



EU approach to measure food waste

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Structure of the presentation

- **Introduction – EU context and how food waste become a priority in the EU**
- **Why do we want to monitor food waste**
- **Initiatives on Monitoring of food waste**
 - **National (UK and others)**
 - **EU-wide (Eurostat, FUSIONS).**
- **EU legislative initiative on waste (including food waste)**



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Introduction

EU – how does it works...

- *28 Member States*
- *National rules and EU legislation*
- *Directives and Regulations*



DG SANTE – responsible for health and food safety



Development of policy action in the EU - timeline

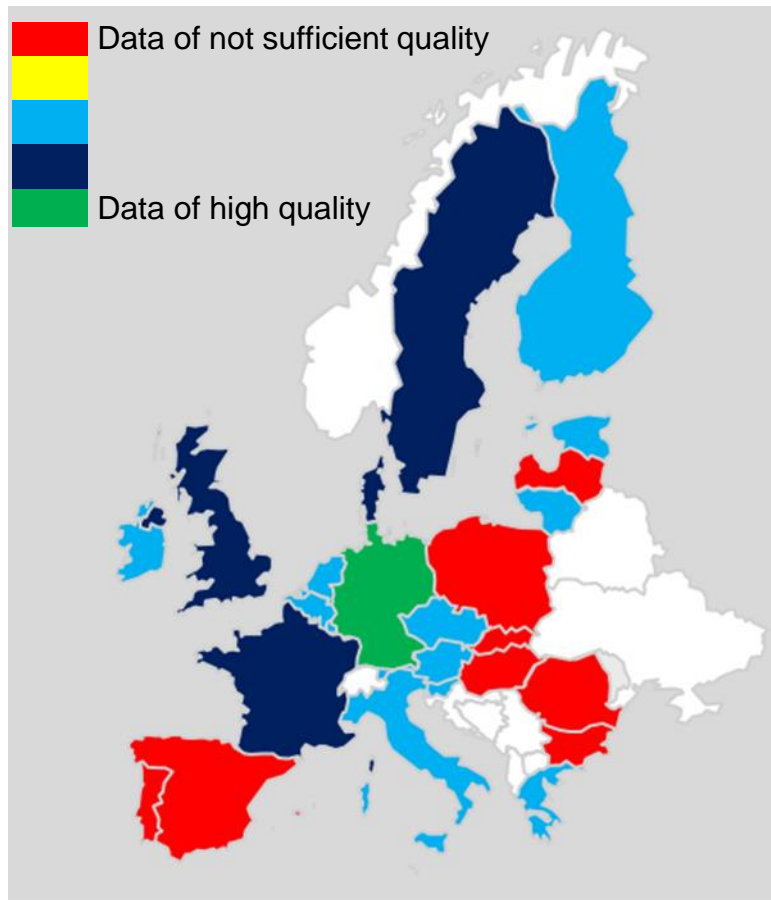
- 1999 - Landfill Directive requires Member States to gradually limit landfilling of biodegradable municipal waste within next 17 years
- 2005 – EU publishes Strategies on resources and waste prevention. Studies on waste prevention priorities identify food waste identified as one of priority streams for action.
- 2010 - first EU wide study dedicated to food waste. It estimated the amounts and analysed prevention options.
- 2014 – 1st proposal to introduce provisions on food waste into EU legislation.
- 2015 – policy communication on Circular Economy and new, improved legislative proposal.

Why do we want to monitor food waste?

Policy commitments to monitor food waste

- *Global - SDG target 12.3*
- ***EU policy needs*** – *food waste became one of the priority materials to be subject of a new EU policy („Closing the loop - An EU action plan for the Circular Economy” of Dec 2015)*

EU data on food loss and waste are inadequate



- We need data on food waste to:
 - Compare policy efficiency between MS
 - Report against SDGs and EU targets
 - Encourage prevention, as „numbers lead to action“



Food waste measurement in the EU up to date

National surveys and studies

- UK (WRAP) – most complete, longest time series
- Other – e.g. Denmark, Finland, France, Italy, Netherlands, Spain, Sweden, United Kingdom, Norway
- As made for national purposes they differ in:
 - concepts (e.g. "edible food", "avoidable waste"),
 - scope (region, sector of food supply chain)
 - methodologies
- <http://www.eu-fusions.org/index.php/country-reports>

Food waste measurement in the EU up to date – EU level initiatives

- Using **European statistics on Waste** (so called "Plug-in exercise") – voluntary exercise testing whether data collected within waste statistics would provide an adequate information – led by Eurostat.
- **FUSIONS** - (Food Use for Social Innovation by Optimising Waste Prevention Strategies) – research project funded by the EU. One of its components were measurement of food waste.



European statistics on Waste

European statistics on waste

Since 2004, Every second year Member States collect and report data on waste generation and treatment, based on Waste Statistics Regulation.

Coverage: waste handed over to waste management

First exercise on food waste covered 2012 data, 2014 is currently analysed.

Dataset on waste generation – matrix of:

- *19 economic activities*
- *51 waste materials*

Extract from Eurostat database - example

Generation of waste by waste category, hazardousness and NACE Rev. 2 activity [env_wasgen]							
Last update	03.02.17						
Extracted on	24.02.17						
Source of data	Eurostat						
UNIT	Tonne						
HAZARD	Hazardous and non-hazardous - Total						
GEO	European Union (28 countries)						
TIME	2014						
NACE_R2/WASTE	Total Waste	Chemical and medical wastes	Animal and mixed food waste	Vegetal wastes	Animal faeces, urine and manure	Mixed ordinary wastes	Common sludges
Agriculture, forestry and fishing	20 180 000	560 000	2 270 000	3 730 000	10 780 000	860 000	130 000
Manufacture of food products; beverages and tobacco products	40 790 000	1 780 000	9 730 000	13 150 000	1 040 000	4 700 000	2 750 000
Manufacture of textiles, wearing apparel, leather and related products	2 260 000	600 000	10 000	10 000	0	370 000	20 000
Construction	870 900 000	830 000	10 000	1 370 000	10 000	7 330 000	150 000
Services (except wholesale of waste and scrap)	99 600 000	6 330 000	5 180 000	5 730 000	720 000	31 720 000	900 000
Households	208 710 000	210 000	7 090 000	24 120 000	0	131 530 000	120 000

Possible input from Waste Statistics

Key economic activities with food waste:

- *Item 3 - Manufacturing of food, beverages and tobacco*
- *Item 17 - Services*
- *Item 19 - Households*

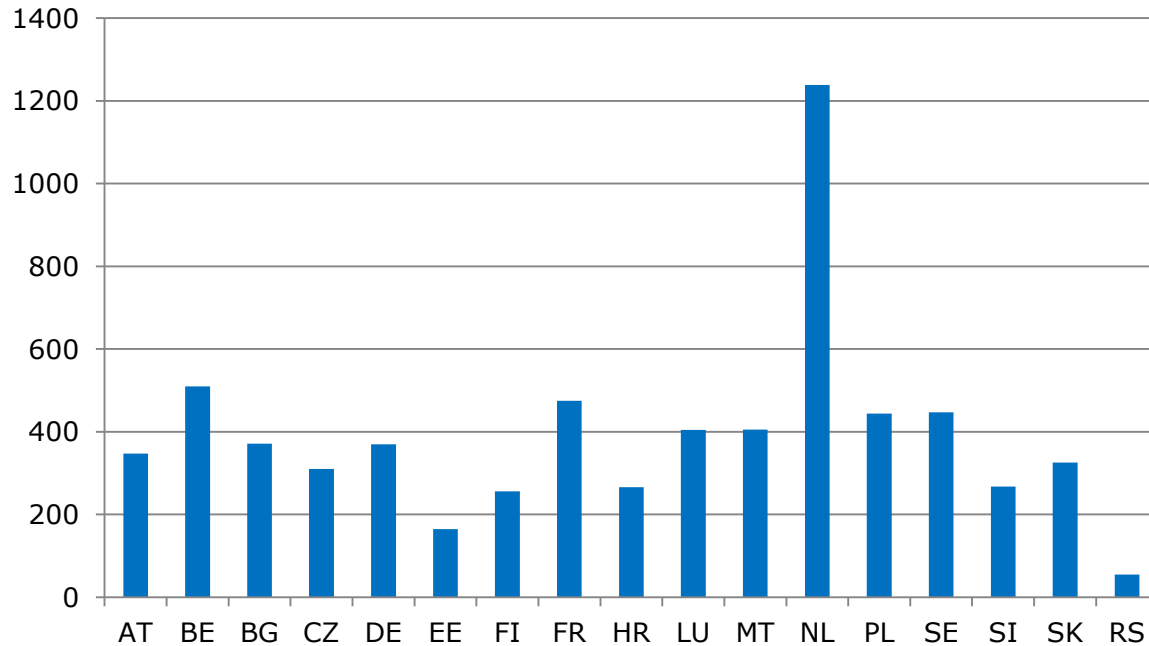
Waste which includes food waste:

- *09.1 - Animal and mixed food waste*
- *09.2 - Vegetal waste*
- *10.1 - Household and similar waste*

Everything is available at: Eurostat Statistics Explained

http://ec.europa.eu/eurostat/statistics-explained/index.php/Waste_statistics

Result: Draft estimations based on waste statistics



Waste containing food waste, per capita, per year. 2012 data

Main issue: what is share of food waste in mixed municipal waste?

Some estimations from Member States...

<i>Austria</i>	<i>25,3 % of mixed municipal waste</i>
<i>Finland</i>	<i>25 % of mixed municipal waste</i>
<i>France</i>	<i>23 % of Household waste</i>
<i>Croatia</i>	<i>24 % of mixed municipal waste</i>
<i>Luxemburg</i>	<i>kitchen waste=24,8 % of residual waste</i>
<i>Malta</i>	<i>52% of recyclable and biodegradable waste (340 gr per person and day)</i>
<i>Netherlands</i>	<i>26% of mixed household waste</i>
<i>Sweden</i>	<i>33% of residual waste (and precise shares for economic activities)</i>
<i>Slovenia</i>	<i>21 % of mixed municipal waste</i>



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FUSIONS – presentation of the project

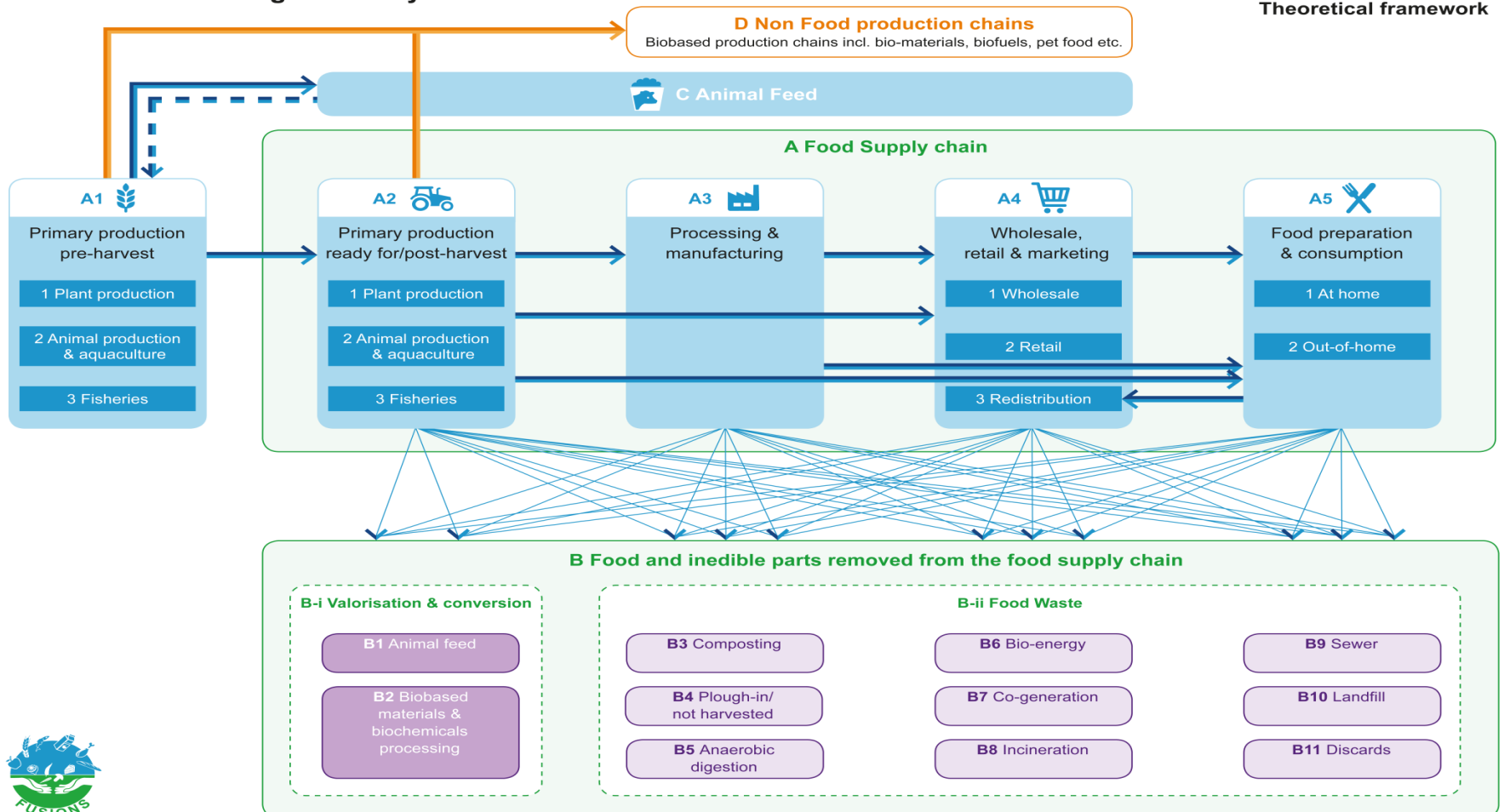
- *Title: Food Use for Social Innovation by Optimising Waste Prevention Strategies*
- *Project duration: 48 months (2012 – 2016)*
- *Governance and execution: 21 partners in 13 countries*
- *Key deliverables on measurements:*
 - **"Food Waste Quantification Manual"**
 - Estimates for European food waste levels (March 2016)

www.eu-fusions.org

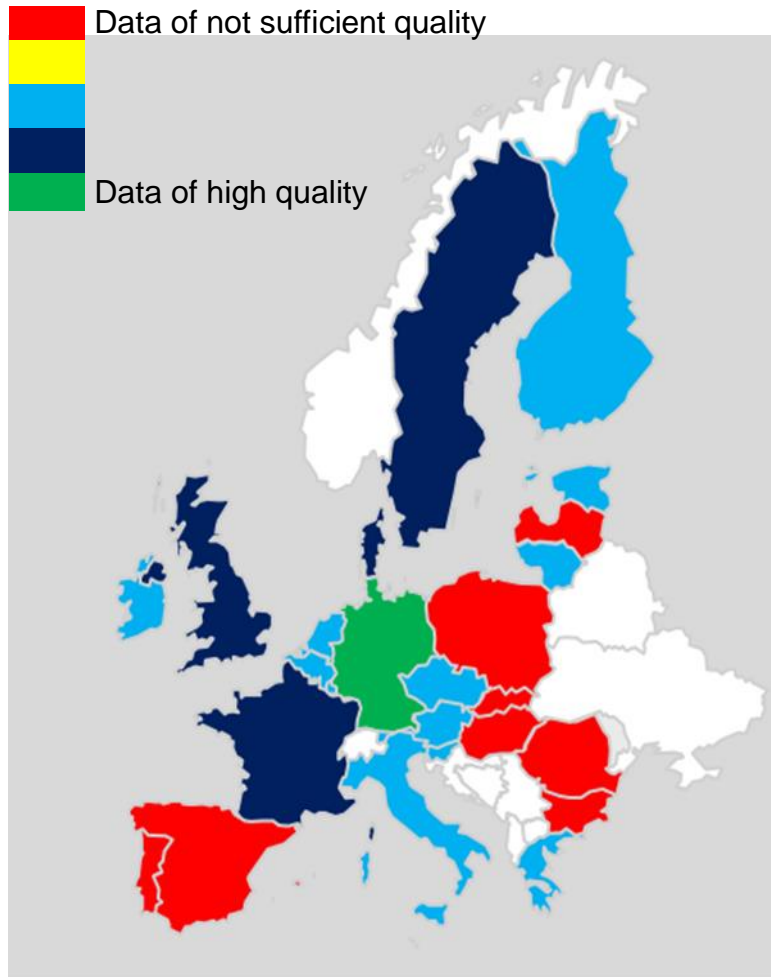
FUSIONS definitional framework of food waste

Resource flows in Agri-Food System

FUSIONS
Theoretical framework



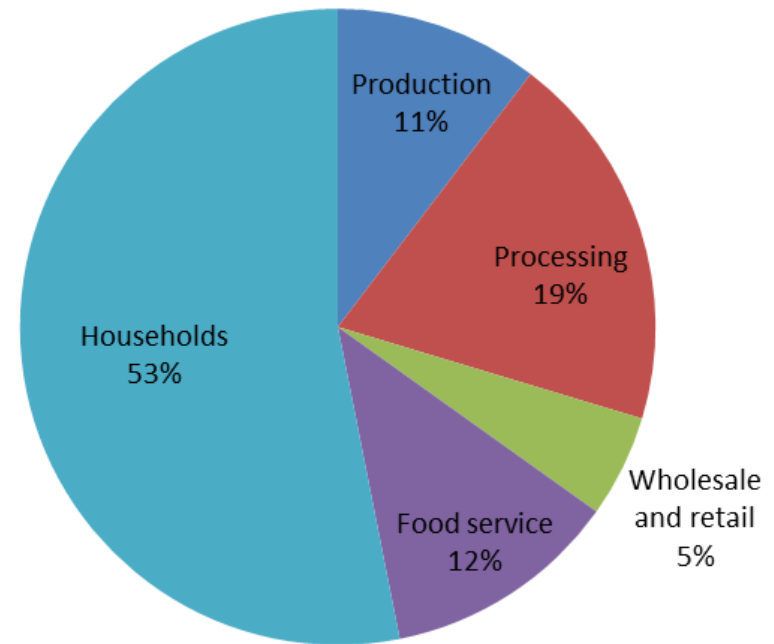
Based on Manual – FUSIONS estimated food waste for the EU-28



Sector	countries submitting data	countries submitting data of sufficient quality	Factors used to calculate results for the whole EU
Primary Production	9	3	Produced food amounts
Processing	13	5	Produced food amounts
Distribution	10	6	Population
Food service	10	5	Turnover number
Household	14	7	Population

Food waste estimates for EU28 (based on 2012)

- **88 (\pm 14) million tonnes of food waste per year**
- **Equivalent of 20% of all produced food in EU**
- **143 billion euros**
- **~ 304 Mt CO₂ eq (6% of total emissions of GHG in EU28%)**
- **173 kilograms of food waste per person**



Introduction of food waste provisions into the EU Regulatory Framework



Commission's Proposal (COM(2015)595 final)

The Proposal amends Waste Framework Directive (2008/98/EC). In relation to food waste it reflects commitment to SDG 12.3 and **requires each Member State to:**

- reduce food waste at each stage of the food supply chain (including households)
- **monitor food waste levels**
- **report back on progress.**

Understanding of „food waste“ in the Legislative Proposal

Food waste is food (as defined in General Food Law, including inedible parts) which the holder (Food Business Operator or household) discards or intends or is required to discard.

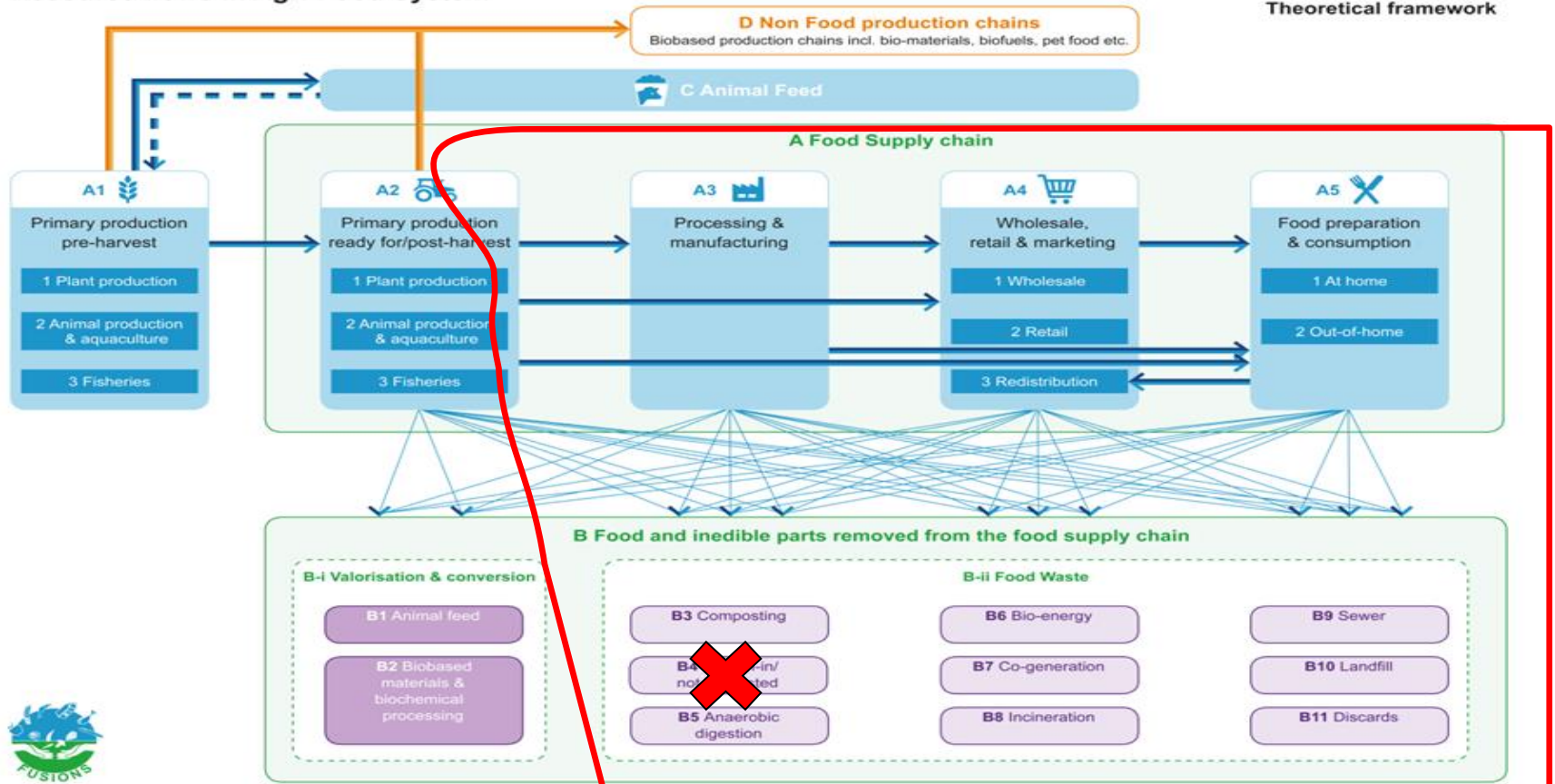
or: Food waste is material which has once been a food and now is being discarded (becomes a waste)

Food waste definition draft from European Parliament

"food waste" means food intended for human consumption, either in edible or inedible status, removed from the production or supply chain to be discarded including at primary production, processing, manufacturing, transportation, storage, retail and consumer levels, with the exception of primary production losses.

FUSIONS framework – scope of Commission Proposal

Resource flows in Agri-Food System



Sectors of food supply chain

1. Primary production
2. Processing and manufacturing
3. Distribution
4. Food services
5. Households

Important: As each sector requires different policy approach they should be monitored separately.



Approach to monitoring of food waste on EU level:

- Fit for purpose
- Based on FUSIONS Food Waste Quantification Manual
- Uses to the extent possible existing reporting and policy frameworks (e.g. Waste Statistics)
- Compatible with FLW Protocol

Monitoring of food waste – some thoughts

- No single method of data collection: surveys, administrative data, statistical estimations as well as their combination can be used – but will need to provide explanations on the methods used.
- **FUSIONS manual** and **FLW Protocol** include a lot of practical info on measuring and quantifying food waste at Member State (Manual) and economic entity level (FLW Protocol)
- Obligation of separate collection of bio-waste (also part of Legislative Proposal) may significantly improve monitoring of food waste

Challenges expected - examples:

- Primary production – any measurement at farm level?
- Processing and manufacturing – how to deal with sludges?
- Food services and households
 - how to effectively monitor large number of small entities?
 - how to optimize measuring of food waste in mixed household waste (compositional analysis? kitchen diaries? costs!)
 - Shall we monitor food waste going down the sink?
If yes, how?

For further info:

- If you are interested in EU countries approaches – see:
 - FUSIONS Food Waste Quantification Manual
 - WRAP (UK) reports
 - country reports linked to the FUSIONS website
- On waste prevention policy in general you may see reports from European Environment Agency („Waste prevention in Europe“)
- For following EU legislation proces – ask some EU legislation fan (student?) to check details of Procedure 2015/0276/COD

Thank you for your attention

for more information:

http://ec.europa.eu/food/safety/food_waste_en

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