

Why is food waste such a problem in Europe?

Experiences from EU FUSIONS and REFRESH

Toine Timmermans, 31 October 2017

Total Food 2017

Exploitation of agri-food chain wastes

Norwich Research Park, Norwich, UK

31st October - 2nd November 2017

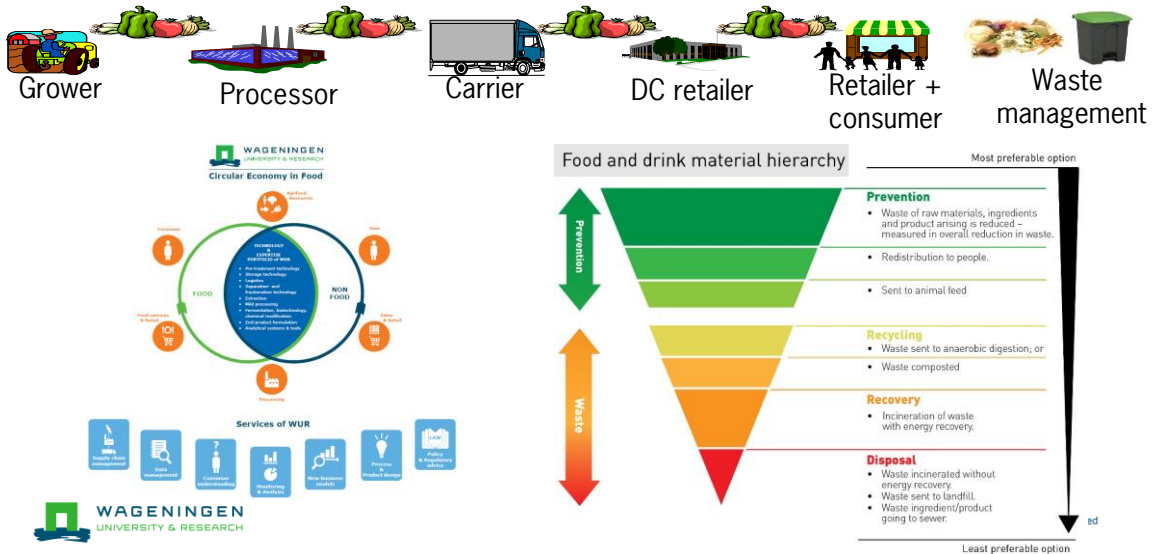


Ambitions Wageningen University & Research

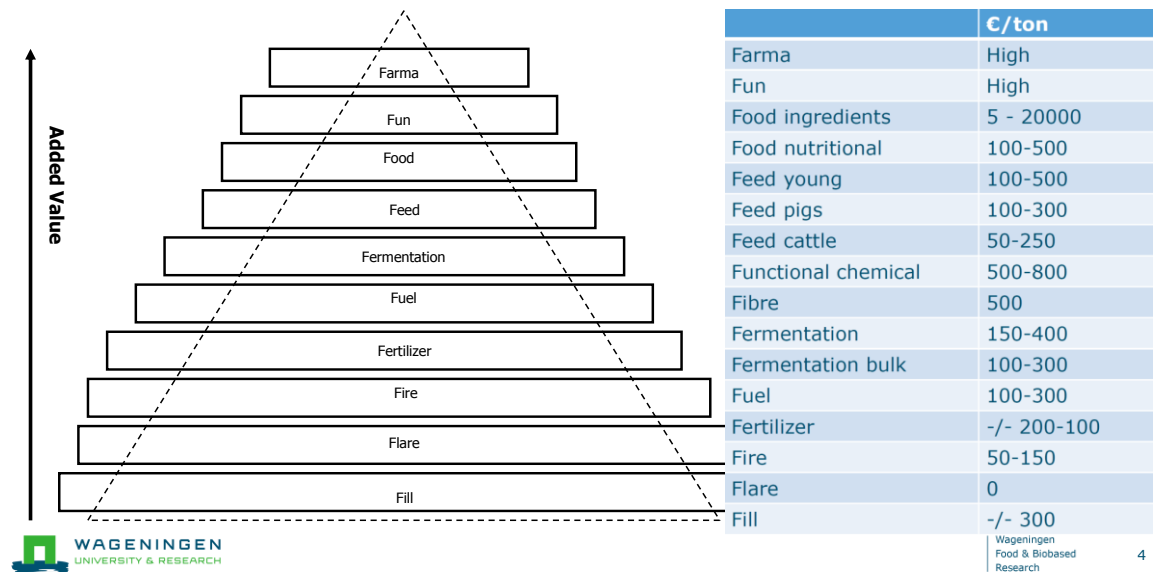
- **Optimum use of resources** in the bio-economy networks (from farm to fork). Towards a resilient & responsible food consumption & production system. Balance between "more with less" and "**less is more**" narratives.
- Food Waste **Prevention** (network/chain design), **Reduction** (innovation/intervention) & **Utilisation** of unavoidable side streams. Building on the food use pyramid (highest valorisation option) & based on circular economy principles



Circular economy & value chains/networks



Resource efficiency: Biomaterials Use Hierarchy



European & global targets & initiatives

SDG 12.3:

- 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
- EC Circular Economy Package Target = SDG 12.3



FUSIONS & REFRESH



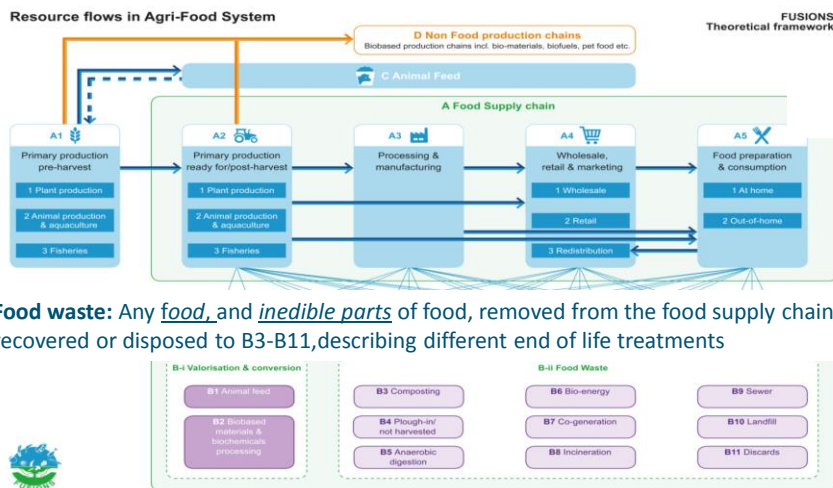
FUSIONS Project Structure (2012-2016)



FUSIONS multi-stakeholder platform



FUSIONS definitional framework



Food waste: Any food, and inedible parts of food, removed from the food supply chain to be recovered or disposed to B3-B11, describing different end of life treatments



Wageningen
Food & Biobased
Research

Food waste – latest estimate EU-28

EU-28
PRODUCES



88 MILLION
TONNES
of food waste per year

amounting to an estimated

143 BILLION
EUROS

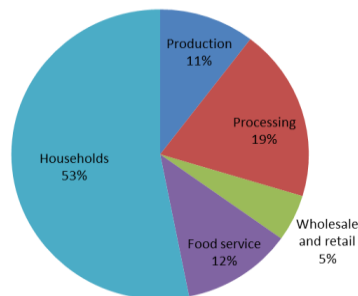


For more information on data and quantification, access the March 2016 FUSIONS reports "Estimates of European Food Waste" & "Food Waste Quantification Manual to monitor Food Waste Amounts and Progression"



173 kg pro-capita
food waste

- Equivalent of **20%** of all produced food in EU
- **143** billion euros
- ~ **304 Mt CO2 eq** (6% of total emissions of GHG in EU28%)



Wageningen
Food & Biobased
Research

FLW PROTOCOL



A multi-stakeholder effort to develop a global
FLW Accounting and Reporting Standard



Wageningen
Food & Biobased
Research

Social Innovation: feasibility support

■ Surplus Food



■ Disco Bôcô



■ Hungarian Foodbank Association



• Cr-EAT-ive



• Gleaning Gleaning Network EU

• Social Supermarkets

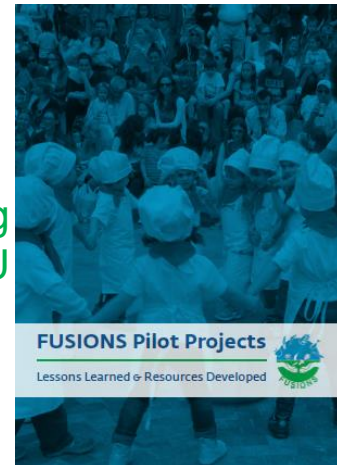


Deloitte.
Deloitte
Développement
Durable

• Order-Cook-Pay



Wageningen
Food & Biobased
Research



Cr-EAT-ive Project – Greece

Raise awareness and influence behaviour

Objectives

- **Raise awareness** on food waste and **influence behaviour** of kindergarten children, their parents, teachers & staff

Outcomes

- Food waste **diaries** (30 families)
- **Teaching materials** for children (teacher guides, fun exercises & a board game)
- Educational **guidelines** aimed at parents
- Guidance & training of canteen staff



Project Participants

6 Kindergartens
480 children
480 families
25 Teachers
7 Kindergarten Heads



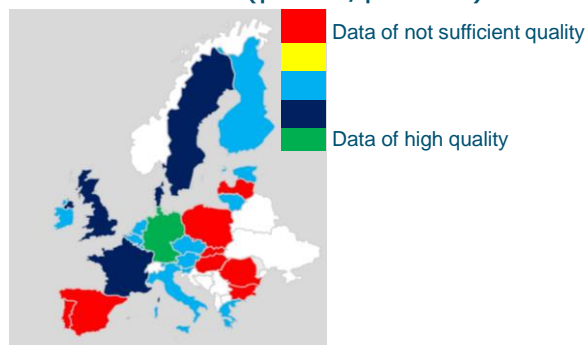
European policy Arena; What's happening

Policy Commitments: SDG12.3, Circular Economy Package

- Monitoring of food waste at MS level

Building on EU-FUSIONS, Eurostat and FLW protocol

- a new EU platform food loss & food waste (public/private)



European policy Arena; What's happening

- Harmonisation of food donation guidelines
- Date labelling (study private sector practices, review terminology, annex products with no expiration date)
- Support former foodstuffs utilisation as animal feed
- European Court of Auditors report



European policy Arena, Member States actions

Collaborative models with Multiple Approaches (& mixed models)

- Enforced by legislation
 - France (law to "oblige" donation by supermarkets)
 - Italy (facilitate donation, incentives)
 - UK (Groceries Code Adjudicator, fair trading practices)



European policy Arena, Member States actions

- Voluntary agreements (already running for some years):
 - Courtauld Agreement (UK), Sustainable Food Alliance (NL), Format/Mattvet (NO), Chain Roadmap (BE)
- Urban City (Milan Urban Food Policy Pact, Amsterdam Metropolitan Solutions)



1.2Mt
Packaging and
Food Waste
prevented

3.3Mt
CO₂e saved

£1.8bn
saved



(Social) innovation & systemic causes



"Fruittelers zijn pionnen van Europees stratego"

Honderdduizenden kilo's hardfruit klaar voor vernietiging

Tholen - Honderdduizenden kilo's appels en peren, uitgespreid op het Belgisch-Limburgse land, liggen klaar om vernietigd te worden. Dat gebeurt met het overaanbod fruit dat wordt 'weggehaald' om de markt te beschermen. Fruitteler Kris Franssens maakte deze week foto's van het fruit op de velden. Na de Russische boycot zorgde Eur ervoor dat er een interventieregeling kwam waardoor een bepaald deel van fruit uit de markt wordt gehaald. De appels en peren kunnen niet worden 'weggegeven', want dan komt het alsnog op de markt terecht.



Tienduizenden biologische bloemkolen halen de winkel niet

14 okt 2016 - 11:44 • 0 reacties • Frysk

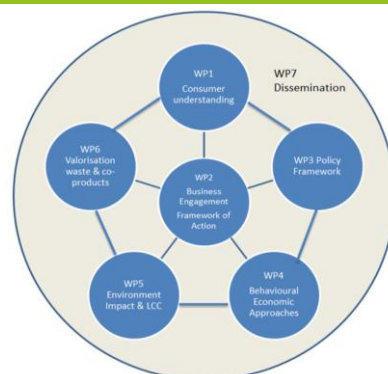




Resource Efficient Food and dRink for the Entire Supply cHain (2015 – 2019)

26 partners, 12 countries

Multi stakeholder platforms: the Netherlands, Germany, Spain, Hungary, China



REFRESH is funded by the Horizon 2020 Framework Programme of the European Union under Grant Agreement no. 641933. The contents of this document are the sole responsibility of REFRESH and can in no way be taken to reflect the views of the European Union



The REFRESH Project

A central ambition of the REFRESH project is to develop a 'Framework for Action' model that is based on strategic agreements across all stages of the supply chain (backed by Governments), delivered through collaborative working and supported by evidence-based tools to allow targeted, cost effective interventions.



www.eu-refresh.org



The Netherlands, Cooperation with industry

- Cooperation between industry (sector organisations) and government since 2009
- Joint agenda on reduction food waste
- 2014 year against food waste



Rijksoverheid

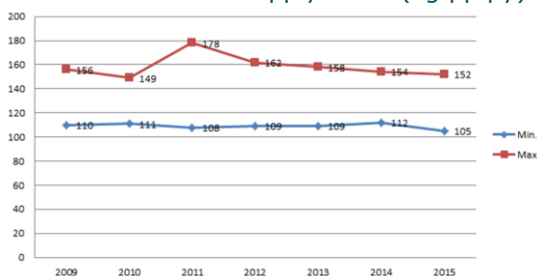
www.eu-refresh.org

Wageningen
Food & Biobased
Research



The Netherlands, time for a next step

Food waste across supply chain (kg.pp.py)



- Food waste losses on political and business agenda
- Awareness
- Lots of individual actions (research, campaigns, new business models)
- But: no 20% reduction
- New phase



www.eu-refresh.org

Wageningen
Food & Biobased
Research





Dutch Taskforce Circular Economy in Food



Taskforce Circular Economy: Ecosystem & impact

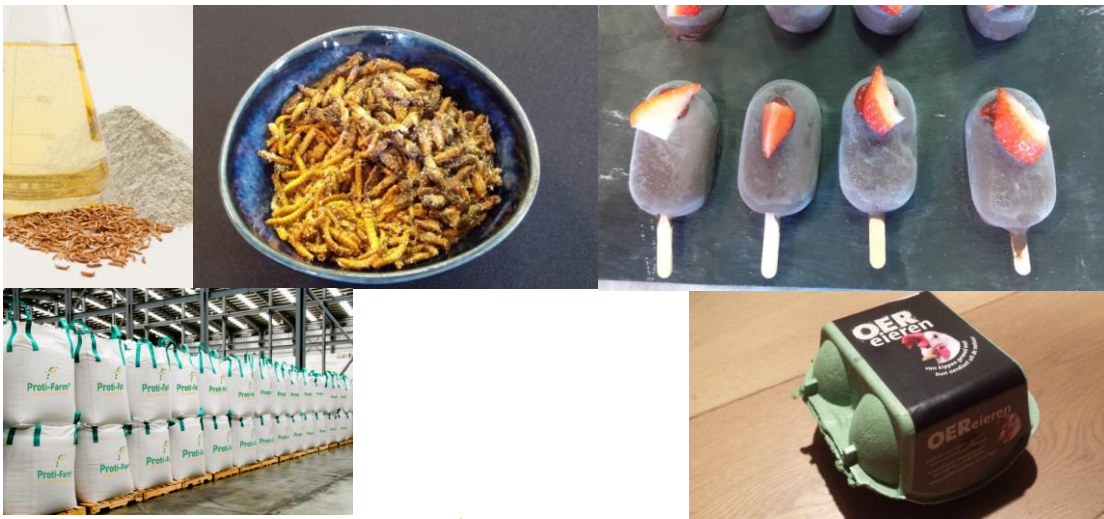


Surplus Food Retail/Food service Category



Wageningen
Food & Biobased
Research

Circular systems & novel products



Wageningen
Food & Biobased
Research

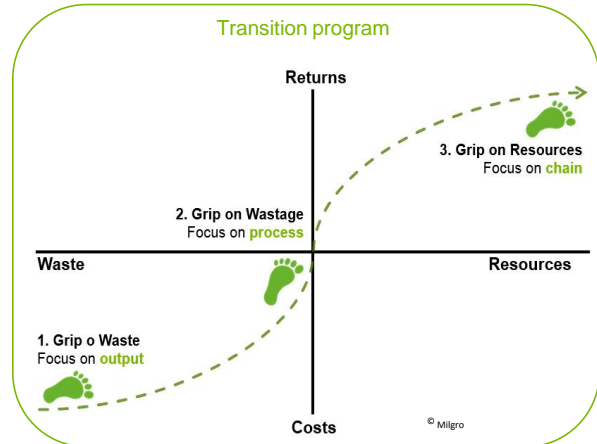
Data Intelligence Waste and Resource Management

Facilitate the transition toward a circular economy

Enable sustainable increase in prosperity by:

- Preservation of resources for future generations
- Responsible operational management: avoid environmental pollution
- Incorporation of ecology in economics: *'earth & earn together'*.

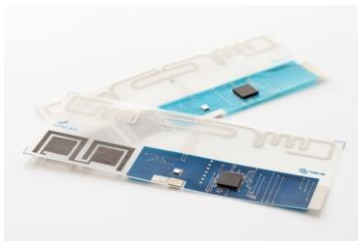
'Waste is a resource that has gone off track'



Wageningen
Food & Biobased
Research

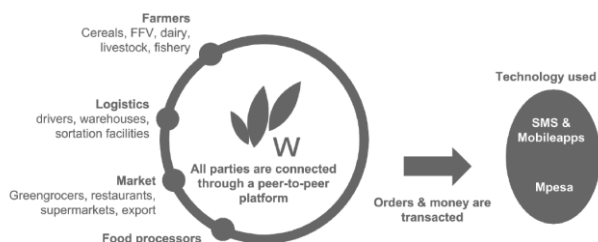
Technology as a game changer

Smart monitoring



Wageningen
Food & Biobased
Research

Leapfrogging – new business models



Frameworks for action, some systemic aspects

- **Transparency** (Target, Measure, Act), Actions & Monitoring progress
- Supply chain **collaboration** (forecasting, utilisation & circular business models), value chains & **responsibility**
- **Externalities** & balance in economic, ecologic & social-economic impacts
- **Policy coherence** (e.g. biofuels – prevention should come first)
- **Economic & legal frameworks** (food -> feed, food -> food)
- Commitment for a collective **consumer driven** action program (harmonised consumer insights research)



www.eu-refresh.org

Wageningen
Food & Biobased
Research



Thanks for your
attention



Knowledge and Best
Practice on Food
Waste Prevention

refreshcoe.eu

toine.timmermans@wur.nl



31