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GUIDELINES TO REDUCE FOOD WASTE - WASTE MANAGEMENT

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This chapter provides guidelines for reducing and improving the management of food waste across the entire food value chain, from primary production and food service to retail and end consumers, as part of broader efforts to enhance resource efficiency, embed circular economy principles, and support the transition to more sustainable and regenerative food systems.

The recommendations are primarily targeted at food waste management operators across all sectors of the food chain, who play a key role in determining the destination, handling, monitoring, and valorisation of food waste. At the same time, the broader framework remains relevant for policymakers, local authorities, and other stakeholders involved in food system governance.



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These guidelines are based on the findings of the FOOD WASTE AUDIT D1.1.2, developed within the ECOFOODCCE project, and are aligned with the EU policy framework specifically applicable to waste management activities.

In the D1.1.2 FOOD WASTE AUDIT, it was observed that food redistribution, collaboration with waste management, and circular economy practices are still not widespread, although there is growing interest in future implementation. Waste monitoring is carried out by some businesses, with manual logs more common in primary production and digital solutions more widely used in retail and hospitality. Reporting of data to regulatory authorities or sustainability programs is limited, particularly in the food service and retail sectors. Overall, food waste management currently focuses on prevention, training, and monitoring, with significant potential for growth in redistribution, collaboration, and reporting practices.

Food waste management plays a strategic downstream role in the food supply chain, determining whether food waste becomes a loss or a recovered resource. It impacts key dimensions such as the potential for redistribution (in compliance with legislation and health standards†, contamination control, treatment quality, recovery rates, and traceability of waste flows, ultimately enabling the production of circular outputs like compost, biogas, and secondary bio-based materials.

At the policy level, resource recovery objectives over disposal are strongly aligned with SDG 12 and further reinforced in Europe through the Circular Economy Action Plan, which supports organic recycling, industrial symbiosis models, and digital traceability. The regulatory framework is defined by the revised Waste Framework Directive, which has strengthened Member States' obligations regarding monitoring, treatment, recovery performance, and food waste reduction targets, accelerating the transition toward circular systems.

Inefficiencies are primarily systemic and operational. Key drivers include uneven coverage of separate organic waste collection, frequent contamination from incompatible materials, variable sorting accuracy, infrastructure limitations, fragmented governance, and low adoption of digital traceability and harmonised reporting systems.



Operational challenges, particularly during peak waste generation periods, further contribute to avoidable losses in recovery performance.

Despite significant investments by many operators to improve treatment facilities, the sector still faces governance fragmentation and uneven coordination between municipalities and processing operators. Strengthened cooperation, structured monitoring, contamination prevention, and scalable organic waste strategies remain the most effective levers to increase recovery rates and accelerate circular food waste valorisation at scale.

These findings highlight the need to shift from a linear, disposal-based model to a circular, value-retention framework, where food waste is regarded as a recoverable resource flowing into optimised systems of collection, sorting, recycling, energy recovery, and secondary raw material valorisation.
Through improved coordination, contamination prevention, enhanced organic sorting standards, redistribution of edible surplus before it becomes waste, and the valorisation of unavoidable organic fractions via composting, anaerobic digestion, and upcycling, waste management operators can play a pivotal role in strengthening circularity and regeneration across the food system.

Improving waste management requires a combination of practical measures, stakeholder engagement, and behavioural changes.



Key Cause of Food Waste	Recommended Action	Expected Outcome
Insufficient staff training and unclear waste classification	Implement standard training programs and clear guidelines	Improved staff/consumers competence and correct waste classification
Inadequate internal procedures and role clarity	Establish source separation protocols and assign clear roles	Higher separation efficiency and reduced contamination
Operational inefficiencies	Optimise logistics and unify procedures	Improved operational efficiency and reduced waste loss
Limited infrastructure and collection coverage	Expand regional infrastructure	Greater access to treatment and recovery, higher recovery rates
Poor monitoring and traceability	Implement centralised digital tracking	Enhanced traceability and real-time monitoring of waste flows
Inconsistent reporting and regulatory gaps	Introduce standardised reporting systems	Better reporting quality, harmonisation, and compliance
Disposal of edible but unsellable food	Define surplus diversion criteria	Increased surplus reuse and reduced edible food waste
Pressure during peak collection/treatment periods	Implement adaptive routing and workforce planning	Improved resilience during peak loads, lower avoidable losses

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A first step is to implement separate collection and sorting of organic and non-organic waste, ensuring that recyclable packaging, food scraps, and residuals are correctly managed. Equally important is establishing partnerships with food donation programmes to recover and redistribute edible surpluses instead of discarding them. For unavoidable organic waste, composting or anaerobic digestion offer sustainable pathways for recovery, while recycling systems should be reinforced for packaging and non-food materials. Finally, training staff and consumers on correct waste handling and reduction practices is crucial to ensure that these measures are applied effectively.

Consumers

Households play a key role in waste prevention. Educating consumers on proper storage, recycling, and composting helps manage food responsibly. Tools such as meal-planning apps or expiration-date reminders can reduce over-purchasing and unnecessary waste. Where facilities exist, consumers should be encouraged to adopt home composting practices, either through personal bins or local compost centres.

Retail

For retailers, two key solutions are establishing partnerships with food donation organisations and creating dedicated areas for sorting and recycling. Back-of-store systems that clearly separate unsold food from packaging and residual fractions can significantly reduce waste volume and increase recovery rates.

Food services

Restaurants and canteens can achieve improvements by implementing kitchen waste monitoring systems. Staff training on portion control and waste handling, supported by incentive programmes or feedback systems, encourages active participation. Collaboration with donation organisations and composting or biogas facilities allows edible surplus recovery and sustainable treatment of unavoidable waste. On-site composting can be considered for restaurants with vegetable gardens.

Retail

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Reducing food waste and improving management require an integrated approach combining technological solutions, behavioural change, and supportive policy frameworks. Waste arises from many points along the chain, including inadequate training, inefficient procedures, limited infrastructure, regulatory constraints, and consumer habits. Actors across the food system are ready to adopt sustainable and circular practices when supported with clear guidance, tools, and accessible services.

Aligning practical actions with broader EU sustainability objectives enables all sectors to minimise waste and transform previously lost resources into new forms of value. This includes better separate collection systems, effective donation partnerships, improved monitoring, and stronger consumer education.

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Thank you for your attention

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These actions support regulatory compliance, reduce environmental impacts, and create more efficient and resilient operations across agriculture, retail, hospitality, and households.

Creating a culture of responsibility is essential. When individuals and organisations understand the reasons for food waste reduction and feel empowered to contribute, meaningful change becomes possible. Training, awareness campaigns, and community initiatives turn waste prevention into a shared commitment. Consumers play a decisive role through meal planning, proper storage, composting, and donation of edible surplus. Small, consistent behaviours create cumulative benefits for households and the wider food system. Reducing food waste also encourages innovation and strengthens the circular economy. Improved sorting infrastructure, digital monitoring tools, redistribution networks, and composting or energy recovery pathways help ensure resources remain in productive use. These measures support environmental goals and long-term sustainability for communities and businesses.

Ultimately, building a food system in which resources are valued rather than discarded requires collective effort and sustained collaboration. Every action contributes to reduced waste, financial savings, environmental protection, and improved social wellbeing. By acting together at household, business, and policy levels, we can create a more resilient and sustainable food system for current and future generations.

