



# Fund for European Aid to the Most Deprived

Background information on 'PREVENTING FOOD WASTE THROUGH FEAD ACTIONS'

7<sup>th</sup> FEAD Network Meeting  
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# FEAD Network Meeting on “PREVENTING FOOD WASTE IN FEAD ACTIONS”

## 1. Introduction

In 2015, around a quarter of the EU population was at risk of poverty or social exclusion<sup>1</sup>, while 8.5% of European citizens were not able to afford a quality meal every second day.<sup>2</sup> These figures are in sharp contrast to the available estimates, which suggest that a third of all the food produced in the world is not being consumed.<sup>3</sup>

According to the existing literature (Segrè et al., 2014), two different concepts which relate to the amount of food that is not consumed should be distinguished: ‘**food loss**’ and ‘**food waste**’. Food loss occurs at the early stages of the supply chain, in other words during sowing, harvesting or preserving. In contrast, food waste occurs at the end of the supply chain and refers to products that are (almost) ready for consumption being wasted during manufacturing processes or at the consumption stage. The available estimates report that around 20% of the total amount of food produced was wasted at EU28 level in 2012.<sup>4</sup>

Food loss and food waste have **negative impacts at environmental level**, e.g. availability of resources, energy, etc.; **economic level**, e.g. price volatility, increasing costs, etc.; and **social level**, e.g. equality, health, etc. Therefore, there is a pressing need to prevent food waste. Within FEAD, tackling food waste and food insecurity jointly is extremely important. In particular, **food insecurity** is defined as ‘the limited or uncertain availability of nutritionally adequate and safe food, or having to acquire foods in socially unacceptable ways’.<sup>5</sup> Overall, food insecurity is highly undesirable since its negative effects go beyond malnutrition, e.g. poor diet-related chronic diseases<sup>6</sup>, mental health issues<sup>7</sup>, and poor academic performance among children<sup>8</sup>. Thus, preventing food waste should be a priority in view of the potential synergies of these interventions with other initiatives such as FEAD, which aims at providing relief from food insecurity to the most vulnerable citizens in Europe.

## 2. Policy background

The prevention of food waste has been attracting increasing attention through time, as shown by several EU policy strategies and action plans. To demonstrate this, we refer to ‘A Resource Efficient Europe’, which is one of the seven flagship initiatives of the EU2020 Strategy.<sup>9</sup> The corresponding roadmap ‘to define medium and long term objectives and means needed for achieving them’ was published in 2011.<sup>10</sup> Regarding food waste, the main milestone that should be achieved has been defined as: ‘By 2020, incentives to healthier and more sustainable food production and consumption will be widespread and will have driven a 20% reduction in the food chain’s resource inputs. Disposal of edible food waste should have been halved in the EU’. In addition, the European Commission (EC) planned on:

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<sup>1</sup> Available at: [http://ec.europa.eu/eurostat/tgm/refreshTableAction.do?tab=table&plugin=1&pcode=t2020\\_50&language=en](http://ec.europa.eu/eurostat/tgm/refreshTableAction.do?tab=table&plugin=1&pcode=t2020_50&language=en).

<sup>2</sup> Available at: [http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc\\_mdcs03&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc_mdcs03&lang=en).

<sup>3</sup> Stenmarck, Å., Jensen, C., Quedsted, T. and Moates, G. (2016). Estimates of European food waste levels.

<sup>4</sup> European Commission. (2016). Recommendations and guidelines for a common European food waste policy framework.

Available at: [https://www.eufusions.org/phocadownload/Publications/D3.5%20recommendations%20and%20guidelines%20food%20waste%20policy%20FI\\_NAL.pdf](https://www.eufusions.org/phocadownload/Publications/D3.5%20recommendations%20and%20guidelines%20food%20waste%20policy%20FI_NAL.pdf).

<sup>5</sup> Loopstra, R., Reeves, A., McKee, M. and Stuckler, D. (2016). Food Insecurity and Social Protection in Europe: Quasi-natural Experiment of Europe’s Great Recession 2004–2012. Available at:

<http://www.sciencedirect.com/science/article/pii/S0091743516300846>.

<sup>6</sup> Shin, J.I., Bautista, L.E., Walsh, M.C., Malecki, K.C. and Nieto, F.J. (2015). Food Insecurity and Dyslipidemia in a Representative Population-based Sample in the US. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4608370/>.

<sup>7</sup> Jones, A.D. (2017). Food Insecurity and Mental Health Status: A Global Analysis of 149 Countries.

<sup>8</sup> Jyoti, D., Frongillo, E. and Jones, S. (2005). Food Insecurity Affects School Children’s Academic Performance, Weight Gain, and Social Skills. Available at: <http://www.sciencedirect.com/science/article/pii/S074937971730243X>.

<sup>9</sup> Available at: [http://ec.europa.eu/europe2020/europe-2020-in-a-nutshell/flagship-initiatives/index\\_en.htm](http://ec.europa.eu/europe2020/europe-2020-in-a-nutshell/flagship-initiatives/index_en.htm).

<sup>10</sup> Communication from the European Commission (2011). Roadmap to a Resource Efficient Europe [COM(2011) 571 final]. Available at: [http://ec.europa.eu/environment/resource\\_efficiency/about/roadmap/index\\_en.htm](http://ec.europa.eu/environment/resource_efficiency/about/roadmap/index_en.htm).

- releasing a **communication on sustainable food** in which it would further assess how best to limit waste throughout the food supply chain, as well as alternatives to reduce the environmental impact of food production and consumption patterns; and
- developing a **methodology for sustainability criteria for key food commodities**.

Although the mentioned communication and methodology have not been released yet, food waste prevention is present in the European policy agenda. As shown in the 2015 **Circular Economy Package**, food waste prevention is a key dimension.<sup>11</sup> In particular, the plan outlines a timetable for proposed actions and legislative proposals on food waste, including the following items:

- the development of a common EU methodology to measure food waste and define relevant indicators;
- the creation of a platform that enables Member States and relevant stakeholders to share best practices and evaluate progress made over time;
- taking measures to clarify EU legislation relating to waste, food and feed, as well as facilitating food donation and the use of former foodstuff and by-products from the food chain in feed production without compromising food and feed safety; and
- examining ways to improve the use of dates marked by actors in the food chain and understanding by consumers, in particular the "best before" label.

In 2015, recommendations and guidelines for a common European food waste policy framework were published<sup>12</sup>, followed by the launch of the EU Platform on Food Losses and Food Waste in 2016. Moreover, the EC has also produced a leaflet to explain the difference between 'use by' and 'best before' dates that are displayed on food packaging.<sup>13</sup> Additionally, parts of the content of the Circular Economy Package and its EU action plan for the Circular Economy are revisions of the Directive on waste that was published in December 2015.<sup>14</sup>

Alongside the actions listed above, since 2015 there has been strong commitment at EU level to pursue the United Nations' **Sustainable Development Goals (SDG)**. Under its twelfth goal 'Sustainable consumption and production', the following food waste-related target is defined: 'By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses'.<sup>15</sup> In supporting the achievement of these goals and its own targets, the EC will cooperate closely with EU Member States and relevant stakeholders to identify and prioritise actions, as well as sharing best practices on food waste prevention. In this context, the cooperation with Member States is promoted by an Expert Group that brings together relevant national organisations, while the cooperation with stakeholders is facilitated by a Working Group on Food Losses and Food Waste.<sup>16</sup> In addition, the EC has focussed on raising awareness on food waste prevention by compiling and sharing best practices on the topic, as well as producing several communication materials.

<sup>11</sup> Communication from the European Commission. (2015). Closing the loop - An EU action plan for the Circular Economy [COM (2015) 614 final. Available at: <https://www.eea.europa.eu/policy-documents/com-2015-0614-final>.

<sup>12</sup> European Commission. (2016). Recommendations and guidelines for a common European food waste policy framework. Available at: <https://www.eu-fusions.org/phocadownload/Publications/D3.5%20recommendations%20and%20guidelines%20food%20waste%20policy%20FINAL.pdf>.

<sup>13</sup> Available at: [https://ec.europa.eu/food/sites/food/files/safety/docs/fw\\_lib\\_best\\_before\\_en.pdf](https://ec.europa.eu/food/sites/food/files/safety/docs/fw_lib_best_before_en.pdf).

<sup>14</sup> European Commission (2015). Proposal for a Directive of the European Parliament and of the Council Amending Directive 2008/98/EC on Waste. COM (2015) 595 final. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52015PC0595>.

<sup>15</sup> Available at: <https://sustainabledevelopment.un.org/sdg12>.

<sup>16</sup> Available at: [https://ec.europa.eu/food/safety/food\\_waste/eu\\_actions\\_en](https://ec.europa.eu/food/safety/food_waste/eu_actions_en).

### 3. Summary of relevant research

#### 3.1 What is food waste?

The existing specialised literature has not reached a consensus regarding the definition of food waste. According to the Agricultural and Rural Commission of the European Parliament, food waste is defined as:

*'The whole of the discarded products of the food supply chain which, for economic or aesthetic reasons, or for closeness to the expiry date, despite still being edible and therefore potentially intended for human consumption, in the absence of a possible alternative use, are eliminated and disposed of, producing negative effects from the environmental point of view, economic costs and missed revenue for companies.'*<sup>17</sup>

However, the definition adopted by the Barilla Centre for Food and Nutrition explicitly distinguishes between food 'losses' and food 'waste':<sup>18</sup>

*'Food Losses are the losses that take place upstream of the food supply chain, mainly during the harvesting, processing, and primary agricultural transformation stages. These are due to climatic and environmental factors (which are difficult to summarize) and accidental causes that can be traced back to the limitations of agricultural technology and infrastructure used in the area. This category also includes the losses caused by economic reasons, such as the quality and aesthetic standards imposed by the market, food regulations, and the greater or lesser convenience of harvesting operations.'*

*'Food Waste is the waste that takes place during industrial processing, distribution, and final consumption. Also included in this are intentional choices, based on which perfectly edible food is discarded and thrown away.'*

Another important issue that relates to food loss and food waste is the conversion of cultivated products into animal feed, which could be taken into account when defining food waste. In other words, the latter is a form of planned non-food use, while the former covers forms of unplanned non-food use.

In 2012, available estimates suggest that around 173 kilograms of food per person were wasted in the EU. This figure adds up to a total of 88 million tonnes of food wasted in Europe, i.e. around 20% of total food produced, with households and the processing sector accountable for more than 72% of total food waste at EU level.<sup>19</sup>

#### 3.2 Drivers behind food waste

Food waste can be caused by a variety of factors that affect different stages of the food supply chain. Segrè et al. (2014) suggest that food waste can be explained by microeconomic conditions, macroeconomic elements, as well as non-economic conditions.<sup>20</sup> In general terms, **microeconomic conditions** are elements that affect the decision-making process of firms and consumers, including factors such as production costs, retail prices, elasticity of supply of the product,<sup>21</sup> value chain

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<sup>17</sup> European Parliament. (2011). 'Avoiding Food Waste: Strategies for Improving the Efficiency of the Food Chain in the EU', Agricultural and Rural Commission, 22 June.

<sup>18</sup> Barilla Center for Food and Nutrition. (2012). Food Waste: Causes, Impacts and Proposals. Available at: <https://www.barillacfn.com/m/publications/food-waste-causes-impact-proposals.pdf>.

<sup>19</sup> Stenmarck, Å., Jensen, C., Quedsted, T. and Moates, G. (2016). Estimates of European Food Waste Levels. Available at: <https://www.eu-fusions.org/phocadownload/Publications/Estimates%20of%20European%20food%20waste%20levels.pdf>.

<sup>20</sup> Segrè, A., Falasconi L., Politano, A. and Vittuari, M. (2014). Background Paper on the Economics of Food Loss and Waste. Available at: <http://www.fao.org/3/a-at143e.pdf>.

<sup>21</sup> The elasticity of supply of a product is the 'link' between the price of the mentioned product and its supply.

inefficiencies, available technology to storage and distribute food products,<sup>22</sup> individual preferences,<sup>23</sup> etc. In the context of FEAD, a better understanding of the **value chain** of different products would permit to identify existing inefficiencies and could create potential opportunities to prevent food waste, e.g. by promoting food donation of unsold products.

**Macroeconomic conditions** relates to a variety of elements such as the level of infrastructure, employment, trade, globalisation, urbanisation, socio-economic growth, and food price inflation, among others. The importance of having a comprehensive understanding of food value chain is also relevant when analysing food waste from a macroeconomic perspective. In the current economic context, in which **trade and globalisation** have led to the development of new and more complex food supply chains at global level, a better understanding of the linkages between the different actors and phases can contribute to prevent food waste. Within FEAD, **food price inflation and unemployment** are also important elements in the sense that both drivers affect households' financial capacity, and therefore, the size of the target group. These changes in households' financial capacity to purchase food could provoke a re-orientation of consumption, e.g. towards cheap and low nutritional products, staple food, special offers, etc.<sup>24</sup> In this sense, there is a role for FEAD to play in terms of awareness raising of the recipients of food parcels.

Drawing attention to **non-economic conditions**, the role played by cultural factors, social aspects, demographics, environmental issues, climate change, policy and legislation should be examined as well. More specifically, **cultural and societal aspects** include food related habits such as the cooking 'style', a traditional preference for certain products, as well as skills to combine ingredients. All these elements affect households' food management approaches, and therefore, food waste, becoming a very problematic issue in the case of those who have limited resources.<sup>25</sup> **Social factors** such as the composition of a household and the living 'style' of its members could impose challenging situations regarding planning capacity of food needs, resulting in food waste, e.g. larger households are usually more efficient than smaller households. Focusing on the **environment and climate**, it needs to be mentioned that extreme weather events affect food production, creating an additional challenge for societies that will need to innovate in their means of production, as well as adopting more efficient utilisation patterns of food.<sup>26</sup> With regard to **policy and legislation**, certain pieces of agricultural and food legislation can have a distortive impact on the food supply chain, leading to overproduction and eventually increasing food waste.<sup>27</sup> Once again, within FEAD, the relevance of understanding perfectly the value chain of food is highlighted.

Regardless the nature of the drivers of food waste, within FEAD there are two main dimensions on which interventions should focus. At supplier level, donation of unsold products should be encouraged and facilitated; while at consumer level, FEAD initiatives should have an educational component to improve management and cooking skills of the end recipients. Some examples of efforts made on this direction are provided in Section 4.

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<sup>22</sup> Food loss due to deficiencies in technology or management techniques can be both quantitative, i.e. reduction of volume; as well as qualitative, i.e. worsening hygiene or safety.

<sup>23</sup> The role of individual preferences is explained from the angle of behavioural economics, which explores social, cultural and psychological aspects.

<sup>24</sup> Some discussion on the implications of food price volatility can be found at: [http://www.fao.org/fileadmin/templates/righttofood/documents/RTF\\_publications/EN/issuesbrief\\_PRICEvolatility\\_EN.pdf](http://www.fao.org/fileadmin/templates/righttofood/documents/RTF_publications/EN/issuesbrief_PRICEvolatility_EN.pdf).

<sup>25</sup> See Thompson and Haigh (2017) for some discussion of cultural factors and food waste. Available at: <http://www.mdpi.com/2071-1050/9/7/1139>.

<sup>26</sup> Recent research has suggested that the most efficient way of preventing damages associated with climate change is to reduce the waste of products with the highest carbon footprint and high waste rates. Available at: [http://ec.europa.eu/environment/integration/research/newsalert/pdf/carbon\\_footprint\\_of%20food\\_waste\\_not\\_necessarily\\_relat ed%20to\\_its\\_weight\\_406na3\\_en.pdf](http://ec.europa.eu/environment/integration/research/newsalert/pdf/carbon_footprint_of%20food_waste_not_necessarily_relat ed%20to_its_weight_406na3_en.pdf).

<sup>27</sup> See European Commission publication on the Common Agricultural Policy. Available at: [https://ec.europa.eu/agriculture/cap-overview/2012\\_en.pdf](https://ec.europa.eu/agriculture/cap-overview/2012_en.pdf).

### 3.3. Proposals to diminish food waste

The need to prevent food loss and waste is an unquestionable issue that should be a priority in the current political agenda. However, this task should be considered as a shared responsibility among policy-makers, participants in the supply chain and consumers.<sup>28</sup> Some approaches that can contribute to the achievement of this objective are listed below:

- **Government and (political) institutions should:** (i) implement campaigns to raise awareness of environmental, economic and societal impacts of food waste; (ii) standardise definitions and metrics related to food waste and harmonise statistical data collection to produce accurate statistics; (iii) improve their understanding of the causes of food waste in each stage of the supply chain; (iv) emphasise food waste reduction in their programmes; (v) promote efforts to firstly reduce food loss and waste; and (vi) focus on food recovery, once (v) has been achieved.
- **Participants in the supply chain** should prioritise the establishment of agreements between farmers and producers, as well as distributors, to improve planning and efficiency of food supply.
- **Consumers should** be re-educated in order to develop new skills that allow them to purchase, preserve, prepare and dispose of food in a sustainable manner.

Other actions that could also contribute to preventing food waste are the improvement of forecasting and ordering, the facilitation of donation of unsold food, as well as the promotion of the transfer of best practices.<sup>29</sup>

### 4. Examples of existing practices of food product selection

Within FEAD, some of the implementing organisations have already adopted different mechanisms to promote an efficient use of their resources and prevent food waste. A common feature among these mechanisms can be identified, namely that they rely on coordination and communication between the different actors in order to ensure that the relevant products reach the end recipients.<sup>30</sup> In this context, an appropriate mechanism of food product selection is key when preventing food waste. In other words, the longevity of those food products that comprise the food parcels should be considered, keeping in mind the characteristics of their process of distribution and storage.

Connecting businesses with large volumes of surplus food to charities that distribute food aid is the pioneering solution that has been developed by **FoodCloud Hubs** for Irish communities. FoodCloud Hubs is responsible for the procurement and storage of FEAD food products, as well as for coordinating the collection of products from other partner organisations from the hubs in Dublin, Cork and Galway. FoodCloud Hubs is in charge of the procurement of 23 food products that were selected by the Department of Social Protection. These products are non-perishable and easy to transport and store. The procurement follows a tender process, aiming to maximise the value for money of the initiative. Food is redistributed to charities that have access to quality products at a reduced cost, while donating businesses benefit through reduced waste disposal costs. The charities either include the products within food parcels or use them in meals prepared as part of their service. The content and frequency of the food parcels and meals are tailored to the needs of the end recipient by each individual charity. The overall reduction in partner organisations' food bills has enabled them to redirect their funding into other support areas.

Improving coordination between different actors is also a key feature of the **SOREAL project** implemented in Belgium. This initiative aims to tackle this issue by acting as a **bridge between food**

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<sup>28</sup> See further details on the strategy 'More food, less waste' implemented in Spain. Key players for this initiative are the Ministry of Agriculture, Food and the Environment, other authorities, primary production sector, food industry, distribution sector, HORECA Channel and consumers. Available at: [https://www.oecd.org/site/agrfcn/Session%205\\_Alicia%20Crespo.pdf](https://www.oecd.org/site/agrfcn/Session%205_Alicia%20Crespo.pdf).

<sup>29</sup> Further discussion is available at: [https://ec.europa.eu/food/sites/food/files/safety/docs/fw\\_lib\\_business-case\\_en.pdf](https://ec.europa.eu/food/sites/food/files/safety/docs/fw_lib_business-case_en.pdf).

<sup>30</sup> The examples presented in this section are taken from: 'Reducing Deprivation, Supporting Inclusion: FEAD Case Studies', Publications Office of the European Union: Luxembourg, 2017.

**suppliers and food aid organisations.** The project collects unsold food products and swiftly distributes them to 10 local food organisations that assist the most deprived people in different Belgian regions. Redistributed food is subsequently used in the distributed food parcels to prepare meals in reception centres, as well as in workshops or meals made by professional chefs. Moreover, the initiative also aims to raise public awareness of anti-waste policies and the benefits of maintaining a balanced diet. In the context of this project, 'solidarity meals' are organised in which food from food parcels is prepared and eaten in a group. The objective of these shared meals is to enhance the self-esteem of those participating and make food culture accessible to all. The SOREAL project also includes specific actions to help the long-term unemployed to gain work experience in fields related to logistics and handling.

Another interesting case is the network of **social grocery stores** which has been created in Luxembourg by **Caritas Luxembourg** and **Red Cross Luxembourg**. In these supermarkets, prices are approximately one third of the market price, which is feasible due to partnerships with several suppliers. This network gives end recipients of the programme the opportunity to select their own food and household items. The participatory approach that is followed in this case allows the aid to reach the end recipients without stigmatisation of the target group. These supermarkets also operate as meeting spaces where informal exchanges of information (e.g. on health education) can take place. A wide range of activities are also organised on a monthly basis, ranging from cooking classes, first aid courses for beginners and a parents café, to sewing classes and counselling sessions.

## 5. Overview of key challenges in food waste prevention in relation to FEAD

When pursuing the prevention of food waste, FEAD will encounter specific challenges. Some of them relate to the characteristics of the target group, while others are inherent to the fact that food is a perishable product. In particular, the main challenges that FEAD implementing organisations will need to overcome are listed below:

- There is a trade-off between the longevity of products and ensuring a healthy diet for the most deprived people. In other words, it is necessary to make appropriate choices regarding fresh and long-lasting products, while ensuring that the nutritional requirements of the end recipients are fully satisfied;
- It is key to identify the real needs of the target group to ensure that end recipients will fully utilise their food parcels to avoid food waste. Cultural factors will play a major role in this regard; for example, it might be the case that certain products are not part of the traditional diet of a population group, therefore the end recipients may be reluctant to use them since they either do not have the skills to cook them properly or are not aware of their benefits as part of a healthy diet.
- Another important aspect is to ensure that the end recipients are able to fully utilise their food parcels to avoid food waste, i.e. they should include an appropriate mixture of fresh and durable goods.
- Coordination between food banks and the organisations that donate products should be reinforced in order to prevent food waste due to an inefficient food management system.



## 6. Conclusions

Food waste is a challenging topic that developed economies should address urgently. This will require an important change in the perception of food that modern societies have, as societies should be re-educated in a manner which makes the relevant actors consider food as a scarce good. In this context, it is particularly important that policy makers, firms and consumers are engaged with this objective and consider its achievement as a shared responsibility.

Within FEAD, prevention of food waste can play a substantial role when fighting food insecurity. This is because a more efficient use of food could release additional resources for reaching a larger population. Potential FEAD interventions should focus on the development of food management skills at institutional and household level, as well as cooking skills that permit consumers to maximise the use of the available resources.

Bearing in mind these issues, the following topics should be discussed:

- Which **FEAD measures** should be implemented to prevent food waste? How can these additional FEAD interventions support the existing measures and contribute to the overall objective of fighting poverty? Should FEAD focus on improving the management skills of the staff at food banks? Should FEAD concentrate on developing skills at household level?
- What are the **challenges and limitations** that FEAD will encounter when implementing these interventions? Are there any **synergies** with other FEAD interventions?
- How can FEAD interventions be combined with other measures at EU level that address food waste? What are the synergies that can be expected?

The 7<sup>th</sup> FEAD Network Meeting provides a valuable opportunity to raise awareness and further discuss these issues. By relying on the knowledge and experience of the FEAD community on the subject, it is expected that additional efforts to prevent food waste and increase food recovery will be put in place in the near future.