



EU Platform on Food Losses and Food Waste

REFRESH

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REFRESH: Resource Efficient Food and dRink for the Entire Supply cHain

REFRESH's main objective is to contribute towards Sustainable Development Goal 12.3

The focus areas for REFRESH are

- Voluntary **strategic agreements** across the supply chain
- Improving **Valorisation** of food waste
- Develop (online) **Decision Support tooling** for new and existing solutions
- Formulate EU **policy recommendations** and **support national implementation**
- With **evidence base** in 5 Piloting Countries: NL, GE, HU, ES and China
 - Duration: July 2015 – June 2019
 - Funding: ~ EUR 9 million

Overview of progress towards the SDGs in an EU context^(*)





26 Project Partners in 13 countries





WHAT IS WASTE?



Environmental impact
/ Behavioural
economics

Valorisation of
unavoidable side flows

Consumer Behaviour

Frameworks of action

WASTE IS A LACK OF IMAGINATION



Consumer Behaviour

- Theoretical Framework
- In-house measurement
- On-pack guidance
- Consumer acceptance
- ICT Apps

Valorisation of unavoidable side flows

- Top waste streams
- Ingredients // texture processing & fibers
- Animal Feed
- Chemicals // bacterial conversion
- Economic modelling
- FoodWasteExplorer

Frameworks of action

- Framework agreements
- PWP platforms for VA (NL, GE, HU, ES, CH)
- FA pilots & evaluation
- Decision Tooling
- Blueprint

Behavioural economics

- Consumer & Retail modelling (BN & ABM)
- FW reduction scenarios
- Roadmap policy interventions

Environmental impact

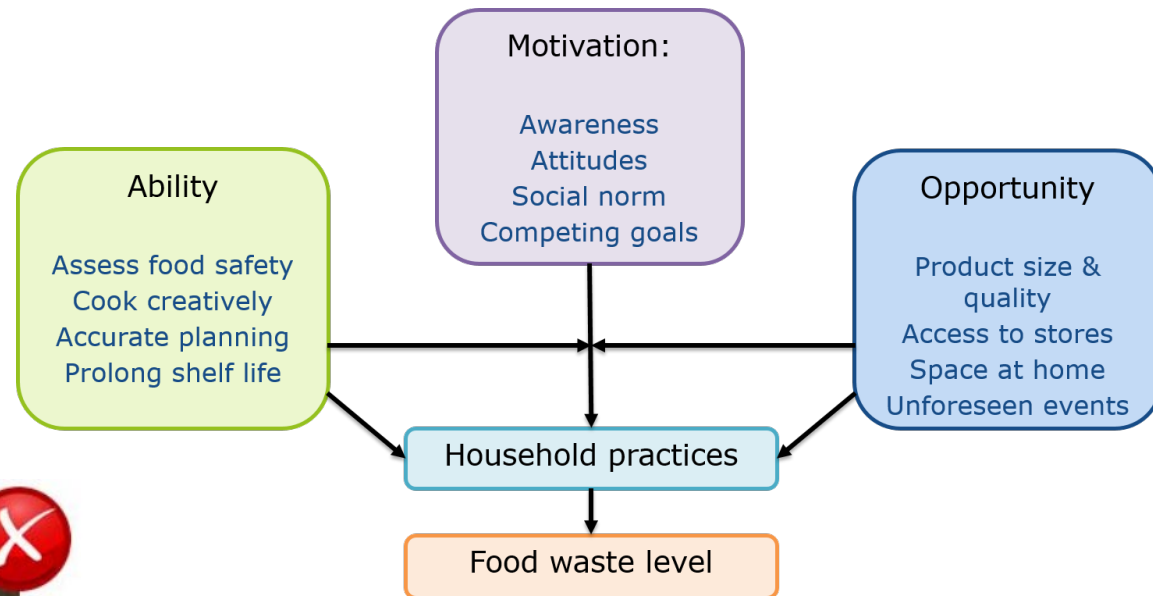
- Simplified LCA/LCC approach of valorisation
- FORKLIFT
- Case studies

Dissemination

- Food Waste Contest
- Events
- Community of Experts
- Communication & online campaign

Consumer Behaviour

- Theoretical Framework & Research Protocol
- In-house measurement
- On-pack guidance
- Consumer acceptance
- ICT Apps





Frameworks of action

- Framework agreements
- Piloting Working Platforms on Voluntary Agreements (NL, GE, HU, ES, CH)
- FA pilots & evaluation
- Decision Tooling
- Blueprint, online guidance



5 key steps of setting up a voluntary agreement



1. Initiation and **Set-up**



2. Ambitions, Goals and **Targets**



3. **Governance** and Funding



4. Establishing **Actions**



5. **Measurement** and Evaluation



Report



EU panel of experts concludes that feeding treated surplus food to pigs is viable provided certain safety measures are enforced

Valorisation of unavoidable side flows

- Top waste streams
- Ingredients // texture processing & fibers
- Animal Feed
- Chemicals // bacterial conversion
- Economic modelling
- FoodWasteExplorer



FoodWasteExplorer

Explore data about food waste streams

collected within the EU-funded project **REFRESH**

Filters can be applied to retrieve selected subsets of data, such as side stream (e.g. peel, stalks, seeds) and component groups (e.g. vitamins, minerals), and search results can be exported for further offline analysis. Currently FoodWasteExplorer contains ca. **2639** data points, however, the work is ongoing, and more data will be added with time.



About FORKLIFT – Food side flow Recovery LIFE cycle Tool

The tool is developed for helping stakeholders (policy makers, researchers, professionals, businesses etc.) to gain a principal understanding of the life cycle environmental impacts and costs for selected valorisation routes of a given food side flow, and highlights potential hot spots. Side flows are defined as a material flow of food and inedible parts of food from the food supply chain (FSC) of a driving product (main product). The stakeholder in the FSC tries to produce as little as possible of the side flow, 'the less, the better' applies for this flow (Davis et al., 2017).

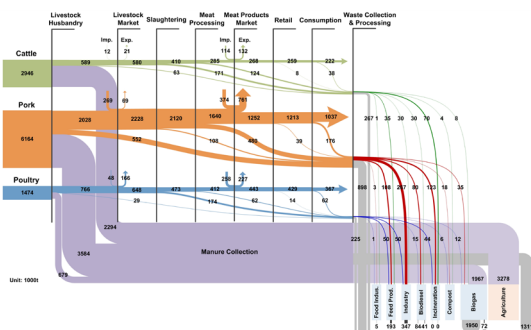
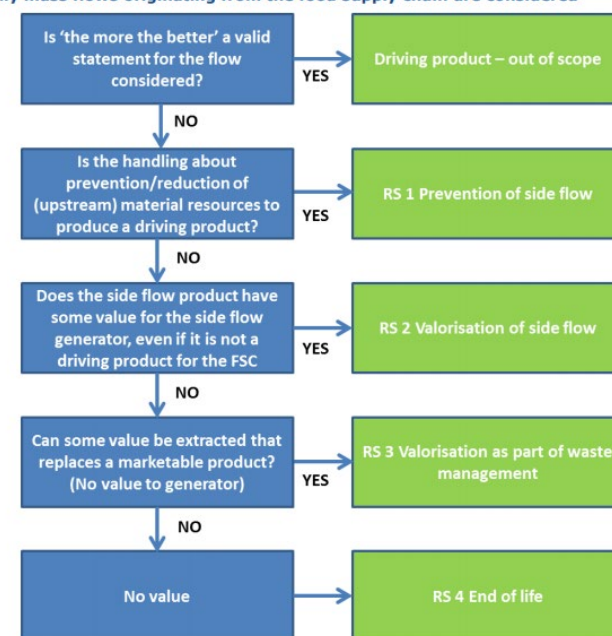
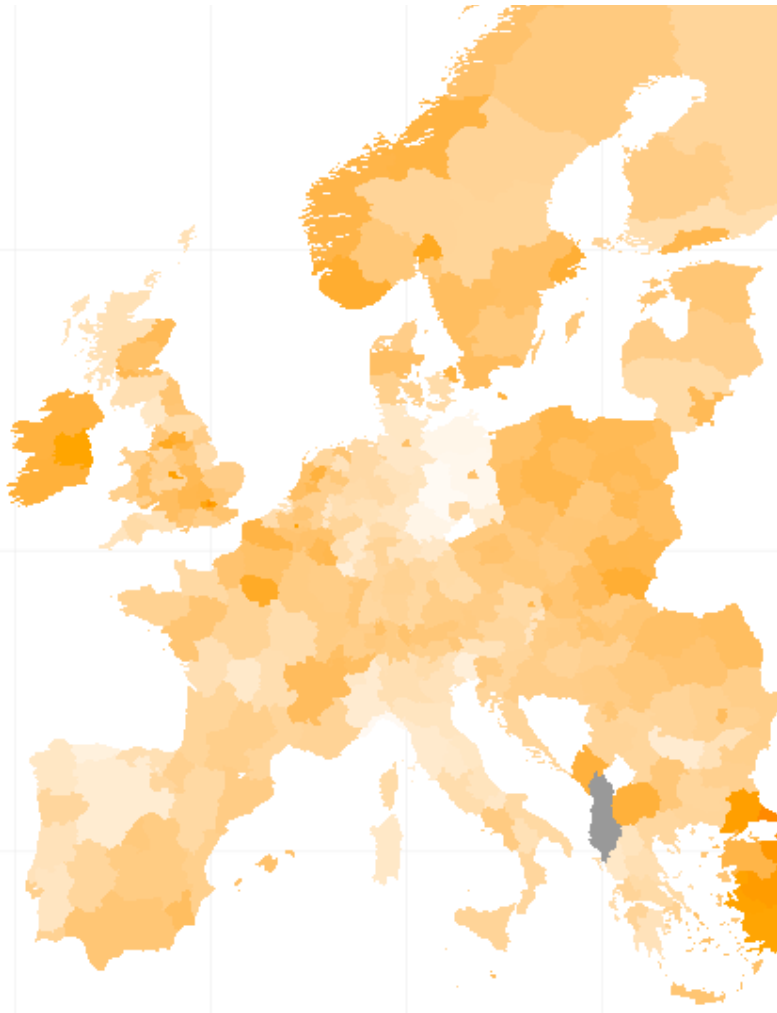


Figure 2: Decision tree for determining the REFRESH situation for side flows.
Only mass flows originating from the food supply chain are considered



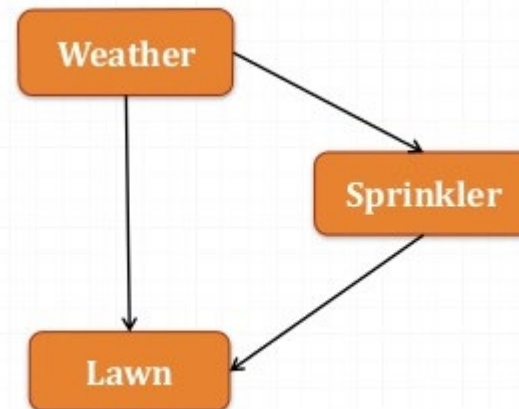
Environmental impact

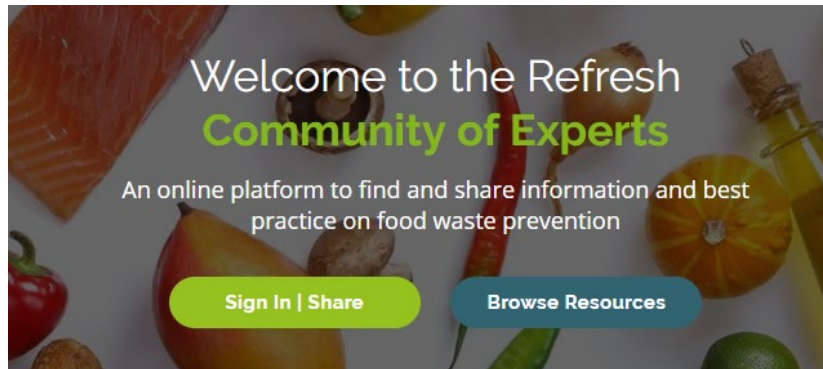
- Simplified LCA/LCC approach of valorisation
- FORKLIFT
- Case studies



Behavioural economics

- Consumer & Retail modelling (BN & ABM)
- FW reduction scenarios
- Roadmap policy interventions





www.eu-refresh.org



 for 1 player

 ca. 10 minutes

The production of food results in by-products. Instead of disposing them as waste, they can also be valorised into new products. This quiz lets you find out what **new products** can be made from this **food waste?**

Dissemination

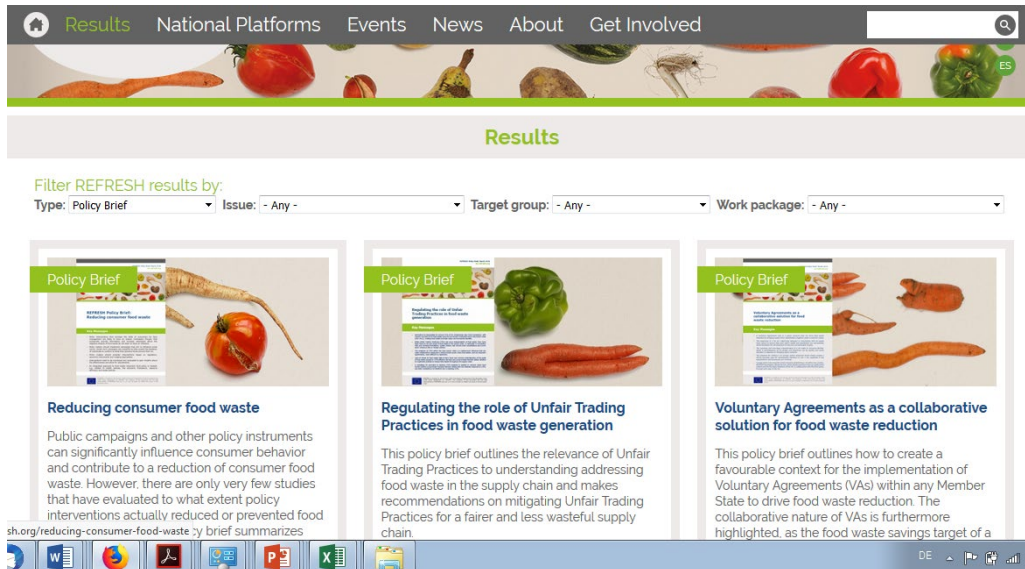
- Food Waste Contest
- Events
- Community of Experts
- Communication & online campaign

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REFRESH policy work

- Focus areas reflected in policy work
 - Four policy briefs:
 1. Changing consumer behaviour (and implementation and monitoring of interventions)
 2. Feeding surplus food to omnivorous non-ruminant livestock
 3. Voluntary agreements
 4. Unfair Trading Practices
- } Integrated supply chain policies



The screenshot shows the REFRESH website's 'Results' page. At the top is a navigation bar with links: Results, National Platforms, Events, News, About, and Get Involved. Below the navigation bar is a search bar and a decorative banner with vegetables. The main content area is titled 'Results' and features a filter section: 'Filter REFRESH results by:' with dropdown menus for Type (Policy Brief), Issue (- Any -), Target group (- Any -), and Work package (- Any -). Below the filters, three policy briefs are displayed as cards:

- Reducing consumer food waste**
Public campaigns and other policy instruments can significantly influence consumer behavior and contribute to a reduction of consumer food waste. However, there are only very few studies that have evaluated to what extent policy interventions actually reduced or prevented food waste.
- Regulating the role of Unfair Trading Practices in food waste generation**
This policy brief outlines the relevance of Unfair Trading Practices to understanding addressing food waste in the supply chain and makes recommendations on mitigating Unfair Trading Practices for a fairer and less wasteful supply chain.
- Voluntary Agreements as a collaborative solution for food waste reduction**
This policy brief outlines how to create a favourable context for the implementation of Voluntary Agreements (VAs) within any Member State to drive food waste reduction. The collaborative nature of VAs is furthermore highlighted, as the food waste savings target of a

At the bottom of the page, there is a taskbar with various application icons and a system clock showing 'DE'.

3 Policy briefs just published on the REFRESH website



System maps & analytical framework

Mapping food waste drivers across the food supply chain

Review relevant EU Policy areas related to food waste prevention and valorisation

Policy Workshops

Policy Briefs

1. Reducing **consumer** food waste
 2. Regulating the role of **UTPs** in FW generation
 3. **Voluntary agreements** as a collaborative solution for food waste reduction
 4. Avoiding FW through **feeding surplus food** to omnivorous non-ruminant livestock
- + Background report on **policy options** for consumer behaviour
 - + Guidance on **evaluating** HH FW interventions



Policy Brief

Reducing consumer food waste



Policy Brief

Regulating the role of Unfair Trading Practices in food waste generation



Policy Brief

Regulating the role of Unfair Trading Practices in food waste generation



Policy Recommendations

Need of integrated policies to reduce food waste and promote sustainable food systems

REFRESH calls for:

- Integrated policies
- Integrated supply chains
- Transparency & traceability
- Priorities on the Biggest Impact areas
 - Bread & fresh vegetables in top of waste streams
 - Year round availability / 'gluts'
 - Animal feed & consumption: head-to-tail & dietary changes
 - Food use hierarchy



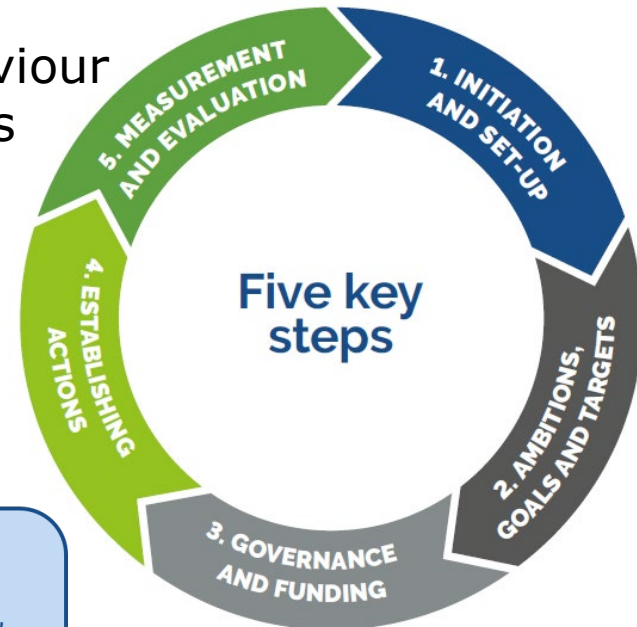
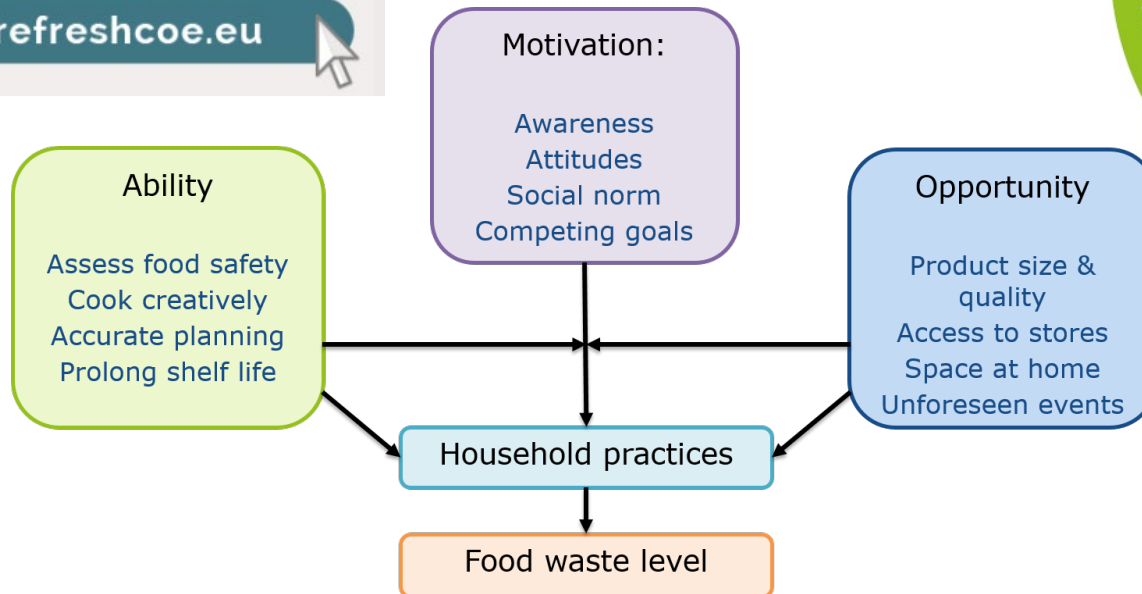
Finalising REFRESH & next



Knowledge and Best Practice on Food Waste Prevention

refreshcoe.eu

- Changing consumer behaviour
- Supply chain interventions
- Impact measurement & evaluation



Setting up a voluntary agreement