

UNEP – Office of Science Policy Message: Preventing Food Waste in Cities – A Priority for Türkiye's Urban Transition

Zero waste approaches in high-impact sectors (food systems, urban waste management)

Key Message

Food waste is one of the most avoidable sources of municipal solid waste, with significant implications for climate change, resource efficiency, and food security. On the International Day of Zero Waste, UNEP calls for accelerated action to **prevent food waste at source**, particularly in cities, where majority of waste is generated and managed, as part of the Food Waste Breakthrough. For Türkiye, rapid urbanisation, dynamic food systems, and growing municipal waste streams intersect with food waste where prevention represents a high-impact opportunity to advance **circular economy goals, reduce greenhouse gas emissions, and strengthen urban sustainability**.

Why Food Waste Matters for Cities

- While food loss and waste generates 8-10% of global greenhouse gas emissions, food waste alone is responsible for up to 14% of global methane emissions, a gas 84x more potent than CO₂ over 20 years. (IPCC, UNEP) Food waste contributes significantly to **methane emissions** from landfills, undermining climate commitments. Cities play a central role in organic waste prevention and management, as decomposing waste in dumps and landfills is a major source of urban methane emissions. In the United States, food waste alone accounts for 58% of landfill methane emissions (EPA).
- It represents a loss of **land, water, energy, and labour, placing unnecessary pressure on natural resources**.
- Cities bear the financial and operational burden of collecting and disposing of wasted food through municipal solid waste systems. There is massive value in prevention, cities achieve **8:1** returns for local authorities and **84:1 savings** for households, while companies show near-universal positive return on investment with half of 1,200 business sites delivering **14:1** or better (Champions 12.3).

Preventing food waste is therefore not only an environmental imperative, but also a **cost-effective urban policy solution**.

Policy Priorities for Türkiye and Urban Authorities

1. **Measure to manage:** UNEP encourages national and municipal authorities to mandate the measurement and reporting of food waste, in line with SDG 12.3 and UNEP's Food Waste Index. Reliable data is essential to guide policy, track progress, and support informed decision-making at city level.
2. **Prioritise prevention in municipal waste systems:** Urban waste strategies should clearly prioritise food waste prevention over treatment and disposal, positioning prevention at the top of the waste hierarchy. While composting and energy recovery remain important, municipalities should not substitute for upstream action to reduce waste generation, through consumer behaviour change programmes.
3. **Enable redistribution of surplus food:** Cities and national authorities should strengthen legal and regulatory frameworks that facilitate safe food donation, including liability protections and clear guidance for businesses and institutions. Redirecting edible surplus food supports social objectives while reducing municipal waste volumes.
4. **Urban food waste reduction:** Develop food waste reduction plans at city-level, including consumer behaviour change programmes with integrated interventions in retail and food service sector.
5. **Lead by example in public institutions and facilities:** Schools, hospitals, and administrative buildings in the municipalities should adopt food waste reduction targets, and reporting requirements (online apps) through citizen's science approach, demonstrating ownership and setting standards for wider society.

UNEP's Call to Action on governments, cities, businesses, and citizens in Türkiye to:

- **Measure and report food waste systematically** across urban and municipal solid waste systems, using SDG 12.3 aligned methodologies and contributing data to UNEP-supported platforms and dashboards. Food businesses should publicly report on food waste in their operations and supply chains.
- **Embed data-driven food waste prevention** into urban waste and circular economy policies, using evidence from analytics and spatial insights to prioritise prevention at source.
- **Align food waste reduction with climate and sustainability strategies**, supported by integrated indicators and transparent dashboards that track progress and enable accountability.
- **Implement consumer behaviour change interventions** to help citizens reduce food waste at home. Scale separate collection of organic waste, to support circularity in urban food systems and keep food out of landfills.

Preventing food waste when guided by robust data and open reporting is one of the most immediate and cost-effective actions cities can take to advance zero waste objectives, reduce emissions, and deliver measurable benefits for people and the planet.

Case of Solid Waste Management in Gaziantep, Türkiye

Gaziantep Metropolitan Municipality (GMM) demonstrates an integrated Zero Waste model that aligns local implementation with national priorities and the Sustainable Development Goals, positioning environmental protection as a core pillar of urban sustainability. To mark the 2026 International Day of Zero Waste, Gaziantep will be inaugurated as one of the “20 Cities Towards Zero Waste” by the Advisory Board on Zero Waste.

Through sustained investments in environmental education reaching over 700,000 students and community-based initiatives such as the *Recycling Starts at Home Project*, the municipality fosters long-term behavioural change at both institutional and household levels. This is reinforced by enabling infrastructure, including a Mechanical Biological Treatment Facility that has processed over 20,940 tonnes of recyclable materials, reduced landfill dependency and supporting domestic resource efficiency amid growing industrial demand. The municipal policy framework prioritises waste reduction, resource recovery, and pollution prevention, addressing the environmental and economic costs of unsorted waste while strengthening the circular use of domestic materials. Guided by the Sustainable Development Goals, it aims to reduce landfill dependency, recover valuable resources, support local industries through recycling, and ensure a cleaner, more sustainable environment for future generations.

Technological innovation plays a central role in operationalising circular economy principles within the Zero Waste initiative. As part of the Deposit Refund System Project launched in 2025, pilot machines were installed across the city and actively promoted through targeted visual media campaigns to encourage citizen participation. Within just one month, over 21,500 items were returned through these machines and redirected into the recycling process, demonstrating both the effectiveness of the system and strong public engagement. Building on this success, the initiative aims to scale up to 100 machines by 2025, significantly expanding recovery infrastructure and embedding behavioural change at the city level.

At the same time, the project is underpinned by a robust financial sustainability model. Waste management services are supported through the Environmental Cleaning Tax, collected via water bills in line with the Polluter Pays Principle, ensuring a consistent cost-recovery mechanism for household waste collection and transport. This is complemented by public financing, municipal resources, and external grants and loans, enabling continued investment in infrastructure, technology, and system improvements.

Beyond implementation, the initiative demonstrates strong potential for scalability and replication. Its success has generated interest from other municipalities, supported by structured knowledge-sharing, digital tools, and communication platforms that extend outreach and facilitate adoption in different contexts. Together, these elements position GMM's Zero Waste initiative as a policy-driven, financially viable, and scalable model, advancing circular economy transitions, strengthening resource recovery systems, and contributing to the reduction of food and material waste in urban environments.