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FOOD WASTE REDUCTION AND ITS POTENTIAL TO MITIGATE GLOBAL WARMING

Silvia Scherhaufer, Gudrun Obersteiner

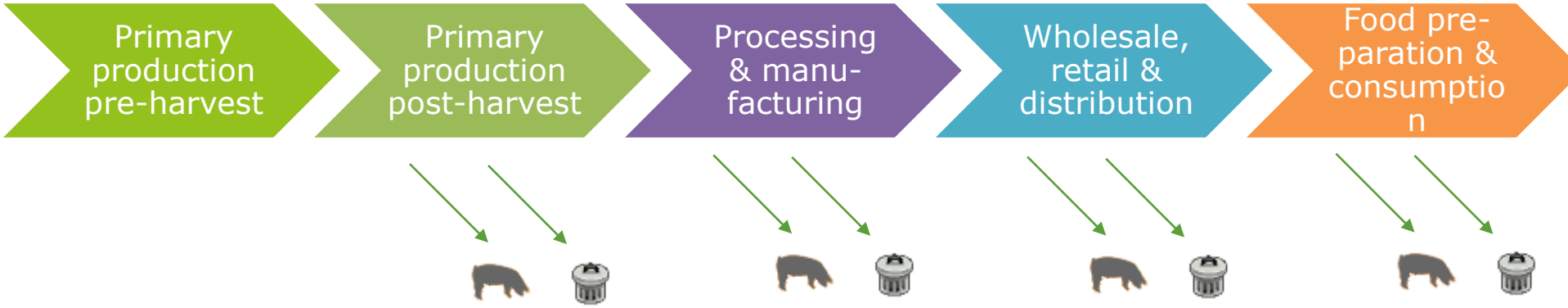
University of Natural Resources and Life Sciences, Vienna

Department of Water, Atmosphere and Environment

Institute of Waste Management

Defintion of food waste

- Food waste occurs in each step of the supply chain



Valorisation & conversion: Any *food*, and *inedible parts* of food, removed from the food supply chain to be reused or recycled (animal feed , biobased materials and biochemical processing).

Food waste: Any *food*, and *inedible parts* of food, removed from the food supply chain to be recovered or disposed (including - composted, crops ploughed in/not harvested, anaerobic digestion, bioenergy production, co-generation, incineration, disposal to sewer, landfill or discarded to sea)

Source: Östergren et al. (2014)

EU Food waste quantities

SUSTAINABLE DEVELOPMENT GOALS

„Reduce food losses along production and supply chains, including post-harvest losses"

„By 2030, halve per capita global food waste at the retail and consumer levels"

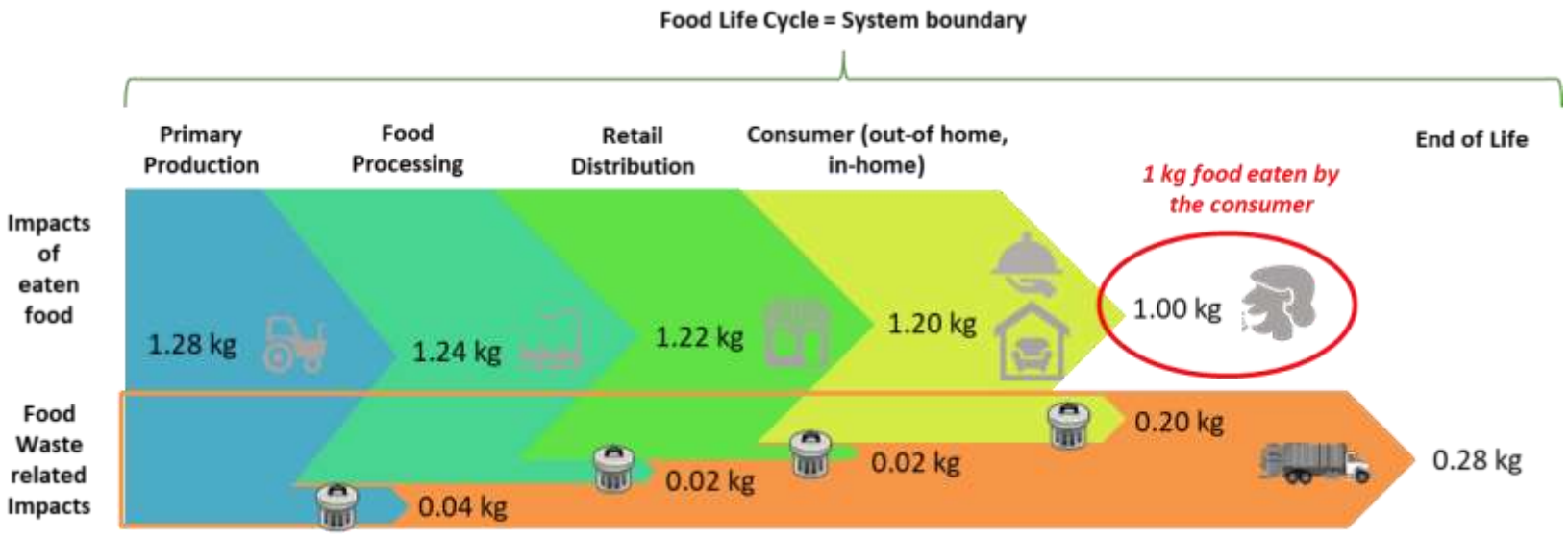
→ a reduction of approx. 31 million tonnes

Methodology

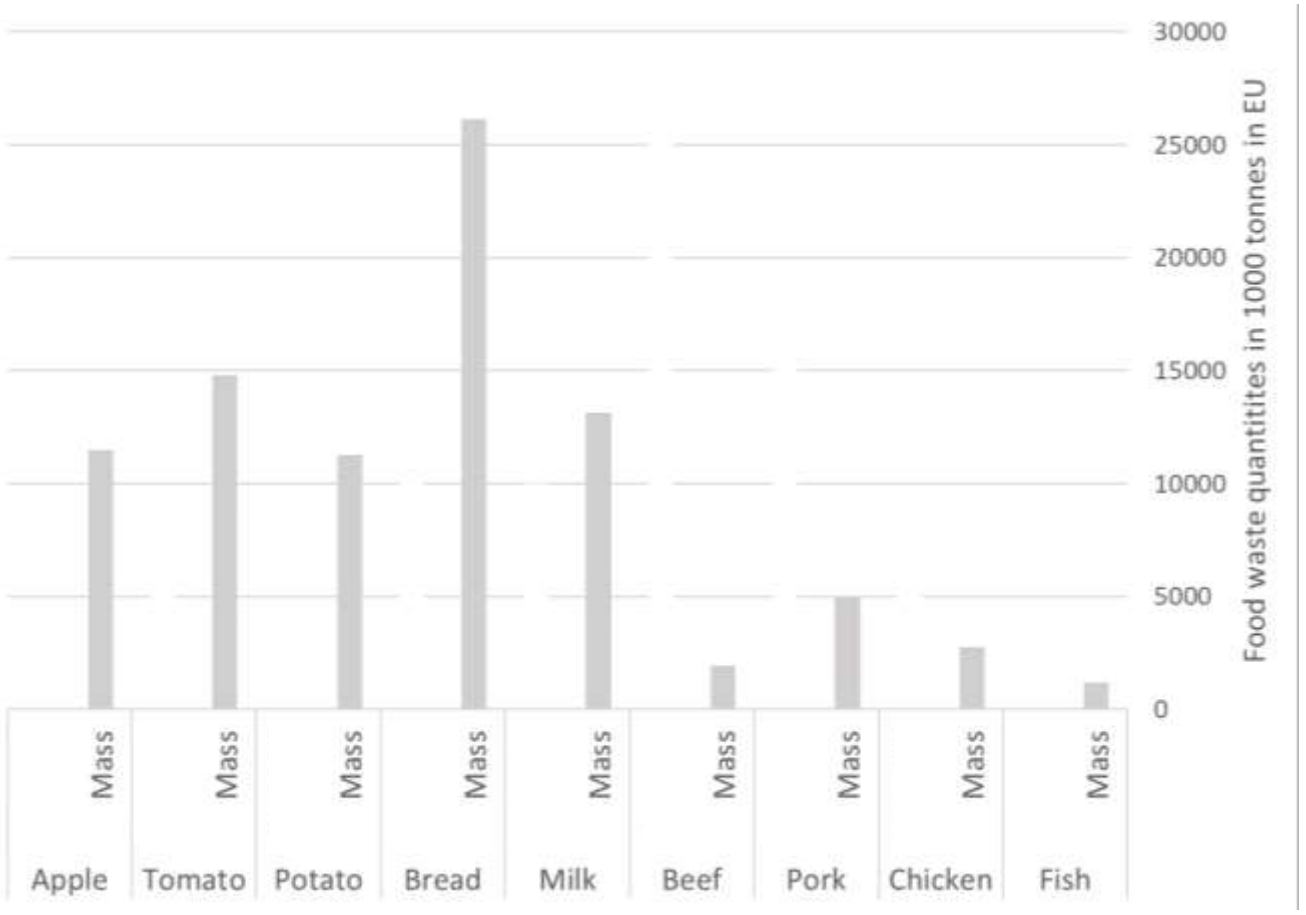
- Bottom-up approach
- Nine indicator products which represent food commodities
- Database with emission factors on GHG, AP, EP (in total 134 LCA studies selected)
- Extrapolated to domestic food utilization in EU and food waste estimates of FUSIONS (Stenmarck et al., 2016)
- Disaggregation of food waste estimates to commodity level on the basis of FAO study (FAO, 2011; Gustavsson et al., 2013)

System boundary

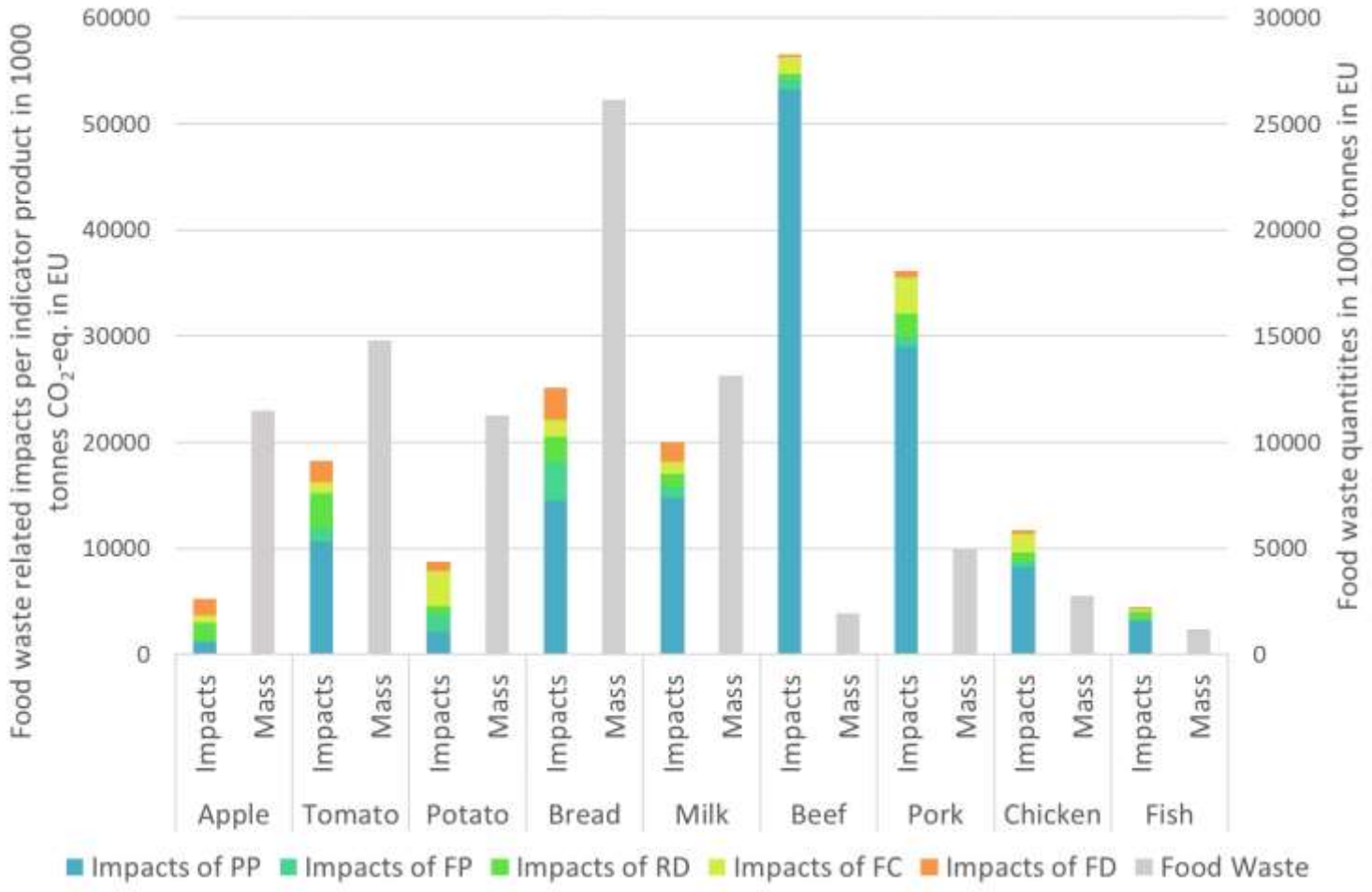
- On the example of 1 kg apple



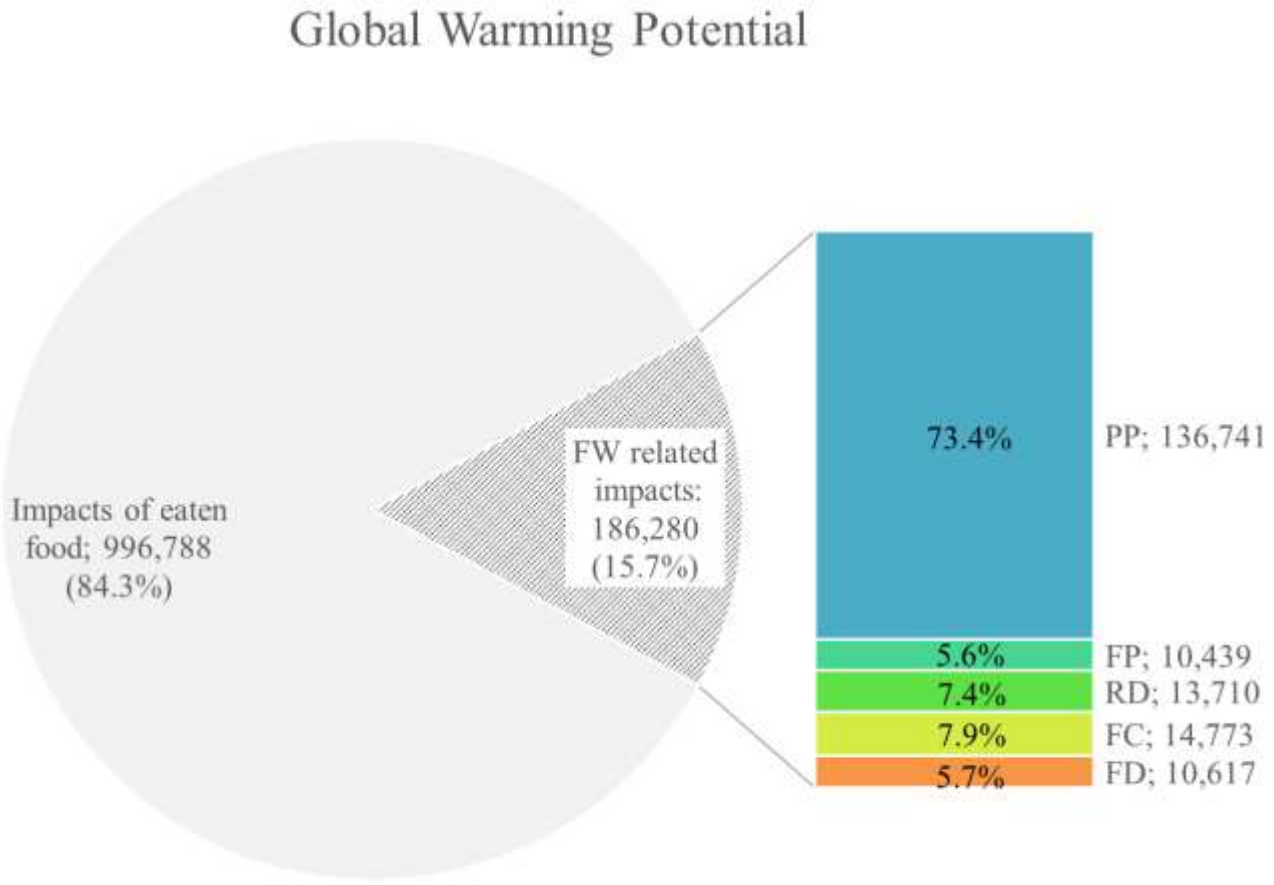
Food waste quantities per product



Food waste related impacts per product



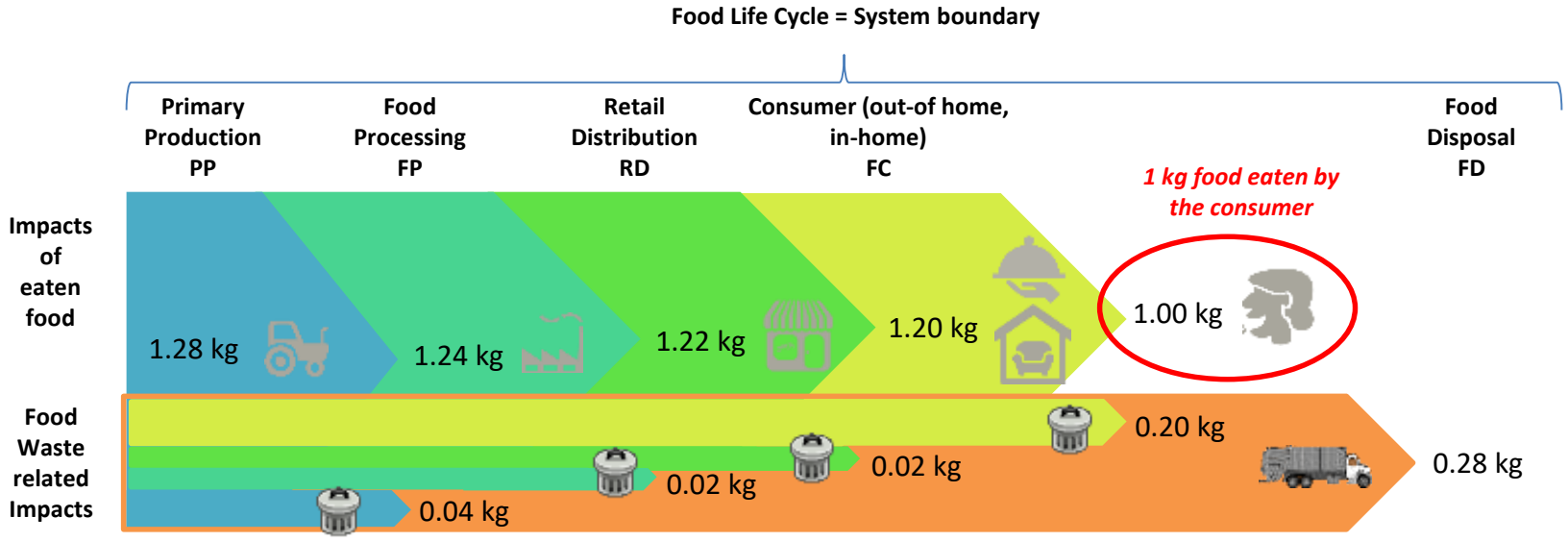
Food and food waste related impacts



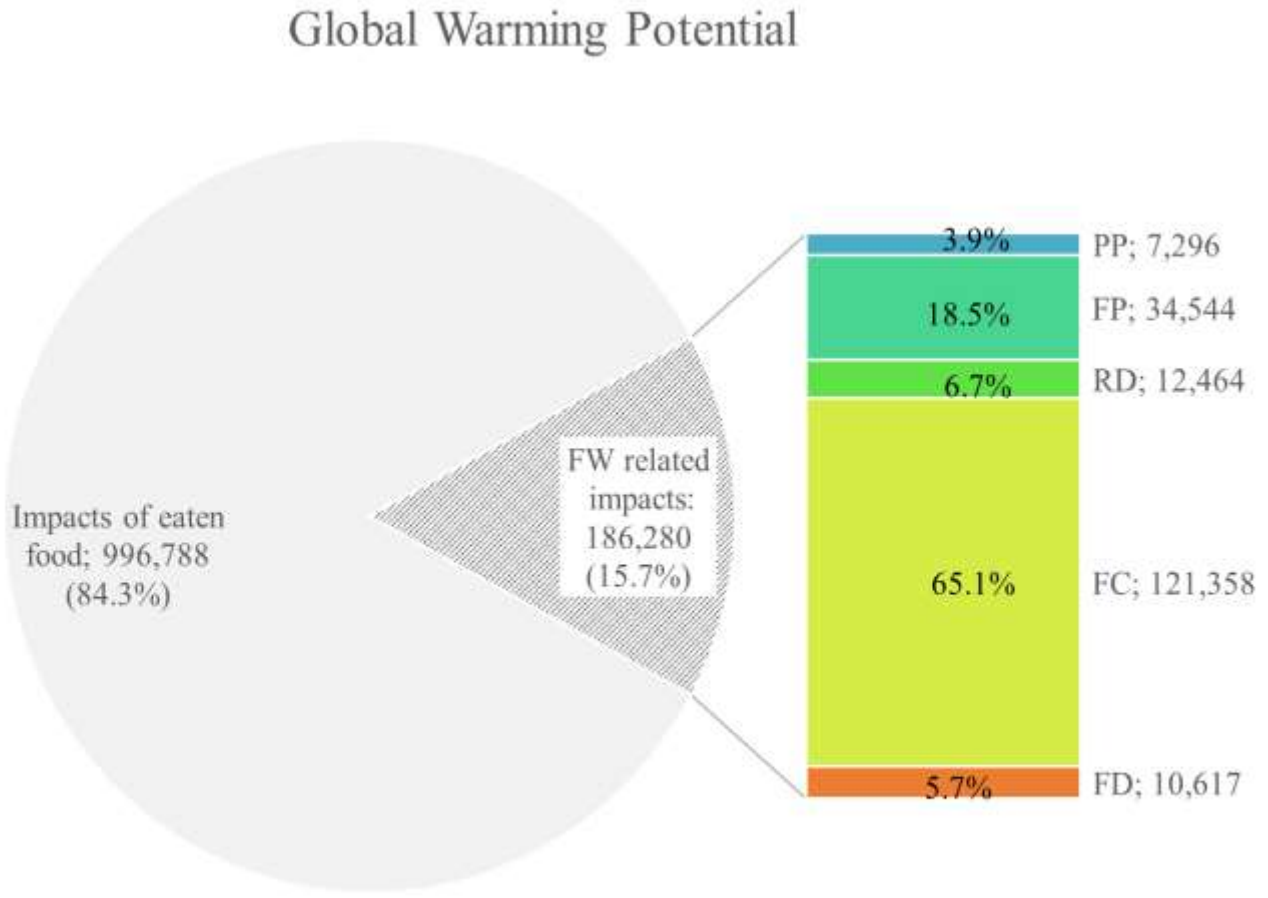
in 1000 tonnes CO_2-eq. in the EU

Food waste related impacts – originator perspective

- All emissions are attributed to the originator of waste

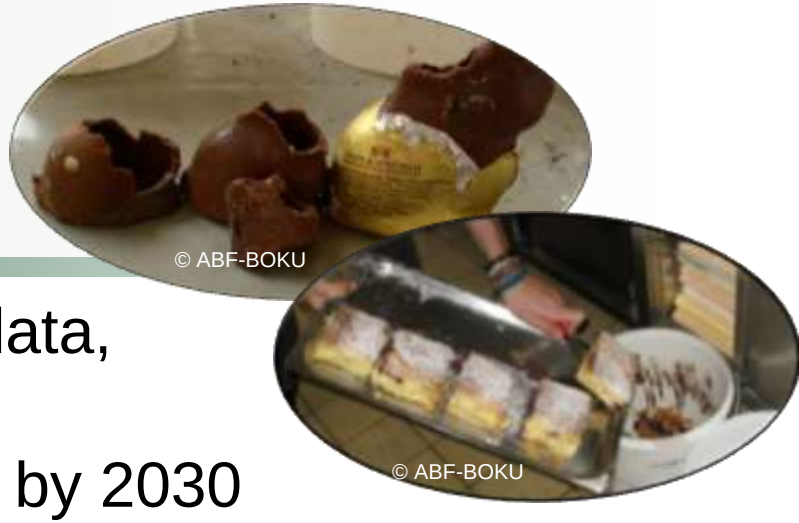


Food and food waste related impacts (originator perspective)



in 1000 tonnes CO_2-eq. in the EU

Conclusion



- To meet SDG; based on current data, this requires a reduction of appr. **31 million tonnes of food waste** by 2030
- Food prevention will be first priority to reach this target and is also first priority of the food waste hierarchy
- By food prevention at consumer level, around 26 million tons can already be saved from being wasted (assuming that 57% of food waste is avoidable)
- This would result in a reduction potential of 69 million tonnes CO_2-eq. (~ corresponds to the level of Finland's total GHG emissions)
- Big step towards food security and also to mitigate global warming

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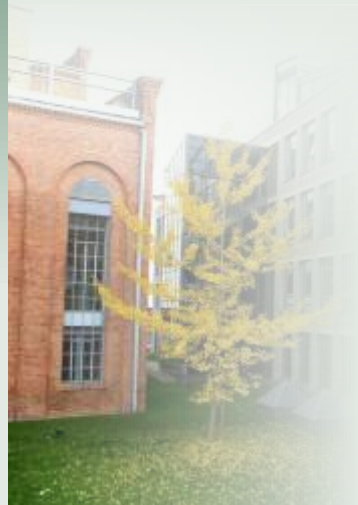
Thank you!

Silvia Scherhaufer
silvia.scherhaufer@boku.ac.at



University of Natural Resources and Life Sciences, Vienna
Department of Water, Atmosphere and Environment
Institute of Waste Management
abf@boku.ac.at, www.wau.boku.ac.at/abf.html
Phone: +43 (0)1 318 99 00, Fax: +43 (0)1 318 99 00 350
Muthgasse 107/III, A-1190 Vienna