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FOOD WASTE IN THE CONTEXT OF
SUSTAINABLE CONSUMPTION AND
PRODUCTION

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Content

- ▶ Facts and figures related on food waste
- ▶ Eurostat data on food waste statistics
- ▶ Food waste definition
- ▶ Factors and causes contributing to food waste
- ▶ EU actions for reducing food waste
- ▶ Romania actions for reducing food waste
- ▶ Approach related to food waste prevention
- ▶ Questions related to food waste and food losses

Facts

- ▶ In a world where over **840 million** people go hungry every day, it is important to realize that achieving food security goes beyond increasing global food production.
- ▶ The establishment of better food systems, sustainable production and consumption approaches, more efficient policies and smarter investment patterns across relevant sectors is the sustainable path towards achieving food security for all.
- ▶ Research shows that the world produces enough food. However much food is lost along the supply chain or wasted due to poor consumption decisions.
- ▶ Food loss and waste carries direct economic and environmental costs and depletes the natural resource base that underpins food production.

Figures

- ▶ Nearly **100 million tones of food** are wasted annually in the EU (estimate for 2012). If nothing is done, food waste could rise to over **120 million tones by 2020**.
- ▶ About a third of all food produced globally for human consumption is lost or wasted-around **1.3 billion tons per year**, according to the Food and Agriculture Organization.
- ▶ Food loss and waste in industrialized countries are as high as in developing countries, but their distribution is different:
 - ▶ In developing countries, **over 40%** of food losses happen after harvest and during processing;
 - ▶ In industrialized countries, **over 40%** occurs at retail and consumer level.
- ▶ In Romania we don't have official food waste statistics, but in one report from ANSVSA we find that retails incinerated **14.000 tones of food in 2014** and **19.000 tones in 2015**.

Eurostat data related on food waste statistics

17 countries reported data in 2014 on 2012

Challenges related to food waste statistics:

- ▶ Data on "waste containing food waste" rather than "food waste" .
- ▶ Limited accuracy of results at detailed level of economic activities and waste items.
- ▶ Quantification of food waste in mixed municipal waste.
- ▶ Experimental data collection = no official food waste statistics.

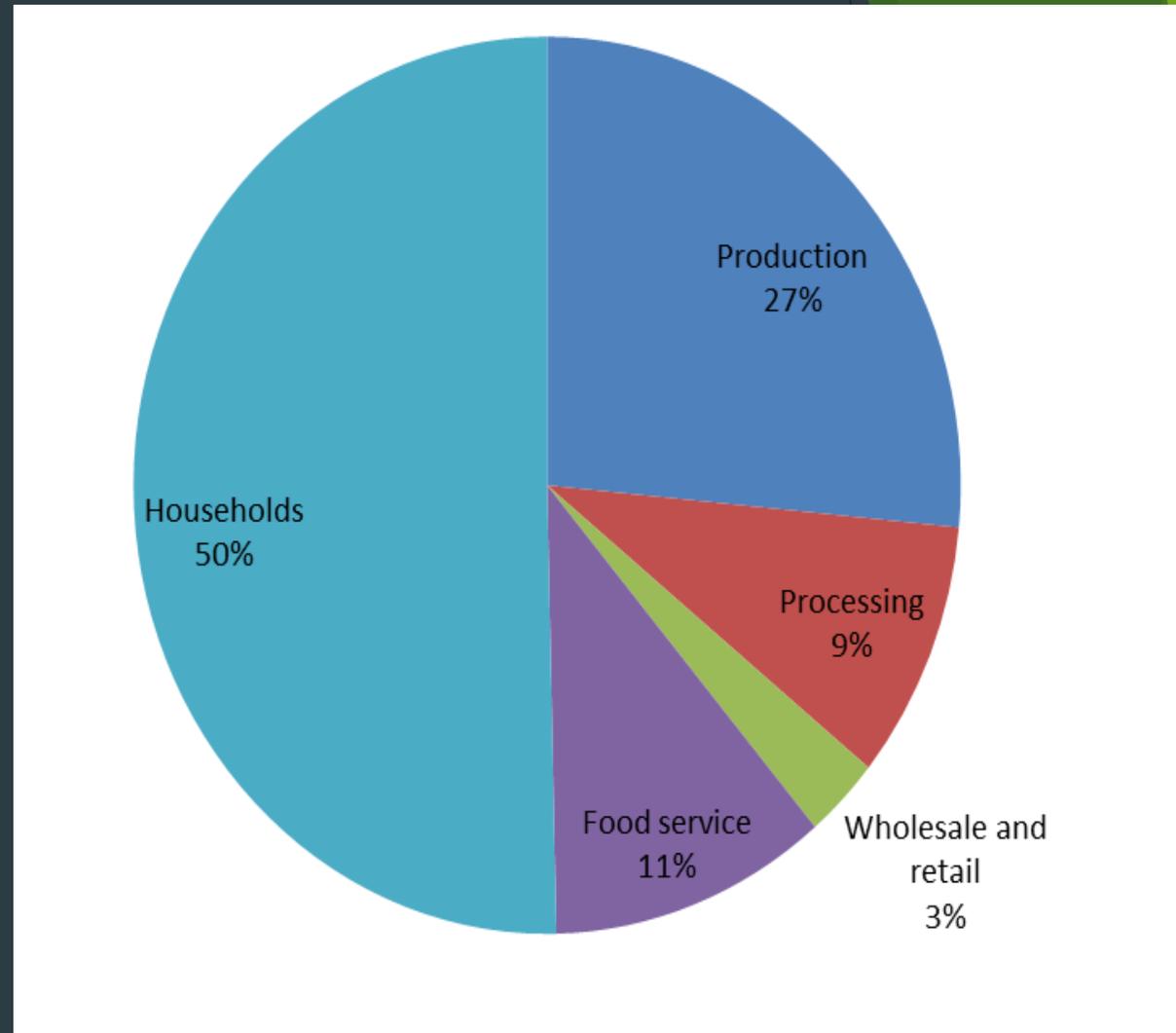
Split of EU-28 food waste in 2012 by sector; includes food and inedible parts associated with food.

There is considerable uncertainty around the overall food waste estimate for EU-28.

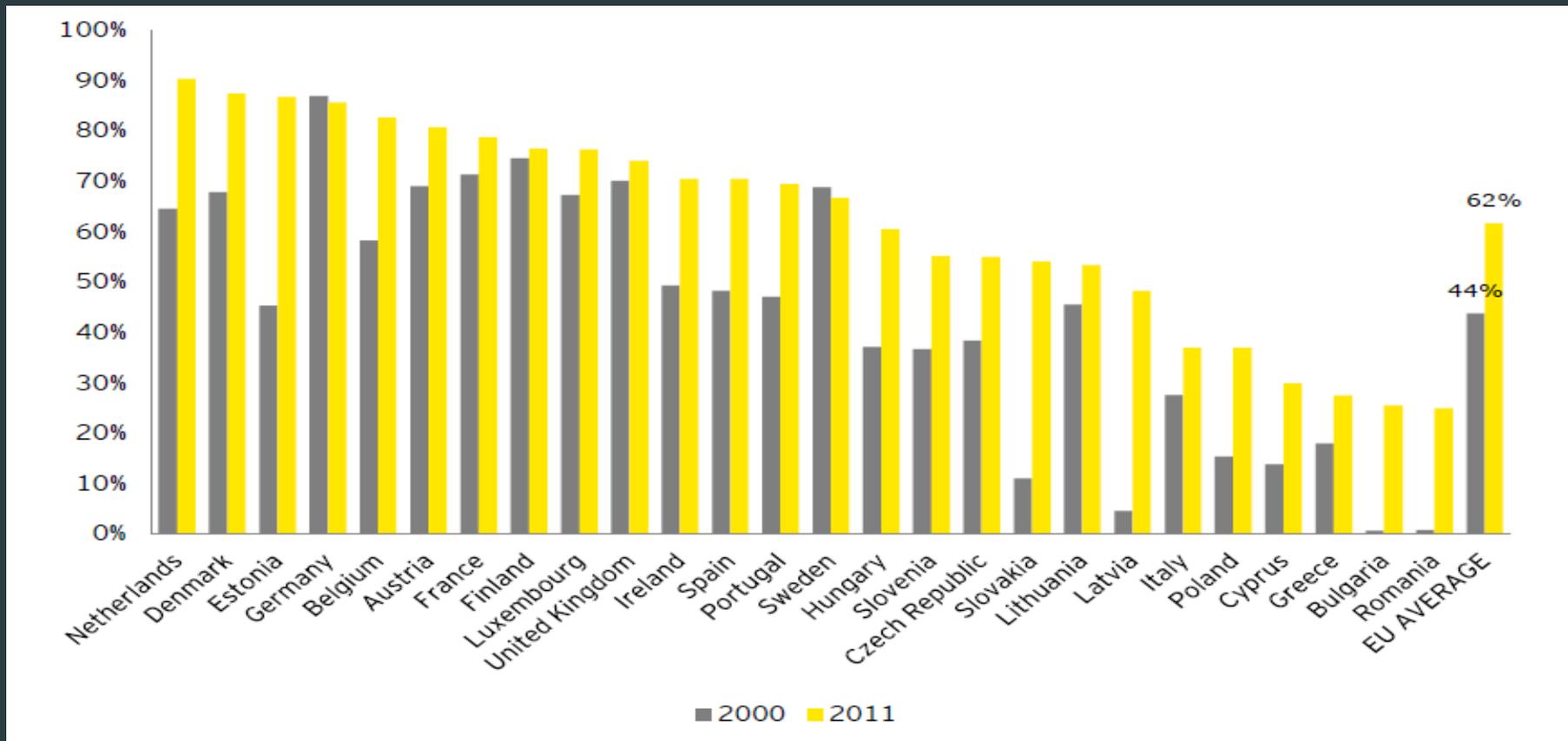
The approximate 95% confidence interval is ± 16 million tonnes (or $\pm 17\%$).

Therefore, the range of results within this confidence interval for EU-28 is from 82 million tonnes to 114 million tonnes.

The largest uncertainty is in the production sector (54%) and the smallest in the wholesale and retail sector (14%).



Evolution of the market share of modern retail compared to total edible grocery market (2000 - 2011) (EY, Arcadia and Cambridge Econometrics, 2014)



Food waste definition

Food wastage - food loss and the food waste, the edible components of plants or animals, the agricultural raw materials or the finished food products, not eaten, being wasted in the food chain at the level of the agricultural producer, of the food processor, of the merchant or of the consumer.

Food is lost or wasted **along the whole food supply chain**: on the farm, in processing and manufacture, in shops, in restaurants and canteens and in the home.

The reasons for food waste vary widely and can be sector-specific.

The following key sectors can be identified for targeted action on food waste:

- ▶ Food manufacturing (and processing)
- ▶ Food distribution and retail
- ▶ The food service sector (restaurants, hotels, catering, cafeterias)
- ▶ Businesses and institutions (businesses, schools, hospitals, public administrations)
- ▶ Households

Factors and causes contributing to food waste include:

- ▶ Insufficient shopping and meal planning and promotions like "buy one get one free" leading to too much food being purchased or prepared.
- ▶ Misunderstandings about the meaning of "best before" and "use by date" labels leading to edible foods being thrown away.
- ▶ Standardized portion sizes in restaurants and canteens.
- ▶ Difficulty in anticipating the number of customers (a problem for catering services).
- ▶ Stock management issues for manufacturers and retailers.
- ▶ High quality standards (e.g. for produce sold at retail).
- ▶ Overproduction or lack of demand for certain products at certain times of the year; product and packaging damage (farmers and food manufacturing).
- ▶ Inadequate storage/transport at all stages of the food chain.
- ▶ Underlying all these problems is an overall lack of awareness, by many actors, of the sheer scale of the problem and the benefits that come from reducing food waste.
- ▶ Poor infrastructure and transportation.
- ▶ Poor packaging.

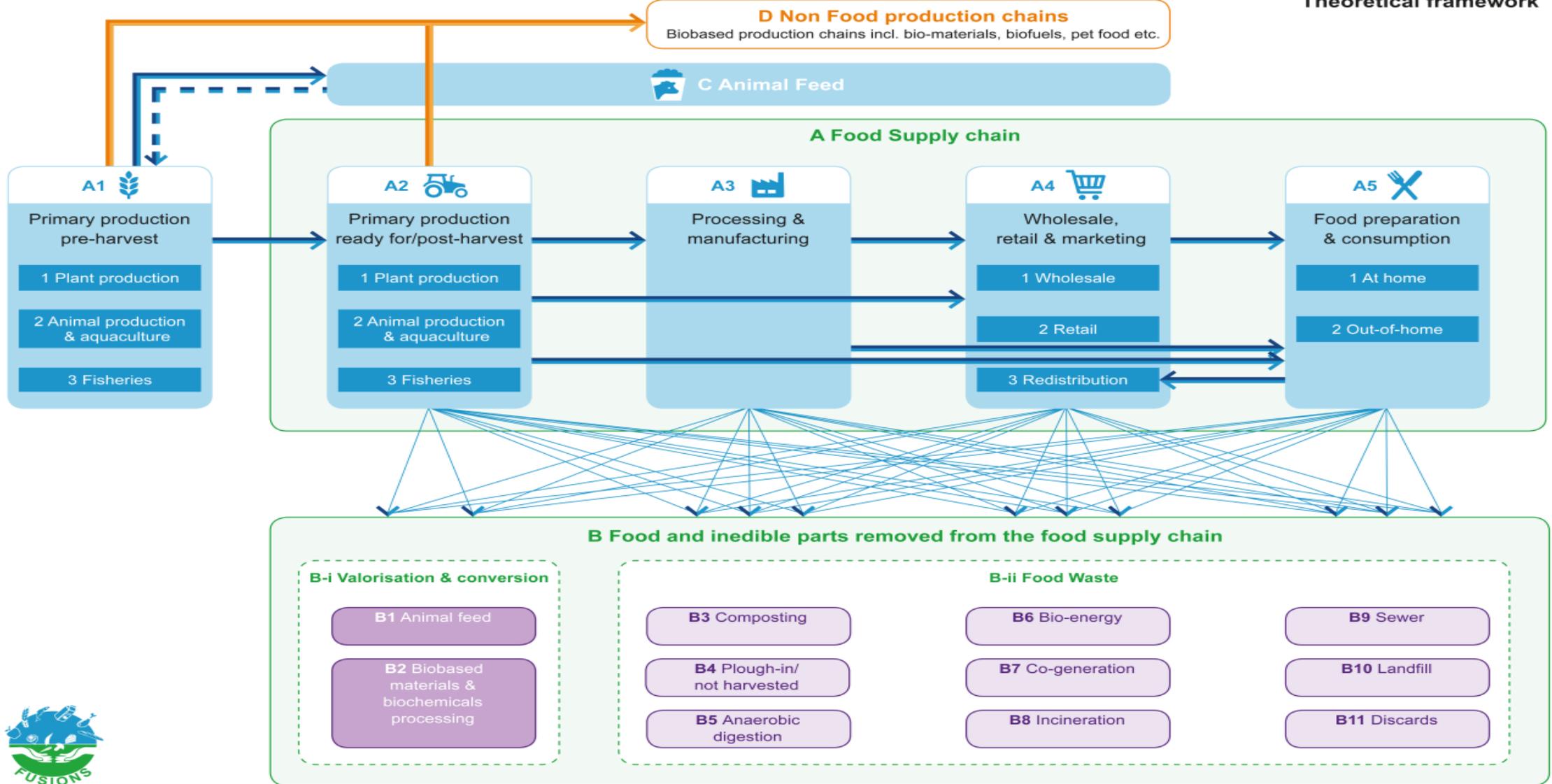
EU actions for reducing food waste

- ▶ The European Commission is taking the issue of tackling food waste very seriously. Reducing food waste has enormous potential for reducing the resources we use to produce the food we eat. Being more efficient will save money and lower the environmental impact of food production and consumption.
- ▶ In July 2014, the Commission adopted a **Circular Economy Package**, including a “chapeau” Communication "Towards a circular economy: a zero waste programme for Europe"
- ▶ The **Food Waste Quantification Manual** will give practical guidelines on how to measure and quantify food waste in different steps of the food chain. This Manual will provide guidelines for a standard approach for EU Members States on how to continuously measure and quantify food waste in different steps of the food supply chain.
- ▶ **FUSIONS** coordinator: Toine Timmermans, Wageningen UR - Food Biobased Research, The Netherlands

The FUSIONS framework proposal

Resource flows in Agri-Food System

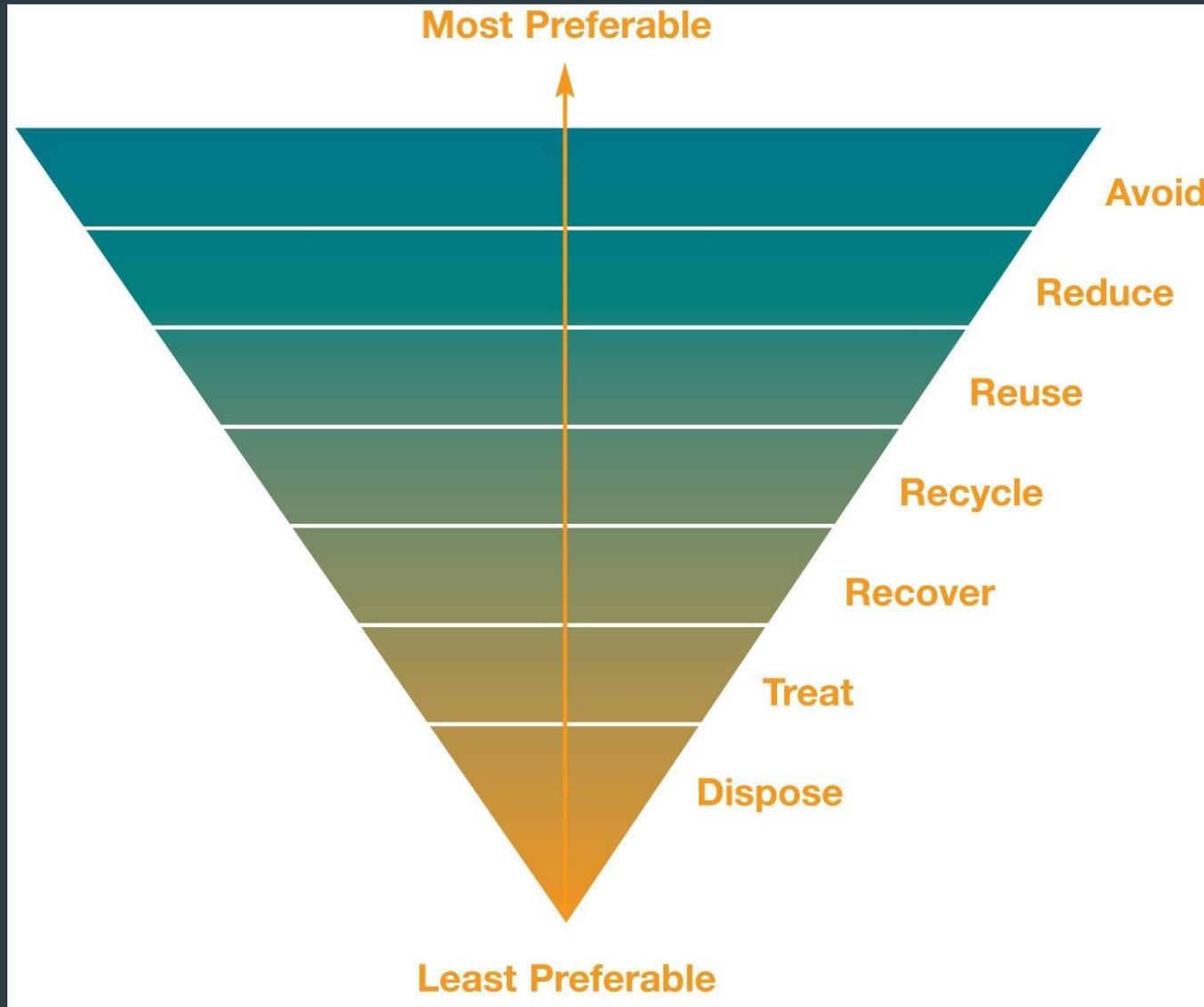
FUSIONS Theoretical framework



Expiry date: a waste of time?

- ▶ As a result of EU legislation Regulation (EU) No 1169/2011 we can use only a *minimum durability date* or a *use-by date*.
- ▶ Longer expiry dates causes probably less waste (see recent WRAP study + TIFN).
- ▶ Manufacturers and retailers use different date types for similar products.
- ▶ **4.15%** of consumers waste is due to passing expiry date, **10%** fresh products, **5%** long shelf life products.
- ▶ Abolish expiry dates for long-life products is not feasible or not worthwhile, due to legislation or potential.
- ▶ Communication for consumers on expiry dates is broadly consistent.

Pyramid of waste management



Romanian legislative proposal for reducing the food waste

Food sector operators are obliged to take measures to prevent food waste. These actions will take place according to the hierarchy of food waste prevention.

- ▶ Accountability measures to reduce food waste along the supply chain.
- ▶ The donation of safe food for human consumption.
- ▶ Directing food consumption for certain animal categories.
- ▶ Directing food products rendered unfit for human or animal consumption by turning the compost and biogas.
- ▶ After completing the earlier steps, food products will be directed to an authorized neutralization.

Romania actions for reducing the food waste

- ▶ In 2013, MARD has constituted an inter-institutional WG which aims to reduce food waste at national level and supporting initiatives of NGOs working in this sector.
- ▶ In 2014, MARD has been the main organizer of the 29th Regional Conference of the UN Food and Agriculture Organization (FAO) for Europe and Central Asia. The main topic on the agenda was food waste, which was attended by over 400 representatives from 55 countries. The conference conclusions were:
 1. The need for sizing studies at national, European and global level for phenomenon of food waste;
 2. The development of public policy at national and European level for the prevention and combat food waste.
- ▶ Thematic Research Plan Sectoral for Food Waste included in the Sectoral Plan for Research - Development of Agriculture and Rural Development for the 2015-2018 (Agriculture and Development rural - ADER 2020).

Approach to food waste prevention - behavior change as a key vehicle for food waste prevention.

- Inform on environmental problems
- Show negative consequences of current life style
- Demonstrate positive consequences of behaviour change

MOTIVATE

- Remove information lacks
- Inform on options
- Provide infrastructure
- Make alternative solutions available
- Train
- Provide expertise

ENABLE

- Adapt taxation
- Provide investment grants
- Award efficient behaviour
- Induce social pressure
- Fine inefficient behaviour

ENCOURAGE

Is the program sufficient to induce change?

ENGAGE

- Community action
- Personal contact
- Opinion leaders
- Utilise networks

PROVIDE EXAMPLE

- Public procurement
- Efficient behaviour in public administration

Questions in food waste and food losses in the context of sustainable consumption and production

- ▶ Volumes produced of food waste and food losses?
- ▶ Percentage of losses/waste in each step of the food supply chain?
- ▶ Amounts of food lost/wasted?
- ▶ Economic costs of food losses/waste?
- ▶ Energy required for producing losses/waste?

THANK YOU!

