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FOOD WASTE REDUCTION AND ITS POTENTIAL TO MITIGATE GLOBAL WARMING

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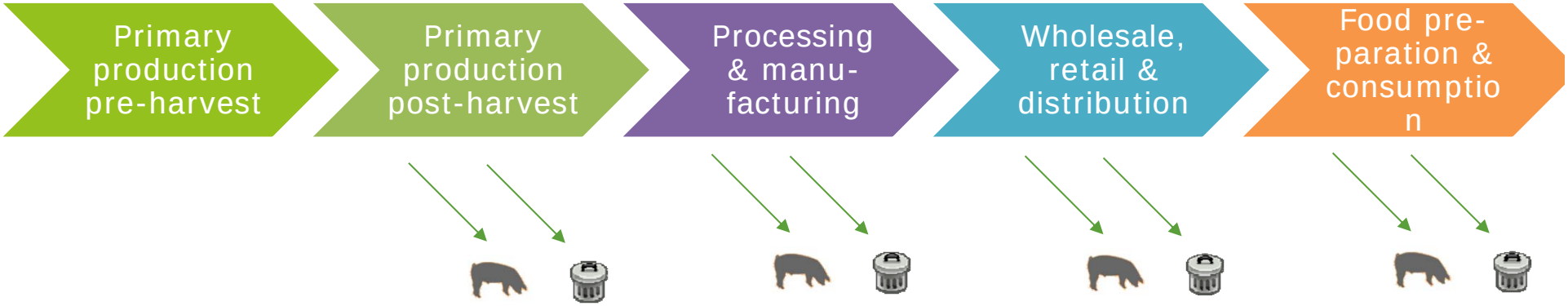
Defintion of food waste

- 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).

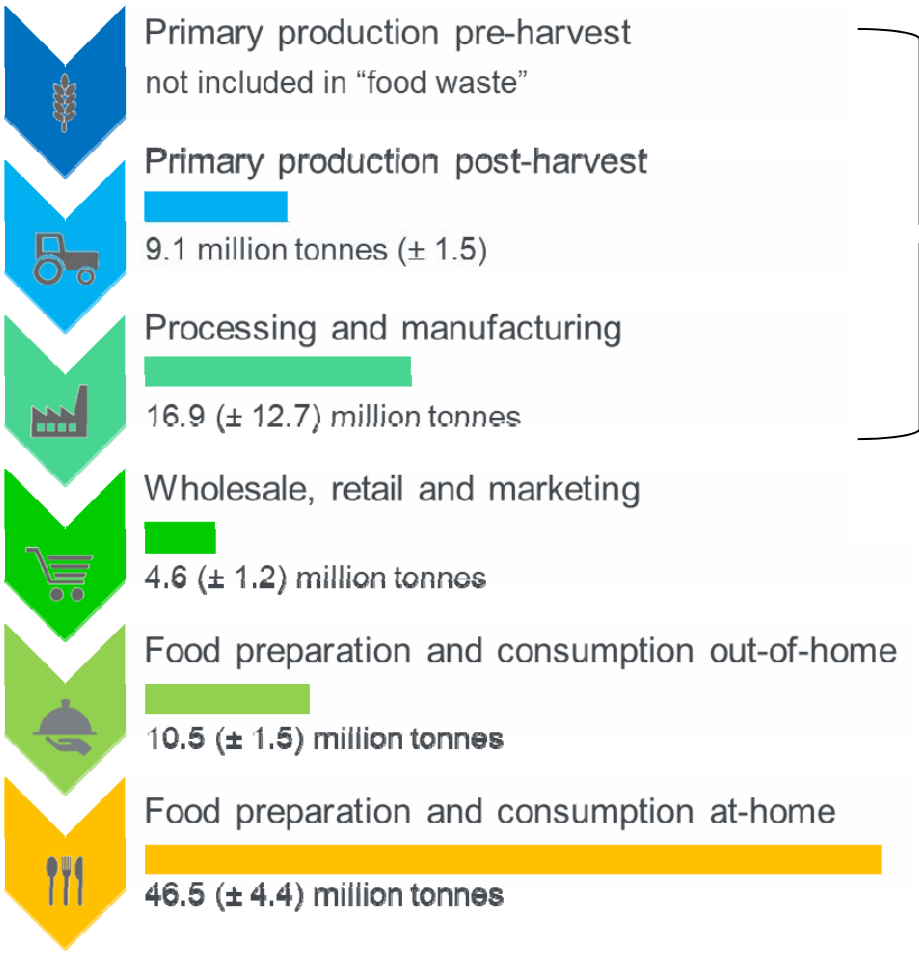
Food waste: Any *food*, and *inedible parts* of food, removed from the food supply chain to be recovered or disposed (including - composted, crops ploughed in/not harvested, anaerobic digestion, bioenergy production, co-generation, incineration, disposal to sewer, landfill or discarded to sea)

Source: Östergren et al. (2014)

EU Food waste quantities

EU Estimates on food waste:

(Data from Stenmarck et al., 2016)



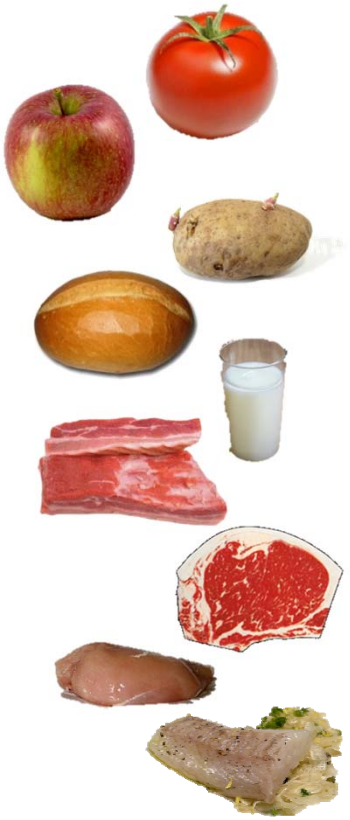
„Reduce food losses along production and supply chains, including post-harvest losses"

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

→ a reduction of approx. 31 million tonnes

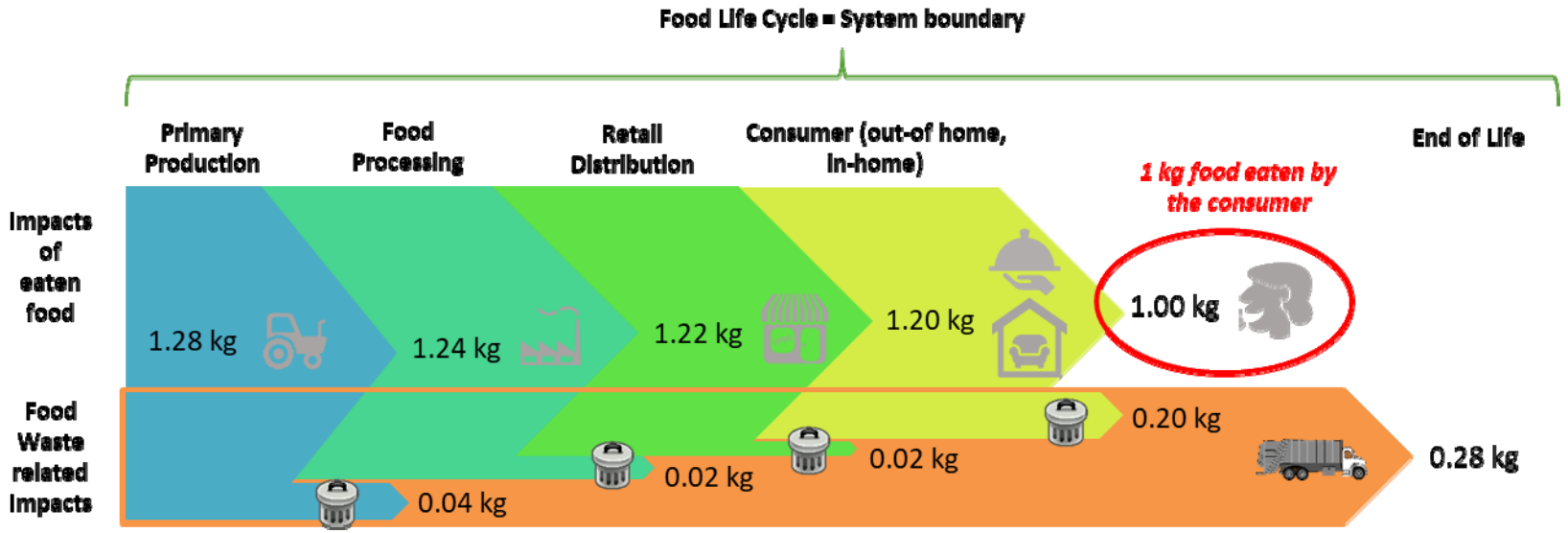
Methodology

- 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)

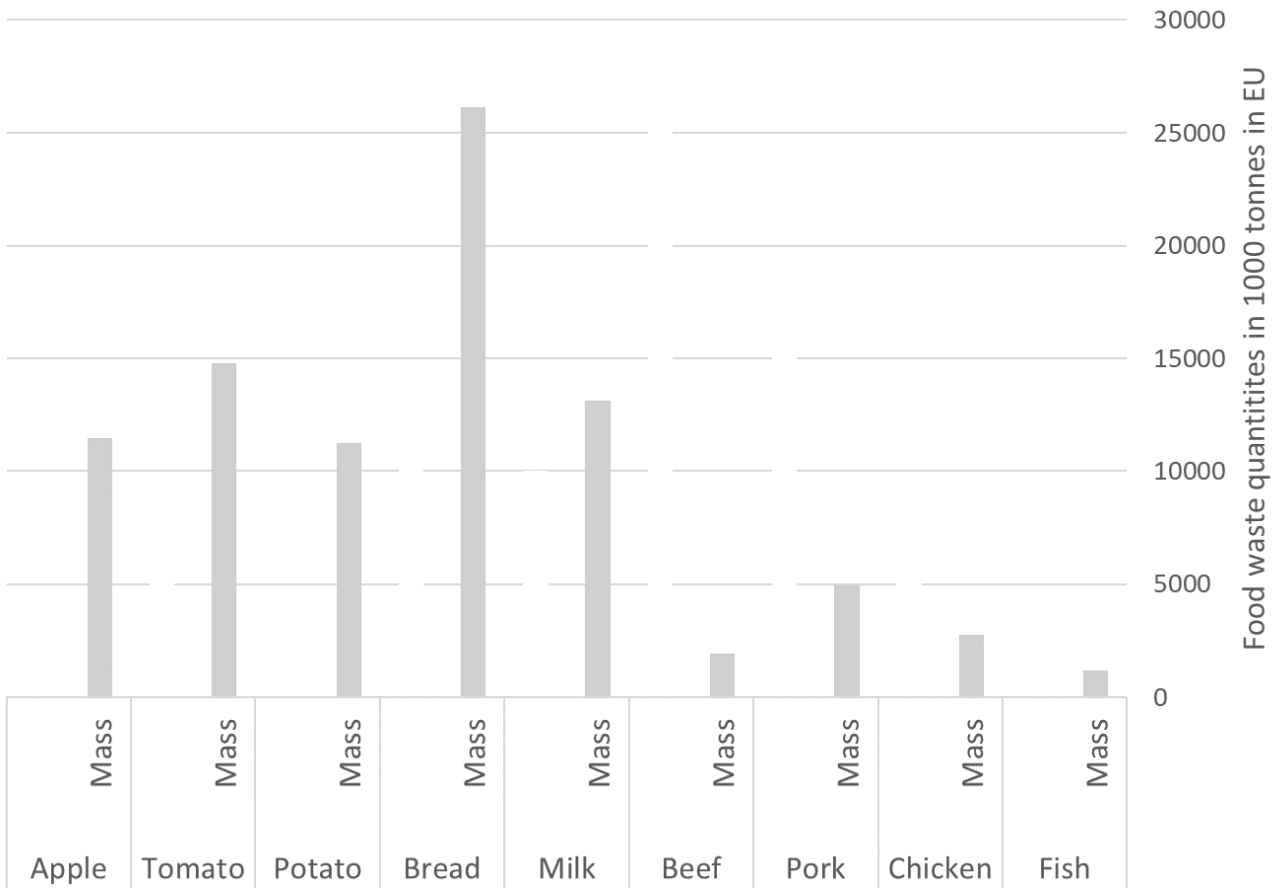


System boundary

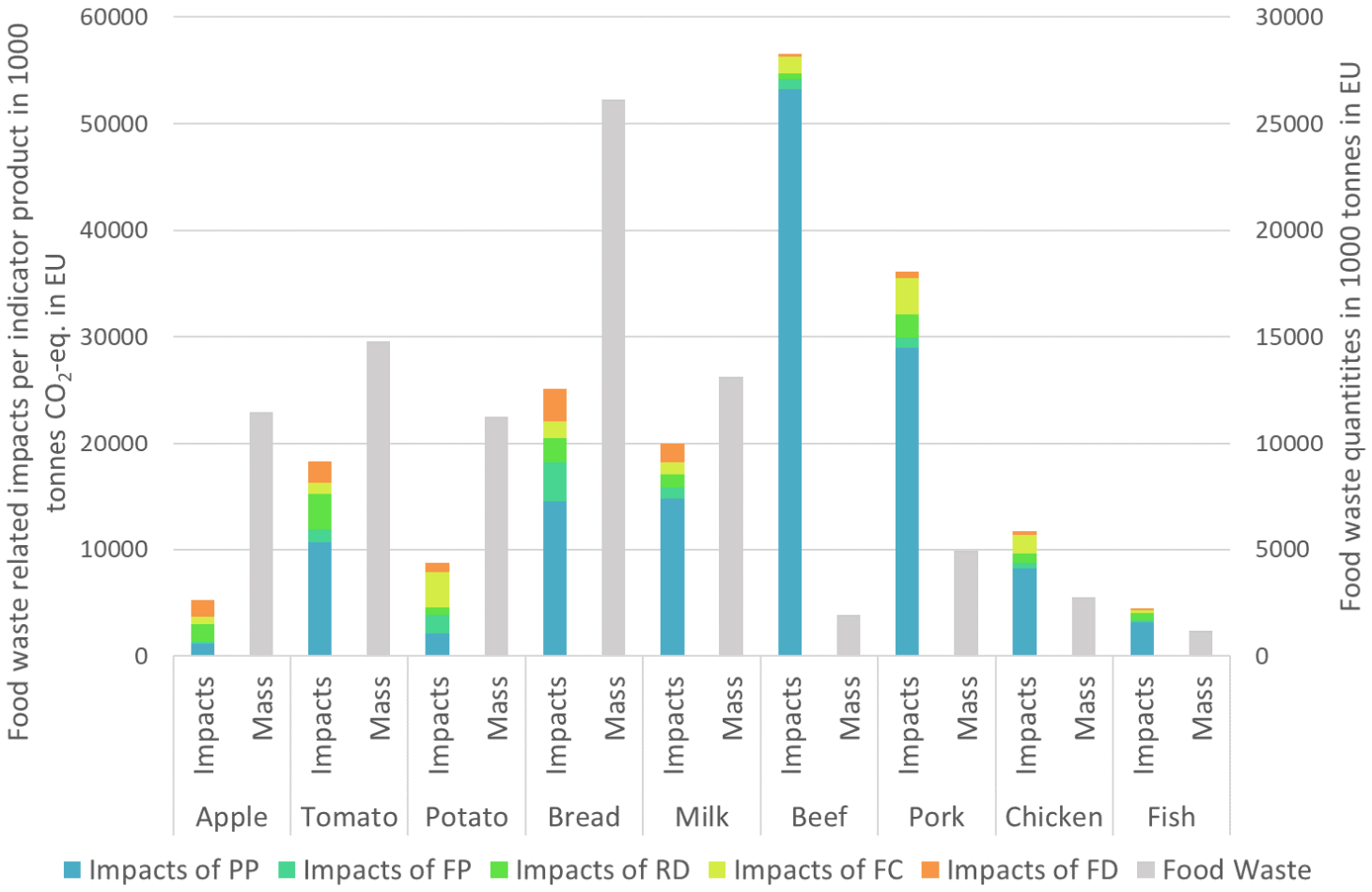
- On the example of 1 kg apple



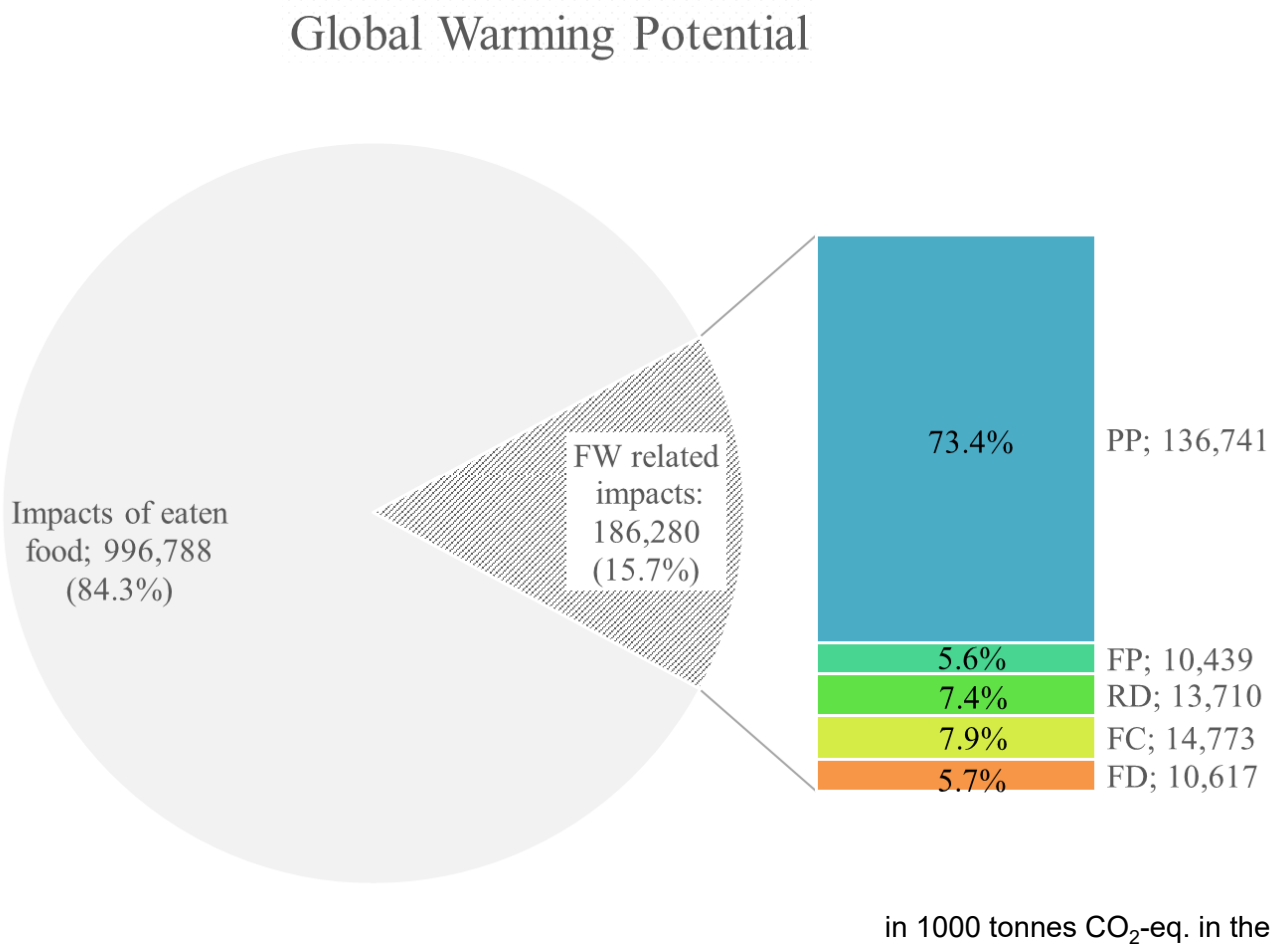
Food waste quantities per product



Food waste related impacts per product



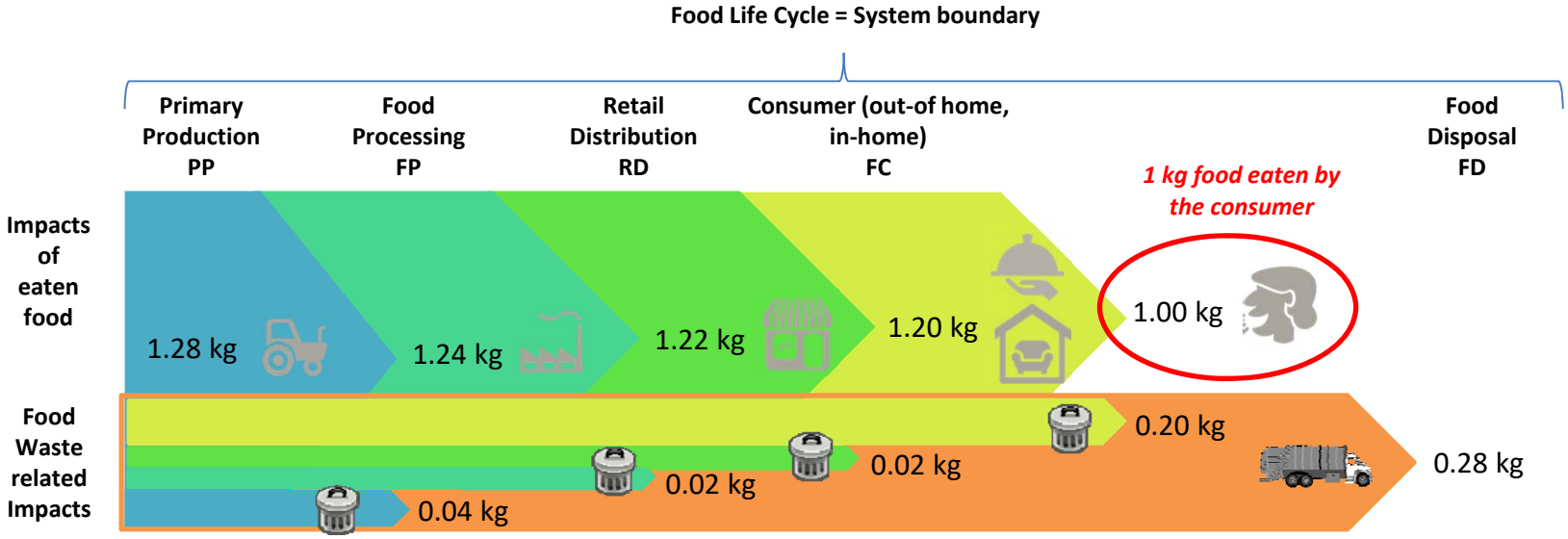
Food and food waste related impacts



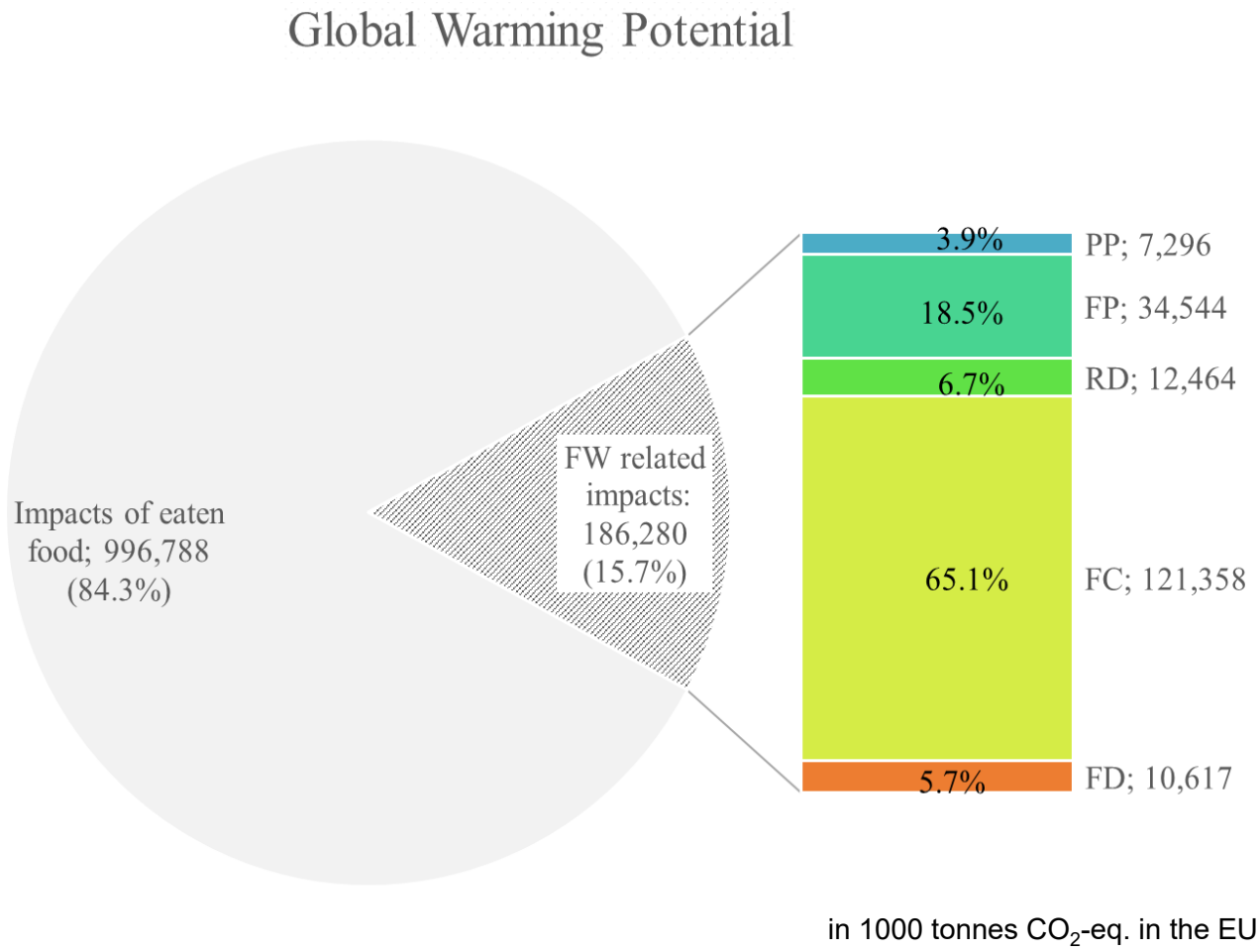
in 1000 tonnes CO_2-eq. in the EU

Food waste related impacts – originator perspective

- All emissions are attributed to the originator of waste

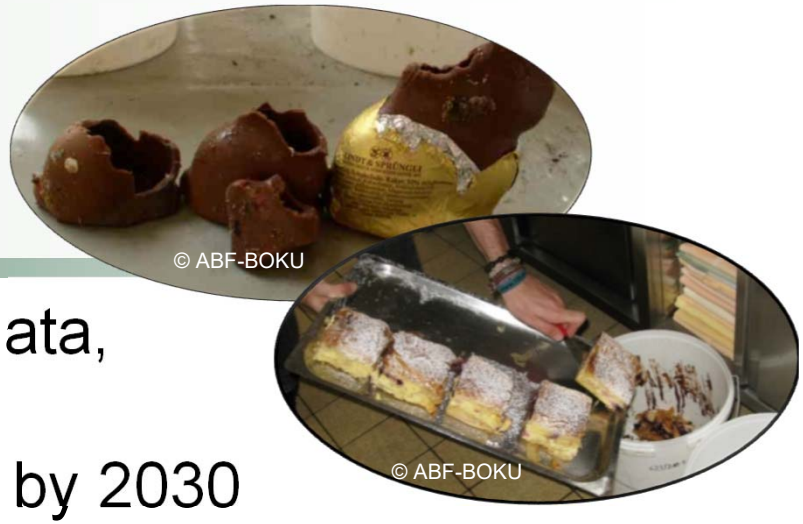


Food and food waste related impacts (originator perspective)



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!

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