
This policy paper outlines arguments in favour of the European Council and Commission supporting the European Parliament’s position on food waste within the Waste Directive, in the upcoming triadogue discussions. It outlines the evidence base for, and the benefits of, the following policies:

- The introduction of targets to reduce food waste by 30% by 2025 and 50% by 2030, across the entire supply chain from the point food is ready to harvest to consumer
- A review to be made of making these targets binding by 2020
- A clear timeline for measurement of food waste from farm-to-fork by 2020
- The introduction of a specific food waste hierarchy
- The introduction of a farm-to-fork food waste definition, including all agricultural food waste caused by humans

Measurement by 2020 is both possible and necessary:

A clear timeline should be introduced to measure and baseline food waste farm-to-fork by 2020. Earlier baselines can be used for states who already have good quality data for earlier years.

Critics have argued that the lack of current food waste definition, methodology and data prevents reduction targets being set. However, the European Parliament have clearly set out a definition of food losses and waste in amendment 98, and Amendment 149 lays out a clear timeline for developing a methodology by 31 December 2017, so Member States can begin measurement on the basis of this definition and methodology by 2018. At most, the timeline for developing a methodology should be slightly extended to 2018, given how the triadogue discussions have taken longer than expected. There is no reason to delay further than this – targets can be set now for countries with good data, and other countries can use later years as their baseline once measurement begins in 2018/19 on the basis of the methodology.

Amendment 236 calls for a review of the possibility of introducing binding food waste reduction targets, based on these measurements by 2020. Thorough baseline data on EU food waste should be gathered by 2018/19 to help make this review fully informed and ready by 2020.

Numerous studies show that accurate baselines and reporting are essential for targets to be meaningful and sufficiently regulated to ensure they are achieved. Baseline data is essential to make a target measurable and accountable – without data, it will be impossible to measure progress towards the target, and difficult to focus action where it is most needed.

Currently, data from Member States, reported by FUSIONS, is of uneven coverage and quality, with most Member States having a mix of good data, poor data and no data for different stages of their food supply chains. European data on primary production and processing food waste is currently patchier than for other levels of the supply chain which makes measurement and targets more challenging, but acquiring the data by 2019 is both possible and necessary. For instance, WRAP in the UK will have data on primary production food waste by 2018, and are developing a methodology for measuring this.

Countries who already have good quality baseline data for 2014 or later years can introduce reduction targets immediately, and other countries can use later baseline years, with all countries committed to gathering baseline data by 2019 at the latest. In 2010, a European Commission study concluded that “accurate baseline data would enable the EU to set targets for food waste prevention”. Seven years have passed since that study, and the data has still not been gathered. The Parliament’s clear timeline for action should be backed now, as otherwise ambitious measurable action will be indefinitely delayed.

Targets need to cover the whole supply chain, from farm to fork:

The European Commission’s draft text currently only includes consumer and retailer level food waste in the target to reduce food waste across the EU by 50% by 2030, referring to the Sustainable Development Goal 12.3. You can’t manage what you don’t measure. Approaching consumer and retail level food waste in a systematic targeted way, but having a vaguer non-targeted approach to reducing food wasted in the supply chain, is inconsistent and will bias action towards the later stages
of the supply chain. The only way to know where the hotspots for food waste are in European supply chains, and prioritise them accordingly, is to have farm-to-fork measurement and reduction targets.

Liz Goodwin, member of Champions 12.3 and Senior Fellow and Director, Food Loss and Waste at the World Resources Institute, has stated: “Given the economic, social and environmental benefits of tackling food loss and waste, we should aspire for companies and nation states to halve food loss and waste from the point it is ready to harvest through to consumer.”

Food waste is more concentrated in large retailers and food businesses than throughout millions of separate households, so it is often easier to measure their food waste – for instance, one farm may waste 250,000 cauliflowers per week at certain points, which dwarves what a consumer would waste in a year’s. Policy changes in these large food businesses may lead to easier large-scale food waste reductions than persuading millions of consumers to implement behaviour change.

The scale of food waste at primary production and processing levels is certainly substantial, and should not be side-lined. Recent studies reveal that the scale of pre-retail waste in Europe are significant, between 30% (EU FUSIONS) and 59% (FAO) of Europe’s total food waste – if the FAO’s estimate is closer to the truth, targeting only retail and consumer waste may miss out 59% of Europe’s food waste from the targets.

There is a common false narrative that food losses in the supply chain are purely a developing country problem, caused by poor post-harvest infrastructure. But this is not borne out by the evidence. According to the FAO’s stats, Europe has higher per capita food waste at pre-retail level than any other continent except Latin America. Problems such as poor refrigeration and storage, less efficient forecasting and other technical issues are less of an issue in developed countries, but these problems are replaced by others, such as cosmetic outgrading, order cancellations, and overproduction (see section on “Externalities” on p2 above).

Food waste at farm level is often the most overlooked in international food waste targets. The FAO estimate that 36% of Europe’s food waste occurs at agricultural level, and 11% at postharvest level, making up a total of 47%. FUSIONS estimates for primary production food waste are dramatically lower, at 11%. However, both studies are based on extremely limited data, and so we should provisionally assume the EU’s agricultural food waste is between the two extreme estimates of 11-47% of the EU’s total. Considerable amounts of food are wasted at primary production level both in the form of edible produce that is left unharvested in the field, and produce discarded post-harvest. It is vital that pre-harvest and harvest food waste be included, as they together constitute up to 36% of the EU’s food waste.

Food waste at farm level may vary from year to year with changes in yield due to weather, pests and other factors. However, specific reduction targets are still possible for primary production, where a rolling 3-year average can be used to dampen out variation. In extreme cases where weather causes a large enough deviation from normal food waste to jeopardise meeting the target, this can be considered and possible extensions granted.

The European Parliament’s proposed definition of food waste uses the phrase “excluding primary production losses”, which is ambiguous, and may exclude some of this considerable edible and avoidable primary production food waste from the EU’s food waste definition – thus potentially excluding a sizable portion of 11-47% of the EU’s food waste. Therefore, we call for a clarification of this definition to say: “primary production losses means food that is rendered inedible before harvest at primary production level through non-human factors such as weather or pests”, to ensure edible and avoidable food waste caused by human factor is included in the definition, and edible food wasted before harvest is not excluded.

A review of binding targets is urgently needed:

A mandatory target would create a level playing field for businesses to operate in, including unified measuring standards, stronger regulatory incentives to reduce waste and greater harmonisation across states. It would ensure that businesses receive the support they need to reduce their waste, and embed support for waste reduction policies within national Governments.

In one of the only thorough explorations of the subject, the RSPB conducted an analysis of the effectiveness of over 150 voluntary schemes across a range of sectors and issues to determine how well they perform, and found that “over 80 per cent of schemes were found to perform poorly on at least one key measure. The majority of schemes set unambitious targets, with many also failing to achieve ‘unambitious’ targets. In addition, many schemes were undermined by low rates of private sector participation and the resultant lack of a ‘level playing field’ for those participants
seeking to improve their performance. The research found nothing to support the claim that voluntary approaches can be an effective alternative to regulation.\textsuperscript{15} They concluded that “the impacts of most voluntary schemes are limited, and that the efforts of responsible businesses are often undermined by the failure of such schemes to attract widespread industry participation and compliance”.\textsuperscript{16}

A study on the relative impact of different policy interventions on household food waste across 44 countries found that “household food waste generation is 61 percent less in countries with defined legislative frameworks compared to those lacking, or having incomprehensive, ones”\textsuperscript{17} – by far the most effective measure among those studied.

Whatever your position on the effectiveness of regulation, it is important that this option is considered meaningfully, to assess if it’s the best way forward or not. We therefore urge the Council and Commission to support the Parliament’s review clause calling for the Commission to investigate the possibility of setting up binding Union-wide food waste reduction targets by 2020\textsuperscript{18}.

**A specific food waste hierarchy is needed:**

Establishing a specific food waste hierarchy is necessary as food waste is a highly variant waste stream with end components that can go in several different directions, differing from those of municipal solid waste. This needs to be clearly outlined via a food waste hierarchy to enable better prevention and management of food waste, clarifying the priority order for this waste stream, distinguishing between prevention and edible food rescue, when food is redistributed. The most obvious difference is that food waste may be edible, and as such can be fed to humans and livestock, which should be prioritised – this is not captured in the existing generic waste hierarchy.

The proposed food waste hierarchy, in order of priority, is:

1. source prevention
2. edible food rescue, prioritising human use over animal feed and the reprocessing into non-food products
3. composting
4. energy recovery
5. disposal

This food waste hierarchy was supported by the European Parliament in March 2017 as amendment 107\textsuperscript{19}. Ensuring that food is used to its full potential, as high up the food waste hierarchy as possible, will help ensure that food is used for its most environmental and socially useful purpose\textsuperscript{20}. Using a specific food waste hierarchy would enable harmonised reporting of the fight against food waste as part of Sustainable Development Goal 12.3.

**The European Council and Commission need to be more ambitious**

In 2010, the European Commission commissioned a review of numerous initiatives for the reduction of food waste, which concluded that “voluntary” targets for the food industry\textsuperscript{21} should not be a priority, opting instead for “the creation of specific food waste prevention targets for Member States”\textsuperscript{22}. Yet it has continued to push voluntary approaches to food waste reduction. The Commission tabled food waste reduction targets in 2014 but then withdrew the Circular Economy Package promising to return with a more ambitious package – it then announced in 2015 less ambitious Circular Economy food waste aims\textsuperscript{23}. The EU Court of Auditors heavily criticised the Commission for inadequate action on food waste in January 2017\textsuperscript{24}. The European Parliament has made multiple calls on the European Commission to implement binding food waste reduction measures\textsuperscript{25}, and has now voted overwhelmingly in favour of ambitious food waste reduction targets, and a review of whether to make these binding by 2020. This is an excellent opportunity for the Council and the Commission to unite behind these well thought out, ambitious food waste proposals, and to show the world that Europe will be a leader in food waste reduction.

**Overwhelming environmental case:**

The UN’s Food and Agriculture Organisation released a global study\textsuperscript{26} of the environmental impacts of food waste globally, and found:

- **Carbon Emissions**: If global food waste was a country, it would be the third largest emitter in the world after China and the US – responsible for emissions of 4.4Gt CO2 per year.
- **Land Use**: The land area used to grow food that is wasted globally is equivalent to the whole landmass of China and India.
- **Water Use**: Globally, the blue water footprint for the agricultural production of total food wastage is about 250 km\(^2\), equal to the annual water discharge of the Volga River.
Therefore, reducing food waste would contribute significantly to the EU meeting its environmental commitments, including climate change targets set out under the Paris Agreement.

**Europe’s food security:**

There are 55 million people living in food poverty in Europe today, and the estimated food wasted in Europe each year would be enough to feed these people nine times over\textsuperscript{xvii}.

McKinsey Global Institute conducted a massive cost-benefit analysis in 2011 into the biggest global opportunities for resource efficiency. They concluded that reducing food waste was one of their top 3 opportunities\textsuperscript{xviii} and that the alleviation on land, water, fossil fuels and other resources created by this resource efficiency would lead to lower and less volatile food prices\textsuperscript{xix}.

Europe is currently depleting its soil faster than it is replaced – estimates produced by the European Environment Agency suggest that erosion by water and wind affects 16% of European land\textsuperscript{xx}. The FAO estimate that if current rates of soil depletion continue, the global amount of arable and productive land per person in 2050 will be only a quarter of the level available in 1960\textsuperscript{xxxi}. Increasing food supply by reducing food waste and losses rather than expanding production could significantly alleviate pressure on soils to ensure sustainable food production for future generations – enabling greater conservation and biodiversity.

Farmers will directly benefit from agricultural food waste reductions. A major contributor to European farmers’ costs is bearing the cost of ploughing back in or wasting edible crop, which can lead to considerable loss of revenue. Often this could be solved by changes in retailer policy, or changes in the behaviour of supply chain intermediaries, but as the food waste is an externality to these businesses, they do not have enough incentive to change. Extending food waste reduction policy to cover primary production food waste would be beneficial for the income of farmers and help keep them in business to supply future generations in Europe.

**Massive savings and business case:**

Reducing food waste provides excellent returns. Champions 12.3 recently released a study – based on the data of nearly 1,200 business sites spread across more than 700 companies worldwide, they concluded that the median return on investment for food waste reduction was 14-fold – yielding a return of €14 for every €1 invested\textsuperscript{xxxii}.

A European Commission study from 2010 concluded that the cost of EU-wide food waste measurement would be low and cost-effective\textsuperscript{xxxiii}. You can’t manage what you don’t measure – EU-wide food waste measurement would help unlock the massive business savings mentioned above, by enabling a baseline for targets, and revealing a food waste hotspots for targeted interventions.

**Externalities mean market competition will not be enough to reduce food waste – government regulation is needed:**

Voices from the food industry and retail sector in particular have often argued that the demands of competition and efficiency will naturally drive businesses to streamline operations and reduce waste in order to keep their costs down – they thus argue that voluntary initiatives, rather than stronger regulation, are the most appropriate approach\textsuperscript{xxiv,xxxv}.

However, the types of food waste prevalent in developed countries are often the result of externalities, where one business causes food waste and another bears the cost. This situation particularly arises when one business has greater power in the supply chain in relation to another - for instance, cosmetic outgrading, retailers cancelling orders at the last minute, and buyers incentivising overproduction in their suppliers by punishing undersupply on bad years, but then not absorbing gluts. Thus, the incentives to reduce food waste are not internal to the business and will not be driven by market competition. As a result, the FAO estimates that Europe’s per capita food waste is actually higher at the production to retail level than any other global continent except South America, at 186kg per year\textsuperscript{xxxvi}. According the FAO’s 2011 report approximately 59% of Europe’s food waste occurs before the retail stage. Competition in this context may lead to short-term gains for certain companies being prioritised over long-term gains for the food industry and society as a whole. These externalities lead to market failures which require governmental regulation and mediation across supply chains to solve – solving these problems will unlock the huge social, environmental and financial gains to society of reducing food waste.
Immense popular support:

Over 50 organisations from across 18 EU countries (the largest coalition of organisations to ever campaign for food waste policy change), and over 75,000 people through Change.org and Global Citizen petitions, have united in calling specifically for an EU target to halve food waste by 2030, and for this to be binding at Member State level.

Over 1 million people signed an Avaaz petition calling amongst other things for nations of the world to “launch national action plans to achieve the UN goal of halving food waste by 2030”. In France, conservative councillor Arash Derambarsh led a campaign to introduce binding rules to oblige supermarkets to donate food waste to charities, which was passed with overwhelming cross-party support. Following this, over 800,000 people signed a Change.org petition to roll this out throughout the EU, showing a huge public appetite for regulation on food waste.

These actions show that the European Council and Commission can rely on popular support from the public and civil society across Europe for the implementation of food waste reduction targets.

More info:

For more info, contact the author at martin@thisisrubbish.org.uk

References:


2 RSPB (2015), Using Regulation as a last resort? Assessing the performance of voluntary approaches, RSPB

3 FUSIONS (2016), Estimates of European food waste levels, Annex E, p63
http://www.eu-fusions.org/phocal/download/Publications/Estimates%20of%20European%20food%20waste%20levels.pdf

4 In EU FUSIONS Estimates of European food waste levels (2016), the number of countries who submitted data of sufficient quality on food waste at primary production level was only 6 out of 28 and for processing it was only 4 out of 28 – the lowest coverage of data for any stages in the supply chain.
https://www.eu-fusions.org/phocal/download/Publications/Estimates%20of%20European%20food%20waste%20levels.pdf

5 EC - Preparatory Study on food waste across EU 27, 158-9

6 Allen-Mills, T. (2017), Farmers get the cauliwobbles, The Times
https://www.thetimes.co.uk/article/farmers-get-the-cauliwobbles-mpsd2bk

7 FUSIONS (2016), Estimates of European food waste levels, p4
http://www.eu-fusions.org/phocal/download/Publications/Estimates%20of%20European%20food%20waste%20levels.pdf

8 FAO (2011), Food losses and food waste
http://www.fao.org/docrep/014/mb060e/mb060e.pdf

9 It seems likely that the FUSIONS figures for food waste at primary production are significant underestimates as they put food waste at only 1-2% of production9. This is significantly lower than the FAO’s report, which puts average agricultural and postharvest food waste in Europe at 15% of edible food production intended for human consumption9.

10 Venkat (2011), The Climate Change and Economic Impacts of Food Waste in the United States ft. in Int. J. Food System Dynamics 2 (4), 2011, 431-446

European Parliament (2011), Report 30 Nov 2011: on how to avoid food wastage: strategies for a more efficient food chain in the EU (2011/2175(INI)) Committee on Agriculture and Rural Development, Section K

11 FAO (2011), Food losses and food waste
http://www.fao.org/docrep/014/mb060e/mb060e.pdf

12 FAO (2011), Food losses and food waste
http://www.fao.org/docrep/014/mb060e/mb060e.pdf

13 Source: FUSIONS (2016), Estimates of European food waste levels
http://www.eu-fusions.org/phocal/download/Publications/Estimates%20of%20European%20food%20waste%20levels.pdf