

# FOOD WASTE AND LEGAL RESPONSIBILITY IN EU AGRICULTURAL AND ENVIRONMENTAL LAW

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## 1. Introduction

Food waste is one of the most significant challenges facing contemporary society. The fact that food waste is generated is neither abnormal nor unexpected. It is a natural occurrence that a certain proportion of food remains unused, deteriorates and consequently has to be disposed of. However, the real problem arises for a different reason. In a world that still experiences food shortages in some regions, where famine has by no means been eradicated, it is striking that such a large proportion of food continues to be wasted. Yet this issue is not only social in nature but also ecological, as food waste has a considerable environmental impact, generates substantial amounts of carbon dioxide and thus significantly contributes to the acceleration of climate change. Therefore, we believe it is essential to address this problem. We are convinced that one of the most effective means of doing so lies within the framework of the European Common Agricultural Policy (CAP). It includes a range of conditions whose fulfilment supports agriculture in the European Union and thereby allows us to influence its direction and development in the near future.

In our view, this objective can best be achieved through the instruments of environmental law and the protection of natural resources. In this article, we will therefore examine the following themes: food waste as a legal and environmental challenge; the EU framework and the role of the Common Agricultural Policy; and the link between environmental law and the circular economy, before turning to future directions in terms of legal and practical tools. The research question guiding this article is: *How can EU agricultural and environmental law help to reduce food waste more effectively?*

## 2. Food waste as a legal and environmental challenge

Food loss and waste constitute a serious challenge in contemporary society. They are not only social and, to some extent, moral issues, but also economic ones. Moreover, they possess a significant environmental dimension, as such waste contributes to the overall generation of waste and its associated impacts. According to FAO, *food loss and waste (FLW) also account for 8–10 percent of global greenhouse gas emissions (GHGs), contributing to an unstable climate and extreme weather events such as droughts and flooding.*<sup>1</sup>

<sup>1</sup> FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS – UNITED NATIONS ENVIRONMENT PROGRAMME. *Tackling food loss and waste: a triple win opportunity*. Rome: FAO, 29 September 2022].

Consequently, the underlying causes of food loss and food waste are not identical, as they stem from distinct stages of the agri-food chain and from different systemic shortcomings. Their occurrence may be attributed to a combination of legal, technical and environmental factors, including inadequate timing of harvest, ineffective quality control and sorting, unfavourable climatic conditions, insufficient or inefficient processing and packaging capacities, and improper storage arrangements for food intended for human consumption.<sup>2</sup> This figure corresponds to almost five times the total emissions produced by the aviation sector. Such a level of emissions is considerable, and it is therefore understandable that they must be addressed as effectively as possible. However, in contrast to sectors such as industry or transport, there is no straightforward mechanism for reducing or eliminating emissions arising from food waste.

It also represents a high share of the overall food market. On a global scale, approximately 1.05 billion tonnes of food waste were produced in 2022, with households accounting for about 60 % of this volume, food services for 28 %, and retail for the remaining 12 %. In aggregate terms, this means that nearly one fifth (19 %) of all food made available to consumers was ultimately discarded across the retail, hospitality and household sectors.<sup>3</sup> Therefore, it may be argued that this issue concerns not only waste management, but the overall governance of food, nutrition, and the agri-food sector as a whole. This remarkable volume corresponds to approximately one fifth of all food intended for consumption. Within this total, around 60 % originates from households, 28 % from the food service industry, and 12 % from the retail sector.<sup>4</sup> Therefore, meaningful change in this field can occur only where consumers themselves take an active role and demonstrate a genuine willingness to engage.

Although the problem of food waste is most characteristic of developed countries, the divide between those who generate food waste and those who suffer from food shortages is not a divide between states, but rather between different segments of the population. Nevertheless, this issue is also highly pronounced in Europe. At present, food waste within the European Union is responsible for approximately 16 % of the greenhouse gas emissions generated by the food system, representing an estimated market value of around EUR 132 billion.<sup>5</sup>

<sup>2</sup> YOU, S., SONNE, C., PARK, Y.-K., KUMAR, S., LIN, K.-Y. A., OK, Y. S. and WANG, F.: Food loss and waste: a carbon footprint too big to be ignored. *Sustainable Environment*, 2022, vol. 8, no. 1, p. 1.

<sup>3</sup> EUROPEAN COMMISSION. *Food waste – Food safety*. Brussels: European Commission, [online] 2025.

<sup>4</sup> CARVALHO, R., LUCAS, M. R. and MARTA-COSTA, A. Food Waste Reduction: a Systematic Literature Review on Integrating Policies, Consumer Behavior, and Innovation. *Sustainability*, 2025, vol. 17, no. 7, art. 3236, p. 1.

<sup>5</sup> BRUNS, H., DE LAURENTIIS, V., GARCÍA HERRERO, L. and LISTORTI, G.: Behavioural insights to reach European Union consumer food waste reduction targets. *Food Policy*, 2024, vol. 128, art. 102725.

It may therefore be stated that food waste constitutes a relatively significant environmental protection issue which, despite its scale and importance, has not received adequate attention. In the following chapter, we shall examine more closely how the European Union addresses this matter within its legislative framework.

### **3. EU framework and the role of the Common Agricultural Policy (CAP)**

However, food waste also encompasses numerous legal dimensions. EU law has long addressed food waste within the framework of waste regulation, most notably through the Waste Framework Directive 2008/98/EC (as amended by Directive 2018/851), which introduced a waste hierarchy giving priority to prevention. Food waste, as such, has not been the subject of any specific regulation or particular legislative focus at either the European or national level, despite its clear and undeniable links to the law.

At the same time, it must be acknowledged that this issue transcends the boundaries of a single branch of law. It is not confined to the regulation of waste management; indeed, it may be stated that it extends even beyond the scope of environmental law. Food waste lies at the intersection of environmental law, agricultural law, consumer protection, and competition law.

Nevertheless, a comprehensive legal framework in this area is still lacking. The earliest regulatory efforts consisted mainly of various soft law instruments, which did not impose direct obligations on individuals or legal entities. The current approach of the European Union, shifting progressively from soft law and policy strategies towards binding preventive obligations, is increasingly regarded as essential.

However, there exists a strong ethical and structural legal mandate for the future adoption of specific legislation in this field. Food waste undermines the principles of sustainable development and intergenerational equity, both of which are firmly embedded in the primary law of the European Union — most notably in Article 3(3) of the Treaty on European Union (TEU) — as well as in international environmental law, exemplified by Principle 3 of the Rio Declaration on Environment and Development, which explicitly addresses the need to safeguard the environment for present and future generations.

European environmental law already enshrines several general principles, such as the duty to prevent environmental harm and the polluter pays principle, both of which may be interpreted as applicable to the agri-food chain. Another key aspect concerns the attribution of responsibility for food waste, which should be understood as both structural and institutional rather than solely consumer-driven. Nevertheless, as noted above, food waste cannot be effectively eliminated without the active engagement of end consumers.

A crucial step, therefore, lies in integrating the fight against food waste into the broader framework of European legislation and policy. This includes aligning

food-waste prevention with the objectives of the Common Agricultural Policy (CAP), the European Green Deal, and the Circular Economy Action Plan, as well as with other non-legislative initiatives designed to promote sustainable resource management across the Union.

In this part of the article, we focus on the influence of the Common Agricultural Policy (CAP) on land use, agricultural production, and food distribution. We are of the view that the relationship between the CAP and food waste may represent one of the key avenues through which this undesirable phenomenon could be effectively mitigated.

The CAP remains the largest single component of the European Union budget, although its share has gradually declined over the past decades, standing at approximately 24.6% in 2023.<sup>6</sup> Through its instruments, the CAP significantly affects how agricultural land is utilised and which crops are cultivated, sometimes resulting in overproduction and surplus food, particularly through the system of direct payments granted to farmers.

Historically, instruments such as market interventions and export refunds were intended to manage overproduction and stabilise agricultural markets. Nevertheless, these mechanisms have also been criticised for reinforcing structural surpluses and, consequently, perpetuating food waste “by design”. This critique has been central to the broader debate concerning the CAP’s market orientation and its compatibility with sustainability objectives.<sup>7</sup>

Following the 2013 reform, a set of greening obligations was introduced with the aim of encouraging more sustainable farming practices and aligning direct payments with environmental priorities. These measures sought to integrate biodiversity protection, soil improvement, and climate considerations into agricultural policy.<sup>8</sup> However, their implementation has varied among Member States, and their tangible effect on reducing food waste remains open to further evaluation. It therefore appears that the CAP holds considerable potential to contribute to food-waste prevention, both by shaping production patterns and by promoting a more balanced and sustainability-oriented use of land and agricultural resources within the European Union.

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<sup>6</sup> EUROPEAN COMMISSION – Directorate-General for Agriculture and Rural Development. *CAP expenditure – how the budget of the Common Agricultural Policy is spent*. Brussels: European Commission, [online] November 2024.

<sup>7</sup> GIULIANI, A. and BARON, H.: The CAP (Common Agricultural Policy): a Short History of Crises and Major Transformations of European Agriculture. *Forum for Social Economics*, 2023, vol. 52, no. 5, p. 1.

<sup>8</sup> HRISTOV, J., CLOUGH, Y., SAHLIN, U., SMITH, H. G., STJERNMAN, M., OLSSON, O., SAHRBACHER, A. and BRADY, M. V.: Impacts of the EU’s Common Agricultural Policy “Greening” Reform on Agricultural Development, Biodiversity, and Ecosystem Services. *Applied Economic Perspectives and Policy*, 2020, vol. 42, no. 4, p. 718.

However, we consider that one of the major practical challenges lies in the underused potential of the Common Agricultural Policy (CAP) instruments. Despite its considerable policy scope, the CAP still lacks a mandatory component specifically dedicated to food-waste prevention. At present, no binding provision at the EU level directly addresses this issue.

Funds available under the CAP's rural development pillar could, in principle, be used to support short supply chains, food-donation initiatives, or improvements in storage infrastructure. Nevertheless, such measures remain optional for the Member States under Regulation (EU) 2021/2115, which provides a high degree of flexibility in national implementation.

The current conditionality regime under the CAP places strong emphasis on environmental and climate-related standards; however, it does not explicitly target food-waste reduction. This omission reflects a broader gap between the Union's sustainability ambitions and the operational design of its agricultural instruments.

However, the Common Agricultural Policy (CAP) is closely interconnected with other key policies of the European Union, most notably the European Green Deal and the Union's broader Climate Agenda. The European Green Deal sets the overarching objective of achieving climate neutrality by 2050 and places the Farm to Fork Strategy at its core, as a central instrument for promoting sustainable food systems.

The Farm to Fork Strategy, which forms an integral part of the Green Deal, seeks to make Europe's food systems fair, healthy, and environmentally sustainable. Its key objectives include halving the use of pesticides and antimicrobials, increasing the share of agricultural land under organic farming, reducing food waste, promoting sustainable diets, and improving animal welfare, while simultaneously ensuring food security and equitable economic returns for farmers.

Among its quantitative targets, the Farm to Fork Strategy sets a goal of reducing food waste by 50 % by 2030. Additional targets for the same year include a 50 % reduction in pesticide use, a 50 % reduction in nutrient losses, a 20 % reduction in fertiliser use, and achieving 25 % of total agricultural land under organic cultivation.<sup>9</sup>

Within this framework, the CAP Strategic Plans for the period 2023–2027 allow Member States to design and implement eco-schemes that promote resource-efficient farming and reduce food losses along the supply chain. However, the actual extent of such measures depends on the national drafting and implementation of these plans, reflecting the flexibility granted to Member States under Regulation (EU) 2021/2115.

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<sup>9</sup> MOSCHITZ, H., STOLZE, M., MICHELSEN, J. et al.: How can the EU Farm to Fork Strategy deliver on its organic promises? Some critical reflections. *Organic Agriculture*, 2021, vol. 11, no. 4, p. 31.

#### 4. Food Waste Prevention

An important element of food-waste prevention lies in the integration of preventive measures into the broader framework of resource and waste legislation. The jurisprudence of the Court of Justice of the European Union (CJEU) has demonstrated how the legal interpretation of waste concepts can significantly influence food-waste management. In Case C-195/05, *Commission v Italy* (2007), the Court held that food by-products used as animal feed could still be classified as “waste” within the meaning of the Waste Framework Directive. This judgment illustrates how an overly broad definition of waste may, in practice, hinder food donation and reuse activities.

The Waste Framework Directive (Directive 2008/98/EC), which enshrines the principle of the waste hierarchy, establishes prevention as the highest priority in waste management. The Directive is currently under revision to include binding reduction targets specifically addressing food waste, signalling the Union’s intention to strengthen its regulatory approach in this area.

Furthermore, food-waste prevention can be embedded within land-use planning and environmental governance mechanisms, for instance through the incorporation of waste-law mandates or the implementation of EU guidelines promoting food donation, redistribution, and reuse. Such measures could ensure that the prevention of food waste becomes an integral part of sustainable resource management at both European and national levels.

Another pressing issue concerns the search for effective implementation pathways in Slovakia and the wider Central European region. Slovakia is currently preparing a Circular Economy Roadmap aimed at reducing pressure on natural resources and promoting the efficient use of materials and food within production and consumption cycles.

The principal legal instrument governing this area is Act No. 79/2015 Coll. on Waste (the Waste Act). Under Slovak legislation, the management of food waste is legally regarded as a part of general waste management and does not enjoy any special legal status. The national framework is linked to the objectives of the Slovak Republic’s 2030 Strategy, according to which at least 60 % of municipal waste must be reused or recycled by 2030, while landfilling is to be reduced to 10 % by 2030.<sup>10</sup>

Despite these objectives, Slovakia’s current performance remains low: only around 5 % of secondary materials are reused, which clearly demonstrates the need for stronger legal and policy instruments. Planned measures include a potential ban on landfilling retail food waste, as well as the simplification of rules governing food redistribution and composting.

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<sup>10</sup> TAUŠOVÁ, M., KOWAL, B., DOMARACKÁ, L., ČULKOVÁ, K., JANIČKAN, M. and WIECEK, D.: Position of Slovakia in EU from the View of Material Recovery of Waste in Circular Economy. *Acta Montanistica Slovaca*, 2023, vol. 28, no. 3, p. 597.

These steps, if properly implemented and aligned with the forthcoming Circular Economy Action Plan and EU waste-law revisions, could mark a crucial shift towards a more resource-efficient and sustainable food system in Slovakia and across the Central European region.

## 5. National Legal Initiatives and Future Proposals

A crucial element of the current debate on food-waste prevention concerns ongoing policy reforms aimed at strengthening legal accountability. The European Commission has proposed the introduction of legally binding food-waste reduction targets for all Member States by 2030, as part of the forthcoming revision of the Waste Framework Directive and the broader EU Action Plan for the Circular Economy.

In February 2025, the European Parliament and the Council of the European Union reached a provisional political agreement establishing these binding targets. Under the proposed framework, Member States will be required to achieve, by 2030, a 10% reduction in food waste generated during processing and manufacturing, and a 30% per capita reduction in the retail, restaurant, food service, and household sectors.

Following formal adoption, Member States will have a period of twenty months to transpose the amended Directive into their respective national legal systems. This reform marks an important step towards transforming policy commitments into enforceable legal obligations and may represent a turning point in the Union's approach to sustainable food governance.

In France, the *Anti-Waste and Circular Economy Law (Loi n° 2020-105 du 10 février 2020 relative à la lutte contre le gaspillage et à l'économie circulaire, 2020)* introduced a landmark prohibition on the disposal of edible unsold food by supermarkets. Retailers are legally required to donate such food either to charitable organisations or for use as animal feed. This legislation provides a clear example of how binding legal obligations can promote food reuse and redistribution instead of disposal.

In Hungary, the *Project Wasteless initiative (Maradék nélkül)*, launched in 2016 under the EU LIFE Programme and coordinated by the National Food Chain Safety Office (NÉBIH), represents a well-established example of an integrated national approach to food-waste prevention. The project combines systematic measurement of household food waste with extensive public awareness and education campaigns. According to a replication study applying the EU FUSIONS methodology, the average Hungarian citizen generated approximately 68 kg of food waste per year in 2016, of which about 33 kg was avoidable. These findings provide a reliable empirical basis for policy development and confirm the importance of combining legal instruments, policy tools, and behavioural interventions to achieve measurable progress in reducing household food waste.<sup>11</sup>

<sup>11</sup> KASZA, G., DORKÓ, A., KUNSZABÓ, A. and SZAKOS, D.: Quantification of Household Food Waste in Hungary: a Replication Study Using the FUSIONS Methodology. *Sustainability*, 2020, vol. 12, no. 8, p. 6.

In order to address the problem of food waste effectively, coordinated action is required at all levels of governance — not only at the level of the European Union, but also within national and local frameworks. Strengthening support for local initiatives such as food banks, community kitchens, and programmes promoting the reuse of surplus food represents a crucial element of this effort.

Equal attention must be paid to the legal interpretation of the notion of waste. A more flexible and context-sensitive understanding of this concept could facilitate food donation and reuse, while still ensuring that disposal, where necessary, is carried out safely and in accordance with environmental standards.

Preventive measures should remain at the heart of all strategies, with priority given to reducing waste before it occurs rather than merely managing its consequences. Finally, long-term success will depend on building public awareness and developing the necessary knowledge and skills among citizens, legal practitioners, and public officials alike.

## 6. Conclusion

In this article, we have examined the issue of food waste, focusing in particular on the ways in which it may be regulated both within the legislation of the European Union and in the national legal frameworks of the Member States. We have concluded that it represents a significant phenomenon that transcends the boundaries of environmental law and, by its very nature, extends into other branches of legal regulation. In response to the research question formulated at the beginning, we can state: EU agricultural and environmental law can reduce food waste more effectively by creating a coherent and enforceable framework that links prevention, redistribution, and sustainable production across the agri-food chain. Strengthening CAP through targeted eco-schemes and integrating explicit food-waste reduction goals into the Waste Framework Directive would provide clear and binding obligations for Member States. Greater coordination between EU and national measures, including food donation, short supply chains, and public awareness initiatives is essential. Embedding prevention as a legal principle within both agricultural and environmental governance could transform these policies from declaratory strategies into tangible instruments for waste reduction.

We are convinced that addressing the issue of food waste will become increasingly relevant in the coming years.

## Literature

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## Abstract

Food waste constitutes not only an ethical and socio-economic dilemma but also a major environmental and legal concern with tangible effects on soil, water and biodiversity. Despite the European Union's ambitious environmental goals, the legal dimension of food-waste prevention remains fragmented and insufficiently embedded within agricultural and resource-governance frameworks. The Common Agricultural Policy (CAP) continues to shape production patterns and land-use practices across Europe, yet its instruments still prioritise productivity and rural development over the full life-cycle of natural resources. This paper examines how the intersection of environmental law, the CAP, the European Green Deal and the circular-economy agenda can reinforce legal responsibility for food-waste reduction and promote more resource-efficient food systems. By analysing EU-level obligations, national measures and the new CAP Strategic Plans, it identifies legal opportunities to integrate waste prevention into land-use planning, conditionality schemes and environmental permitting. The paper argues that food waste should be recognised as a structural governance issue rather than an outcome of consumer behaviour. A coherent legal framework linking agricultural incentives, environmental duties and waste policy could significantly enhance resource independence, climate resilience and the long-term sustainability of European agriculture.

## Key words

Common Agricultural Policy, environmental law, food waste, legal responsibility, resource efficiency

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