

# Healthy and sustainable food

'Designing out food loss & waste' , Brussels, March 26<sup>th</sup> 2019

# Summary

- Food loss and waste (FLW) reduction is fundamental to achieve a successful food system transformation;
- As tackling loss upstream is equally important as preventing waste at consumer-level, DSM & Cargill are uniquely positioned to provide solutions and are making the case for more private/public partnerships;
- Industry has taken the lead on food loss prevention in collaboration with key stakeholders such as the World Resources Institute and WWF;
- Data and measurement have the potential to untap new business opportunities for FLW;
- New alliances made possible through WBCSD FReSH, the Bio-Based Industries Consortium, the Food Waste Atlas and the new EU Bioeconomy Strategy show there is momentum to find solutions across the supply chain.

## Meeting Report

*“How can the world adequately feed nearly 10 billion people by 2050 in a manner that advances economic development while reducing pressure on climate, water, and ecosystems?”*

**Liz Goodwin**, First Senior Fellow and Director, Food Loss and Waste at the **World Resources Institute** (WRI), asked this fundamental question in her keynote speech at the breakfast event in Brussels organised in March by **Royal DSM** in collaboration with **Cargill**.

The event convened 22 experts from the European Commission (DG Research and Innovation, DG Health and Food Safety, DG Agriculture and DG Environment), research (WRI), civil society (WWF) and industry (DSM, Cargill, Danone, PepsiCo, Olam, Unilever). It offered a platform for a constructive debate on how public and private stakeholders can join forces to deliver healthy and sustainable food to a growing population, while protecting natural resources and acting on climate change. The specific focus of the meeting was on reducing food loss and waste (FLW) and identifying opportunities for reducing food loss in harvesting and production phases.

Food production is essential but is one of the key drivers of environmental degradation:

- WWF estimates that 70% of biodiversity loss is due to food production;
- WRI estimates that greenhouse gas emissions linked to food production will account for 70% of total allowable emissions for all sectors by 2050.

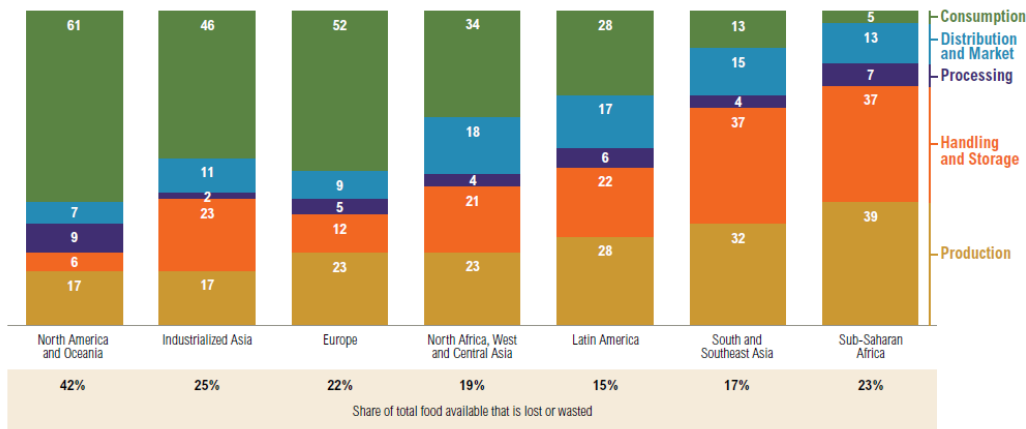
While no single action can ensure the transition towards a sustainable food system, research by WRI and EAT-Lancet indicates that achieving the United Nations (UN)'s Sustainable Development Goal (SDG) Target 12.3<sup>1</sup> is key. The case for reducing FLW is overwhelming: despite the enormous impact of food production on the environment and the need to produce 56% more food to feed the world adequately by 2050, FAO estimates that globally we waste or lose one third of all the food we produce. Recent findings from the WRI<sup>2</sup> make the case for tackling both food loss and food waste simultaneously: at the global scale production and consumption loss and waste each account for 30%

<sup>1</sup> UN SDG Target 12.3 is to halve global food waste at retail and consumer levels, while reducing food losses along production and supply chains, including post-harvest losses

<sup>2</sup> WRI (World Resources Institute). 2018. “*Synthesis report: Creating a Sustainable Food Future: A Menu of Solutions to Feed Nearly 10 Billion People by 2050*” Washington, DC: WRI.org

of the total global FLW across the food supply chain. In terms of calorie loss, food waste at the European consumer end represents an estimated loss of 52%, compared to 23% in production.

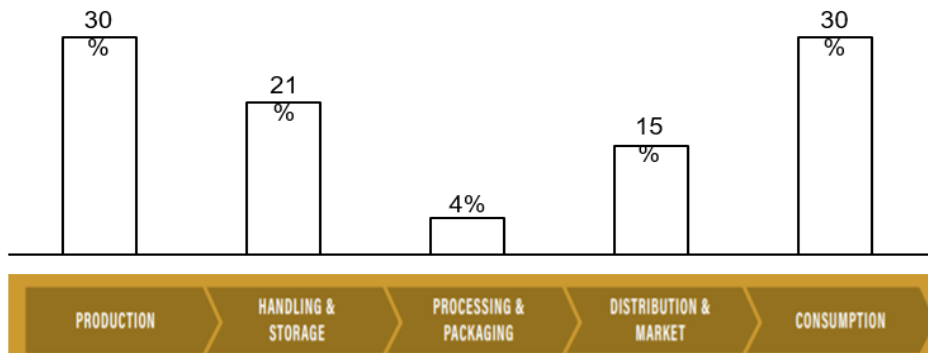
**Food Waste Near Consumption is More Prevalent in Europe (% Kcal lost or wasted) (2011)**



Note: Numbers may not sum to 100 due to rounding.  
 Source: WRI analysis based on FAO 2011.

**Distribution of Total Global Food Loss and Waste Across the Food Supply Chain (2009)**

Percent  
 100% = 1.3 billion tons



Source: WRI analysis based on FAO 2011. *Global food losses and food waste—extent, causes and prevention*. Rome: UN FAO

**FLW reduction initiatives produce multiple benefits**

The business case for reducing FLW is strong, with a return on investment of 14:1, according to the WRI.

Several initiatives initiated by both governments and the private sector, from packaging, date labelling, ingredients, to shelf life extension and consumer campaigns, have already proven the potential to reduce food waste at retail and consumer levels. WWF’s HotelKitchen toolkit is a great example of a collaborative industry platform highlighting the need for measurement, employee engagement, and a prevention-first mindset against food waste.

While such actions should continue to be encouraged, the potential to reduce food loss during food production is often left untapped.

WRI research shows that industry is ahead of governments when it comes to setting targets, measuring and acting on food loss prevention. Participants agreed that industry must take the lead on this important issue, with governments enabling the conditions to succeed. This is also the approach underpinning EU policy actions on innovation and food loss prevention, which encourage

collaboration between stakeholders. One key example is the [EU Platform on Food Losses and Food Waste<sup>3</sup>](#), a multi-stakeholder initiative to maximise the contribution of all actors towards prevention.

Recent EU policy initiatives attempt to move away from addressing policies independently in order to find holistic and higher impact solutions. The [EU Bioeconomy Strategy](#), updated last year jointly by DG RTD, DG AGRI, DG ENV and DG MARE in collaboration with other DGs, reflects the need for a coherent approach between individual policies impacting the food system, and points to the role of innovation as part of the answer to current environmental, health and social needs. The [Food 2030 approach \(DG RTD\)](#) aims to make the food system more sustainable, circular and healthy through innovation.

Faced with increasing societal demand for a more sustainable food system, the Commission also stepped up its support to the transition towards a more sustainable agriculture through its proposal for the EU Common Agricultural Policy (CAP) post-2020 (DG AGRI). The ongoing revision of the CAP represents an opportunity for FLW prevention by enhancing the performance and resource efficiency of farming systems. A new green architecture of the CAP including enhanced conditionality, eco-schemes and a rural development policy will provide the right mix of voluntary and mandatory measures to achieve environmental and climate results.

### Quantifying the impact

One of the key problems identified by all participants in reducing food loss is the lack of a common methodology to measure it, which also complicates the establishment of a baseline against which to measure progress. WWF's recent report '[No food left behind](#)' (2018) details its research on the collection of baseline data from US farms on post-harvest crop losses. One of the core messages from that report is that crop loss measurements uncover market opportunities for both growers and users of agricultural raw materials.

Industry is aware of this and is examining ways to measure and prioritize actions through various projects. Cargill co-leads the FLW working group within the World Business Council on Sustainable Development (WBCSD) and joined forces with DSM and others to launch the [FReSH Food Loss and Waste Value Calculator](#). The tool quantifies the impact of nutrient loss on farmers' income and the environment, which helps to elevate interventions for FLW prevention among different stakeholder groups.

### Fostering new types of alliances

More broadly, there is a case for all parties across the value chain to better collaborate and take responsibility for food losses. Participants agreed that partnerships can lead to better insights and to the development of new technologies and practices. The [Bio-based industries Consortium](#), of which both Royal DSM and Cargill are members, is an example of a platform that brings diverse parties together and creates new types of alliances. New collaborations, for instance with the farming sector, have the potential to develop outside-the-box solutions.

The event also offered the opportunity for industry members to share some best practices:

- **Royal DSM** presented its solutions to prevent food loss and waste. Among them is the vitamin D3 chicken feed ingredient 'Hy.D', which increases vitamin intake in chickens, resulting in healthier, higher-yielding chickens and a 15% increase in eggshell strength. This reduces FLW from egg breakage, thereby lowering resource requirements and increasing the prosperity of farmers. In making egg production more efficient, Hy.D addresses multiple SDGs: 12 (responsible consumption and production), 13 (climate action), 2 (zero hunger) and 3 (good health and well-being).

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<sup>3</sup> The Commission is in the process of developing a common methodology for member states to assess the extent of FLW and will, based on those results, consider the need for legally binding targets

- **Cargill** presented a success story from its operations in Argentina, showcasing the true “cost/value” of food losses. A storage residue and solid production spill of soybean processing, which was previously wasted, is now safely and effectively recuperated in the process, cutting disposal costs and eliminating the need to buy new crops.

### Transparency and engagement

European Commission representatives called on companies to publicly share available data on food loss, notably through the WRI-backed Food Waste Atlas, which enables countries, companies and other organizations to share information on the known quantities of food waste.

As the European Commission is considerably increasing investment in research, there will be more financial instruments available for innovative companies. While large companies already take part in research initiated by the European Commission, policymakers expect greater involvement in such projects. The European Commission urges industry to collaborate further, notably through partnerships on food systems under the umbrella of the HORIZON EUROPE programme.

### Next steps

The dialogue is set to continue through forthcoming editions that investigate FLW and other aspects of healthy and sustainable food systems where multi-stakeholder collaboration provides added value.

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### Participants:

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