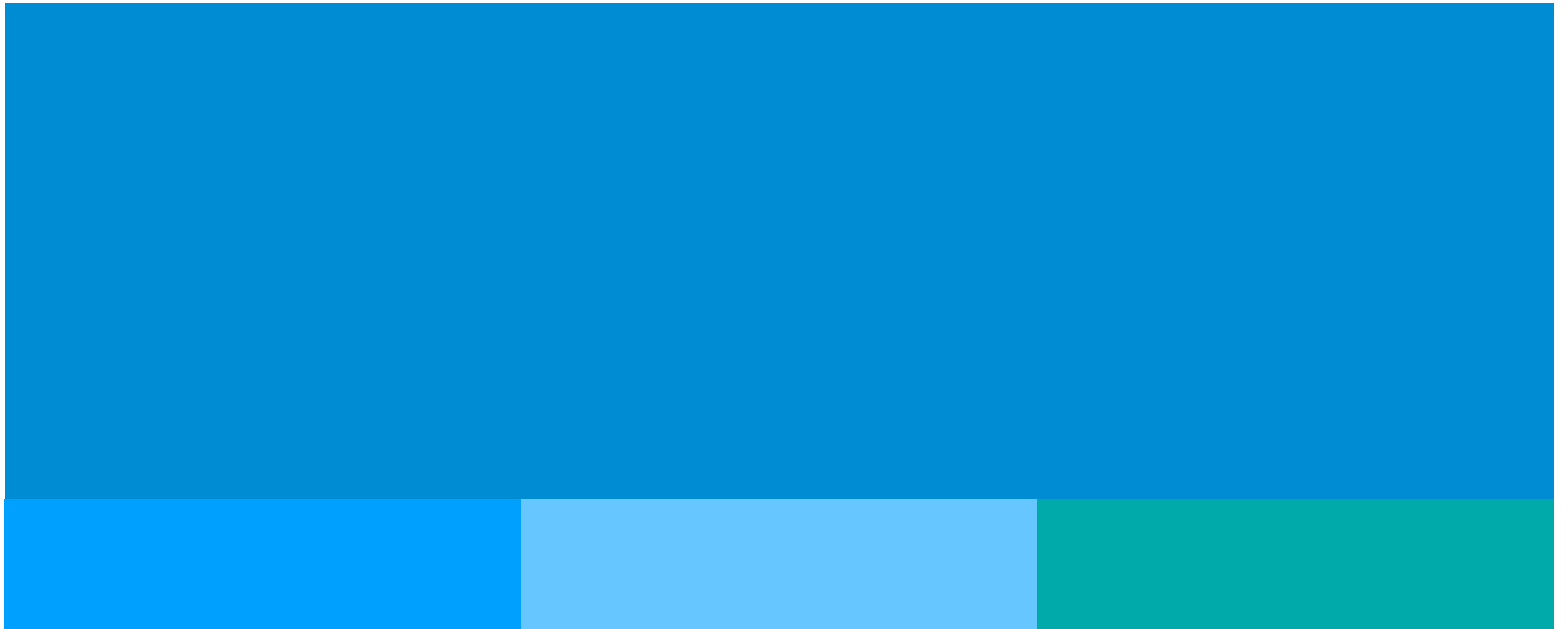


Current situation concerning Food losses & waste – brief outline

Felicitas Schneider

Thünen-Institute of Market Analysis



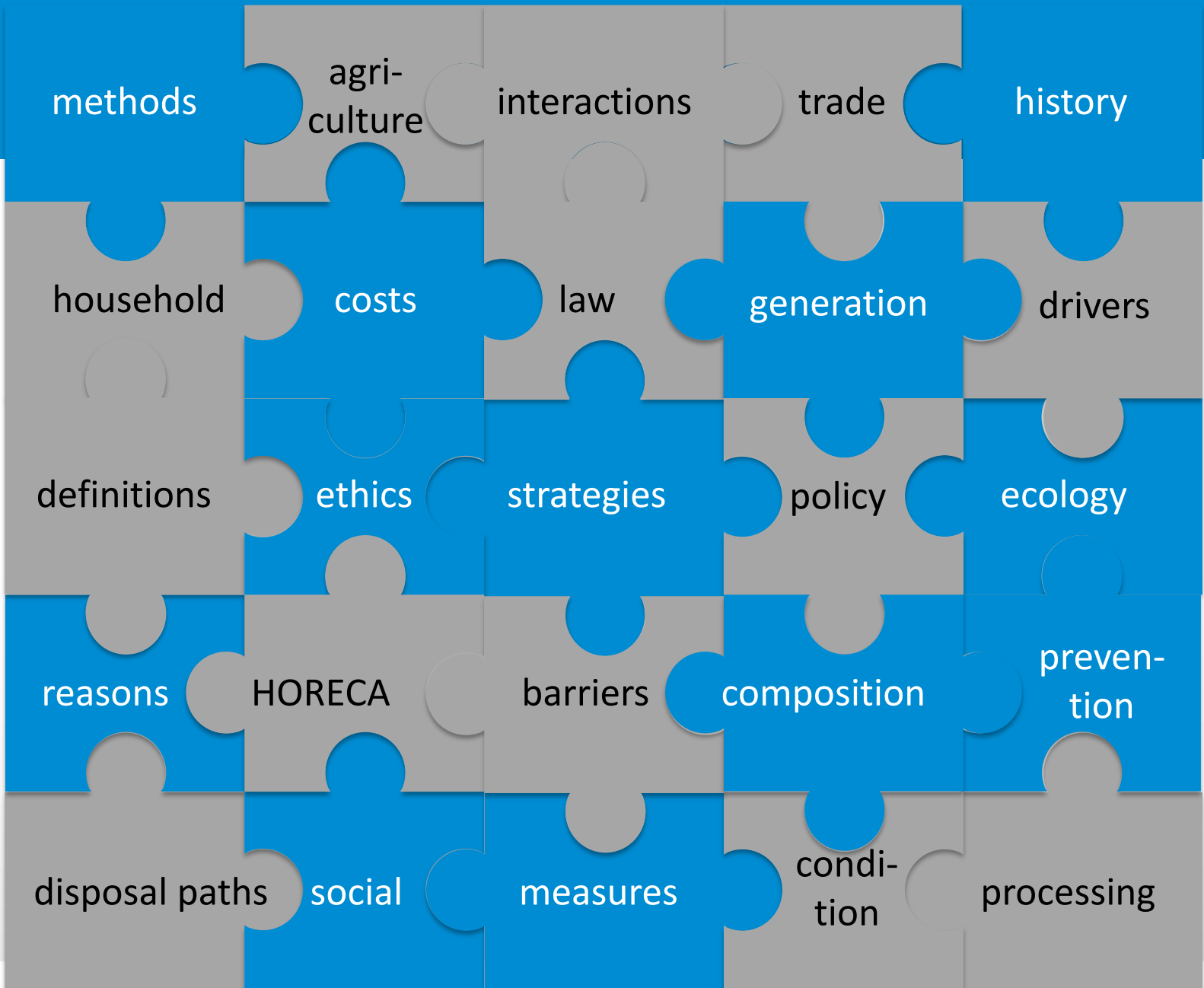
Outline

- brief introduction of myself
- Food losses and waste overview
 - amounts & definitions
 - Impact on environmental, economical and social issues
- My role as MACS-G20 coordinator
- Contact details

Brief CV Felicitas

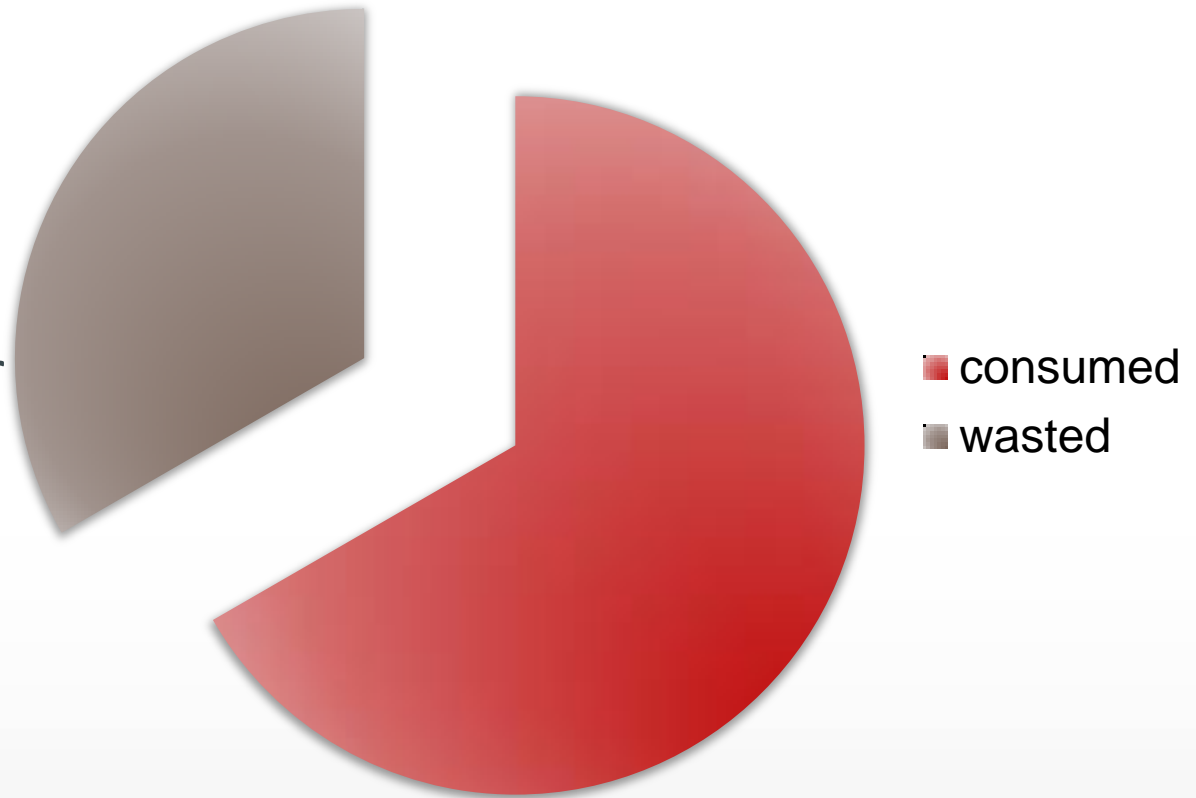


- born in Vienna, Austria
- study „civil engineering and water management“ at BOKU University in Vienna, Austria
- 15 years at BOKU, Institute of Waste Management
 - Life cycle assessment (LCA), bioplastics, Waste electrical and electronic equipment, plastic waste, social context of waste, waste prevention
 - establishment of „Food Waste Prevention“ as field of research
 - Founder and head of IWWG task group „Prevention of Food Waste“
 - Co-founder of german-speaking network towards prevention of food waste
- Board member of First Zero Waste & Organic Cycle Organisation
- since 16.6.2017 Thünen-Institute, Institute of Market Analysis



Food loss and waste on a global scale

30 % of global
production wasted =
1.3 billion tons of
edible food wasted per
year



along the food supply chain up to 300 kg/cap.yr wasted

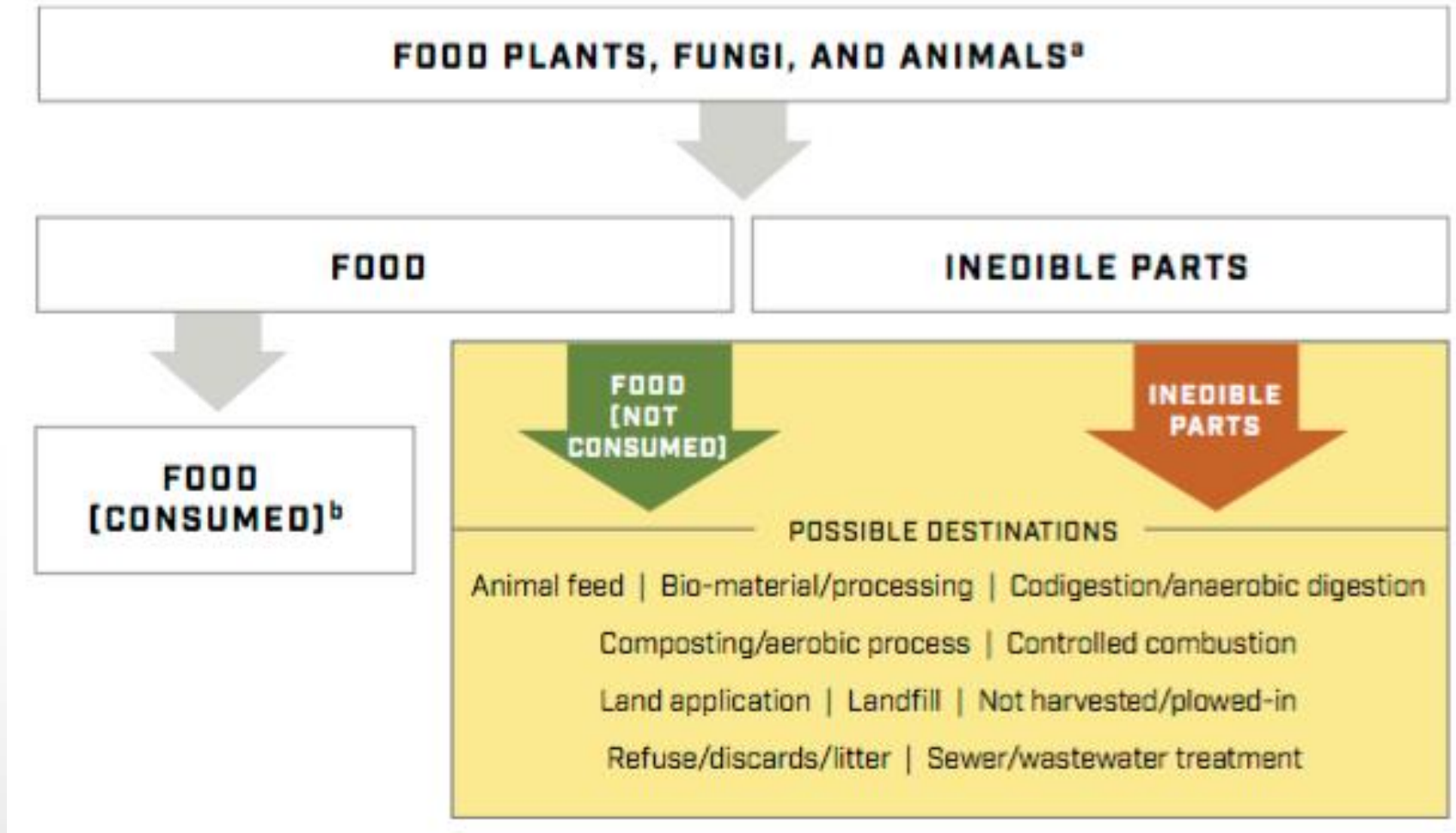
Gustavsson et al., 2011

Food loss and waste FAO definition

- Food losses: take place at production, post-harvest and processing stage of food supply chain
- Food waste: related to retailers and consumers (HORECA & home)
- including only products directed to human consumption
- excluding parts of products which are not edible
- „Food loss and waste“ also applicable to non-food use (feed, bioenergy,...) of originally human consumption products

Gustavsson et al., 2011

Technical framework by WRI and partners

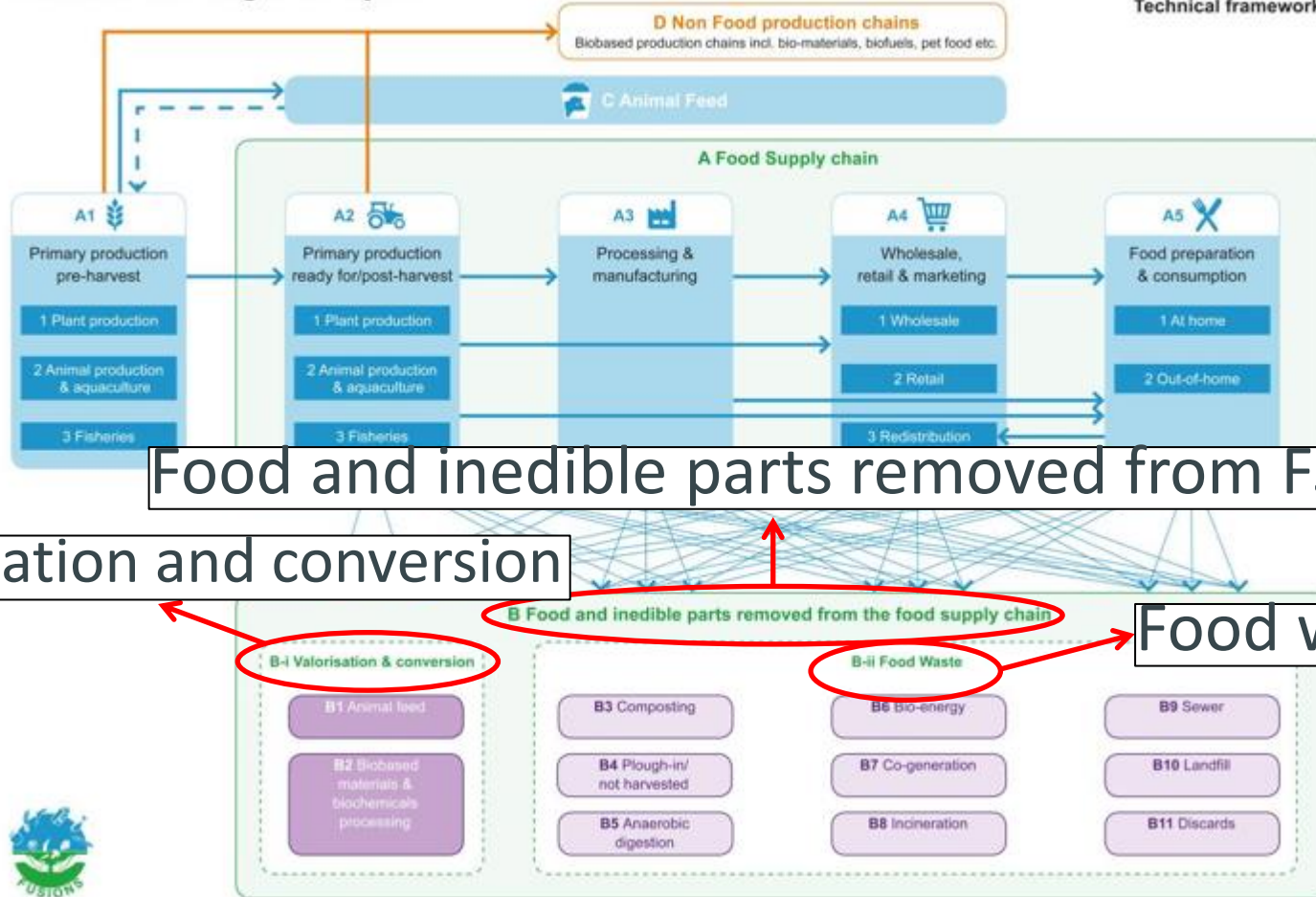


Food Loss and Waste Protocol, 2016

Technical framework by FUSIONS project I

Resource flows in Agri-Food System

FUSIONS
Technical framework



Food and inedible parts removed from FSC

valorisation and conversion

Food waste



Östergren et al., 2014

Technical framework by FUSIONS project II

- Food and inedible parts removed from food supply chain:
 - „valorisation and conversion“ stream: animal feed or biochemicals
 - „Food waste“ stream: not harvested/left on the field, composted, anaerobic digestion, sewer, landfilled, incinerated with and without energy production, discarded to sea
- no clear definition about avoidability as strong relation to cultural issues
- no differentiation if mass stream is directed into official waste management system or not
- include also „ready to harvest/slaughter“, not only harvested food
- important is to consider all streams in order to obtain best value

Environmental impact of FLW – production side

- food production needs plenty of resources such as
 - water,
 - agricultural area,
 - feedstock (e.g. fertiliser, packaging material),
 - energy (e.g. tractor, transport, storage), ...
 - significant environmental burden result, e.g.
 - soil erosion
 - over-fertilization of water bodies
 - CH₄-emissions
 - tropical deforestation
 - ...
- if food is not eaten and wasted instead, all effort has no benefit

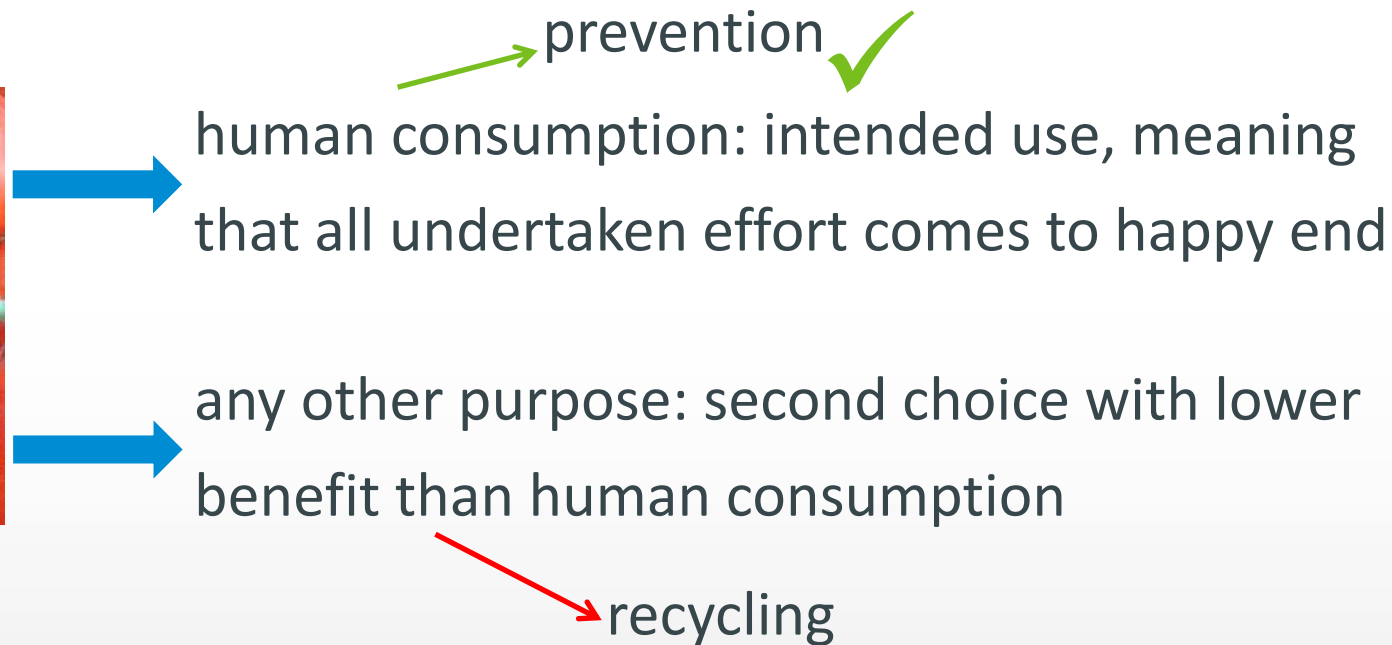
Environmental impact of FLW – disposal side

- in most countries food waste is landfilled or dumped without pre-treatment
- due to compacting at landfill and corresponding anaerobic conditions, methane is released (landfill gas ca. 60% CH₄ + 40 % CO₂)
- methane is a significant greenhouse gas, 25 times more effective than carbon dioxide
- landfills and agriculture are the most important sources of anthropogenic methane and food waste contributes to large extent to climate change

Economic and social impact of FLW

- all physical inputs are related to costs which are without benefit if food is wasted instead of being sold and eaten and have to be financed by used food
- several social impact such as
 - ethical issues (800 mio. people undernourished)
 - way how food is valued
 - appreciation of people producing/processing food
 - land use conflicts...

Prevention of FLW versus recycling



My role as MACS-G20 FLW coordinator

- active contact to MACS-G20 members in order to support FLW prevention activities and foster sharing of experiences
- develop a MACS-G20 FLW road map for next four years
- monitoring joint MACS-G20 FLW activities
- contact person for MACS-G20 members in order to support FLW prevention activities, help with expert advices

→ so please do not hesitate to contact me with any FLW ideas

Contact details

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Thank you for your attention!

Used literature

- Food Loss and Waste Protocol (2016) Food Loss and Waste Accounting and Reporting Standard. Final report, ISBN 978-1-56973-892-4, flwprotocol.org/wp-content/uploads/2017/05/FLW_Standard_final_2016.pdf.
- Gustavsson J., Cederberg C., Sonesson U., Van Otterdijk R., Meybeck A. (2011) Global Food Losses and Food Waste - Extent, Causes and Prevention. FAO, Rome, www.fao.org/docrep/014/mb060e/mb060e00.pdf.
- Östergren K., Gustavsson J., Bos-Brouwers H., Timmermans T., Hanssen O.J., Møller H., Anderson G., O'Connor C., Soethoudt H., Quedsted T., Eastaugh S., Politano A., Bellettato C., Canali M., Falasconi L., Gaiani S., Vittuari M., Schneider F., Moates G., Waldron K., Redlingshöfer B. (2014) FUSIONS Definitional Framework for Food Waste. Full report, ISBN 978-91-7290-331-9, www.eu-fusions.org/phocadownload/Publications/FUSIONS%20Definitional%20Framework%20for%20Food%20Waste%202014.pdf.