

Preparatory study on food waste across EU 27

(BIO IS December 2009– October 2010)

Main findings¹

According to the Environmental Impacts of Products Study published in 2006 by JRC, the food sector is one of the three sectors (with housing and transport) with the greatest environmental impacts in the EU, representing 30% of the total Global Warming Potential. Food waste has a double cost in terms of environmental impacts, as it combines the impacts due to the production of food that will never be eaten, with those caused by the collection and treatment of food waste. As limited data was available to effectively estimate the problem, the European Commission has carried out a study to identify the causes of food waste, to quantify the amount and environmental impacts of food waste, and to propose policy options to reduce food wastage in the EU.

1. Causes of food waste

They are very diverse, from the lack of awareness and cultural attitudes (especially at household and food/catering levels) to supply chain or stock management inefficiencies in the wholesale/retail sector, and including portion-sizing, misunderstanding of date labelling on food, waste of leftovers (in households and in the Food service sector), marketing strategies or standards, planning issues, lack of knowledge, etc.

2. Quantification of food wastage

The total amount of food waste in the EU 27 is estimated at about 89 Mt, i.e. 179 kg/capita/year, so distributed:

- Households: 42% (76 kg/capita/year)
- Manufacturing sector: 39%
- Retail/wholesale: 5%
- Food service/catering: 14%

Concerning the manufacturing sector, the major part is inedible, and thus cannot be avoided, except by transforming it into by-products. Unfortunately, the existing data collection systems are not reliable enough to ensure that by-products are not included in waste figures, so the percentage of 39% must be considered with caution.

Figures seem more reliable for households. In the UK, studies led by the WRAP find that 25% of the food purchased by households is discarded, of which 60% could be avoided, representing about 565 € per household/per year. Even if these figures can't be extrapolated on their own to other MSs, they give a rough estimate of the losses borne by consumers.

3. Environmental impacts

In terms of GHG emissions, the study estimates the overall impact of food waste at 170 Mt CO₂ eq./year, i.e. 3% of total EU27 emissions in 2008. In particular, the impact of household food waste

¹ Due to the lack of reliable data available (from Eurostat and MSs) many figures mentioned are extrapolations and must be considered very cautiously. However, in the current knowledge context, they give a rough estimate of the situation.

is estimated at 78 Mt CO₂ eq., i.e. 45% of the total GHG emissions due to food waste. As a great part of this waste is avoidable it can be concluded that an effective action aimed at reduction of food wastage at household level could reduce the total GHG emissions in EU27 by nearly 1%.

4. Existing prevention initiatives

More than one hundred prevention initiatives have been inventoried, at all levels (national, local, international) and from various actors (public authorities, business, NGOs): awareness campaigns and information tools (guides, brochures), food redistribution programmes, logistical improvements, research and training programmes, a few mandatory tools (the bin tax incentive in Besançon, Irish legislation on separate food waste collection). As most of these initiatives are very recent, many do not yet have measured results.

5. Fifteen year forecast

Taking into account population growth and increases in disposable income, an estimate of 126 Mt of food waste can be expected by 2020 in the EU27, representing a total of 240 Mt of CO₂ eq. emitted, i.e. an additional 40% to the current figures.

6. Policy recommendations

Food waste data reporting requirements: more work needs to be done on this issue because current data are neither reliable nor complete. EUROSTAT reporting requirements and methodologies (notably separating by-products and food waste) have to be improved. But additional changes in food waste reporting need to be introduced in the legal framework of EUROSTAT; this might take several years (2015/2018). In order to improve food waste data, MS need to undertake national food waste studies. More detailed bin composition analysis can furthermore be carried out to improve the level of reporting accuracy.

Date labelling: many consumers do not correctly understand the meaning of date labels like "best before" and "use by" and mix up the two notions, leading to wastage of food that is still edible. According to a WRAP estimate in the UK, confusion about date labelling is responsible for 20% of the avoidable food waste. The study proposes to add a date label coherence requirement to the Food Information Regulation.

Targeted awareness campaigns: the study concludes that increased awareness is necessary to bring about long term behavioural change to significantly reduce food wastage, especially at household level. The necessary funding is less than the potential financial savings to households.

EU targets for food waste prevention: this option is dependent on the first one (EUROSTAT reporting requirements), and, due to the expected time needed for its implementation, it is not considered a priority.

Separate collection of food waste: considered as effective in stimulating a waste prevention effect, however this option is costly as it involves the development of collection and treatment infrastructures. More in depth examination needs to be carried as it could be economically profitable in the long term.