthens resource efficiency, supply security, and economic resilience. Circular approaches such as eco-design, extended producer responsibility, and reuse systems shift waste management from end-of-pipe solutions to prevention-oriented, climate-smart strategies. In this way, the circular economy turns waste from a climate burden into a powerful tool for both mitigation and adaptation.

Policy spotlight – EU framework

The **EU Circular Economy Action Plan**, the **Ecodesign for Sustainable Products Regulation**, and the revised **Waste Framework Directive** place waste prevention and circularity at the core of EU climate and resource policy, reinforcing the principle that less waste means lower emissions.

A circular economy cuts emissions at their source by preventing waste, reducing resource use, and keeping materials in circulation.

News and Announcements

Workshops, conferences, meetings, events, public engagement... all of these are part of a project's life cycle. But we want it to be more than that – a seed for new ideas, a shift in mindset that continues even after the project ends. For us. For better future.

News

Third Party Event - InnWater Conference
On **December 16, 2025,** Etifor presented the WASTEREDUCE project at a third-party event, the InnWater Conference, a European project focused on analysing governance frameworks in the water sector. The conference addressed several key thematic areas, including waste management in protected areas, which plays a crucial role in safeguarding water quality.
Within this context, the WASTEREDUCE project was presented by Giacomo Laghetto (Etifor), highlighting its relevance to integrated environmental governance and sustainable waste prevention strategies.

Workshop in Cittadella (PD)
On **January 22, 2026,** Etifor organized the third participatory workshop in Cittadella (PD) entitled "Dalla teoria alla pratica: proposte di azioni per il contrasto all'abbandono dei rifiuti lungo il fiume Brenta" with local associations and municipalities, in collaboration with Etra, ARPAV, UNITS, and the Brenta Basin Council for waste and water management. This was an important opportunity to present the operational proposal to be implemented in the Middle Brenta pilot area, which includes specific actions from both an infrastructural and a communication perspective.

Info day and Stakeholders Workshop in Pula (Istria)
On **22 January 2026**, the WASTEREDUCE Info Day and Stakeholders Workshop were held at the Juraj Dobrila University of Pula, jointly organised by Istrian County, the Institute of Agriculture and Tourism, and the University. The event addressed key issues related to marine and coastal pollution—including marine litter monitoring, ghost fishing, and micro- and nanoplastics—and presented the Study on the Prevention of Land-Based Waste Entering the Marine Environment along with a draft WASTEREDUCE Action Plan.

Event "Environment and Circular Economy" – Scienza in Villa
Arpav was invited to the Scienze in Villa event to present the topic of the environment and the circular economy to middle school classes participating in the event. The Wastereduce project was also presented, along with the importance of properly managing and recovering waste from various environmental sources.

Announcements

Educational Workshop on Circular Economy
On **9 February 2026**, the WASTEREDUCE IPTPO team will hold an educational workshop for high school students in Poreč, focused on the principles of the circular economy. The workshop aims to raise awareness about waste prevention, responsible consumption, and the importance of circular solutions in protecting the environment and reducing climate impacts, in line with the objectives of the WASTEREDUCE project.

We hope you enjoyed reading this edition of our newsletter!

Stay tuned

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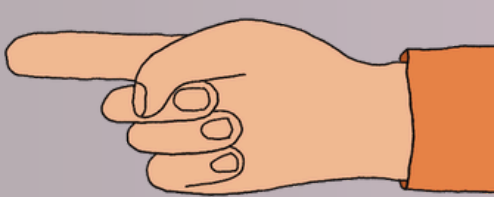
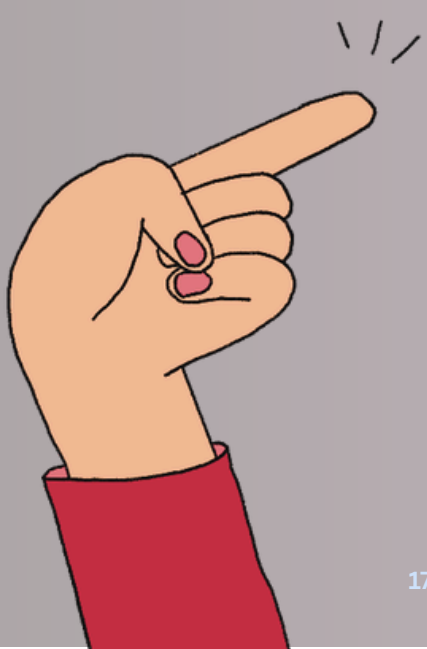


Become a WASTEREDUCE stakeholder



The author of the illustrations used in this Newsletter is Marina Uljančić.