Household food waste measurement in Hungary

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Maradék nélkül – National Food Waste Prevention Programme

National Food Chain Safety Office

Legal background

- United Nations SDG 12.3

- Directive 2008/98/EC
  - reduce the generation of food waste /…/ as a contribution to the United Nations Sustainable Development Goal to reduce by 50%
  - Member States shall monitor and assess the implementation of their food waste prevention measures by measuring the levels of food waste on the basis of the methodology established by the delegated act

- Commission Delegated Decision (EU) 2019/1597
  - Establishment of common methodology for measurement

Hungarian reporting mechanism

- Ministry of Energy

- National Environmental Information System – FBOs mandatory reporting

- National Food Chain Safety Office
  - Sharing household FW data
  - Household FW surveys: 2016; 2019; 2021; 2022; (2023)
  - SMP-FOOD-2022-FoodWaste-NCA-Hungary
    - Supporting national reporting exercise
    - Ensuring the continuation of household FW survey data series
    - More details at the end of the presentation

EU first FW reporting (Eurostat, 2022)

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57 million tons

31.3 million tons
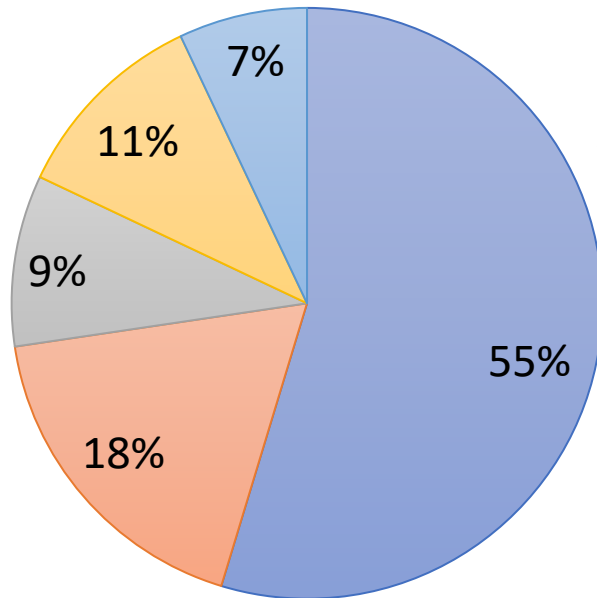
Households, EU average:

70 kg/capita/year

55%

18%

9%

11%

7%

■ Households   ■ Processing   ■ Food service   ■ Production   ■ Wholesale and retail

2021

* Adjustment factor for diaries: 1.43

Country Name	Reference	kg / capita food waste estimate	Confidence level
Austria	(Environment Agency Austria, 2017)	39	High
Belgium	(Flemish Food Supply Chain Platform for Food Loss, 2017)	50	Medium
Denmark	(Danish Environmental Protection Agency, 2018)	79	High
	(Edjabou et al., 2016)	83	High
Estonia	(Moora, Evelin, et al., 2015)	78	Medium
Finland	(Katajajuuri et al., 2014)	67	Medium
	(Stenmarck et al., 2016)	64	Medium
France	(ADEME, 2016)	85	Medium
Germany	(Schmidt et al., 2019)	75	High
Greece	(Abeliotis et al., 2015)	142	Medium
Hungary	(Kasza et al., 2020)	94 *	Medium
Ireland	(Stenmarck et al., 2016)	55	Medium
Italy	(Giordano et al., 2019)	67	Medium
Luxembourg	(Luxembourg Environment Ministry, 2020)	89	Medium
	(Caldeira et al., 2019)	91	Medium
Malta	(Caldeira et al., 2019)	129	High
Netherlands	(The Netherlands Nutrition Centre Foundation, 2019)	50	High
Norway	(Hanssen et al., 2016)	79	High
Poland	(Steinhoff-Wrześniewska, 2015)	56	Medium
Russian Federation	(Tiarcenter, 2019)	33	Medium
Slovenia	(Republic of Slovenia Statistical Office, 2020)	36	Medium
	(Republic of Slovenia Statistical Office, 2019)	33	Medium
Spain	(Caldeira et al., 2019)	77	Medium
		78	Medium
Sweden	(Swedish Environmental Protection Agency, 2014)	81	High
United Kingdom of Great Britain and Northern Ireland	(WRAP, 2020b)	77	High

2022

eurostat

Household food waste per capita (2020)	
EU	70
Portugal	124
Italy	107
Malta	92
Luxembourg	91
Greece	87
Lithuania	86
Austria	83
Latvia	82
Denmark	79
Germany	78
Cyprus	71
Belgium	71
Czechia	69
Hungary	66
Slovakia	65
France	61
Estonia	61
Sweden	61
Poland	60
Netherlands	59
Finland	53
Croatia	53
Ireland	48
Slovenia	36
Spain	30
Bulgaria	26
Norway	78

Household FW survey - methodology

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282 households (758 individuals)
Average size of households: **2.7 persons**

Survey period:
3 November 2021 – 18 December 2021

Methodology: **Physical measurement!**
Food waste logbook for 1 week + input and output questionnaires
Data have been extrapolated for one-year consumption cycle

The methodology complies with
EU-FUSIONS recommendations and **Commission Delegated Decision (EU) 2019/1597**.

Results

Annual household food waste per capita is 65.5 kg.
In total this is nearly 635 000 tons.

65.5
kg/year

634 598 000
kg/year

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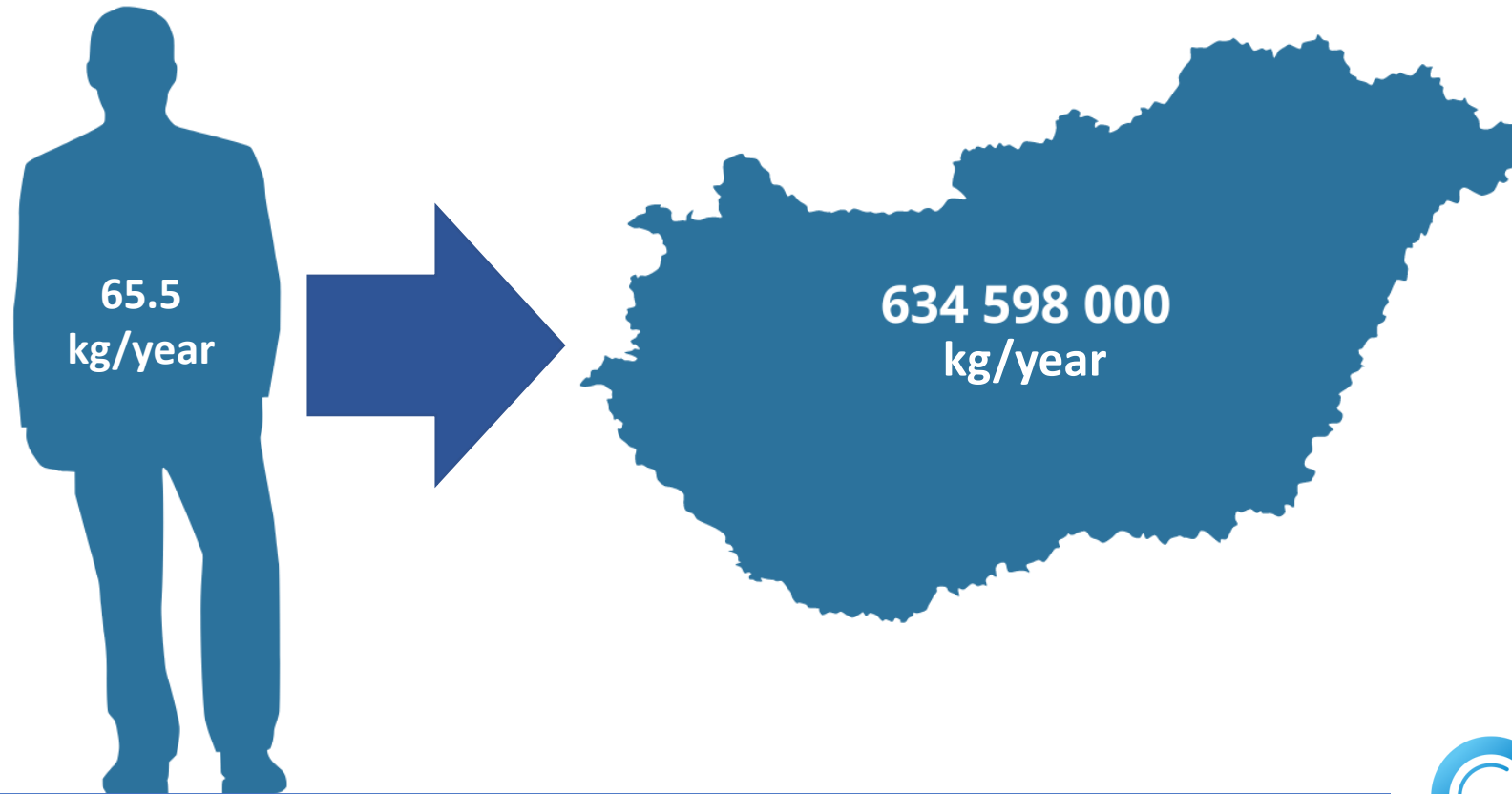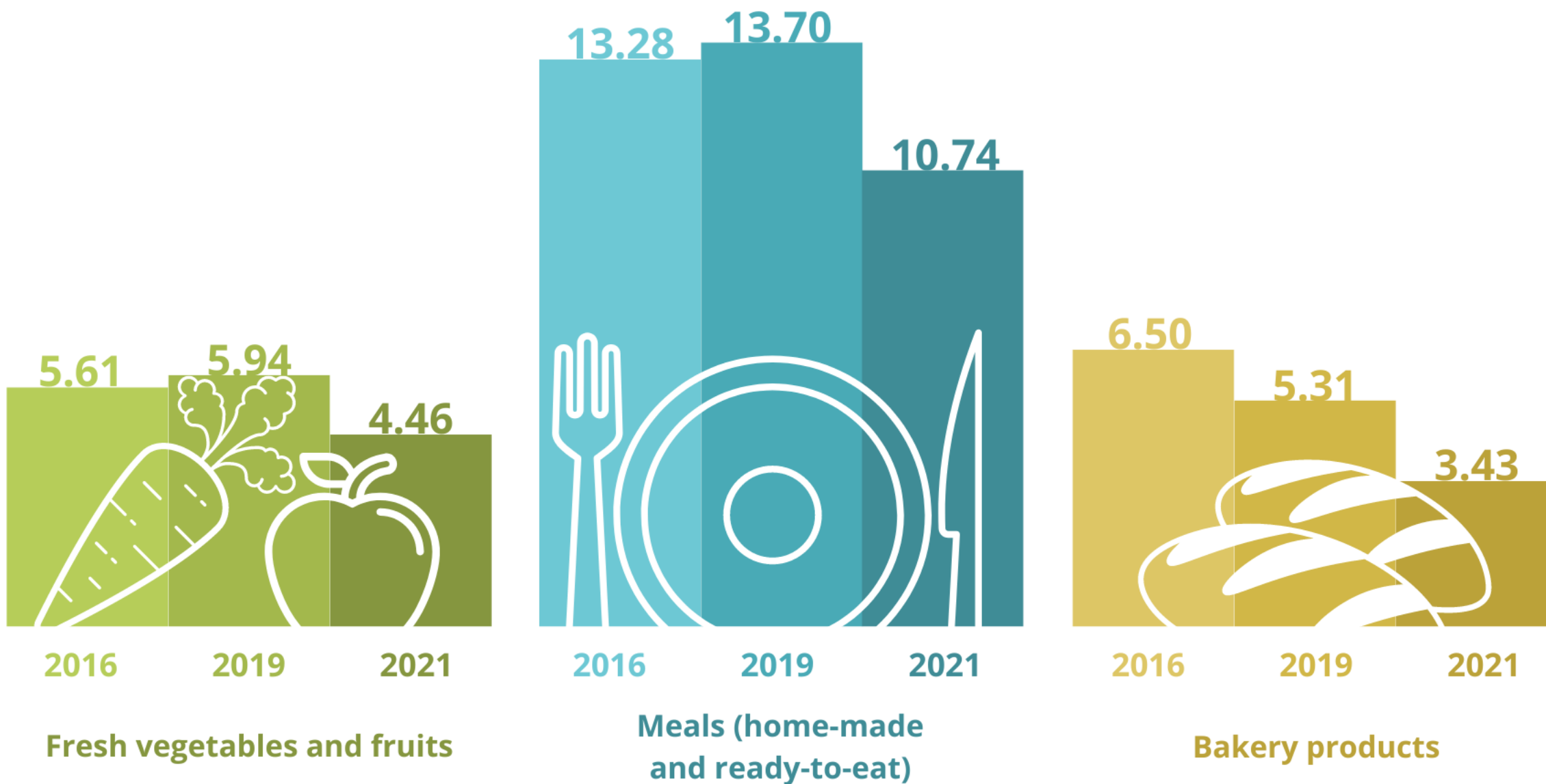
Composition of household FW

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10% of food waste generated in the Hungarian households is liquid

kg food waste / capita / year

	Liquid	Solid	Total = liquid + solid
Avoidable	5.39	19.80	25.19
Unavoidable	0.94	34.78	35.72
Potentially avoidable	1.01	3.59	4.60
Total	7.33	58.17	65.50

Most wasted foodstuffs

Fresh vegetables and fruits
- 2016: 5.61
- 2019: 5.94
- 2021: 4.46

Meals (home-made and ready-to-eat)
- 2016: 13.28
- 2019: 13.70
- 2021: 10.74

Bakery products
- 2016: 6.50
- 2019: 5.31
- 2021: 3.43

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Treatment of FW within the household

Sewer
10.01%

Animal feed
15.70%

Compost
25.68%

Waste collection point
0.84%

Discarded
47.77%

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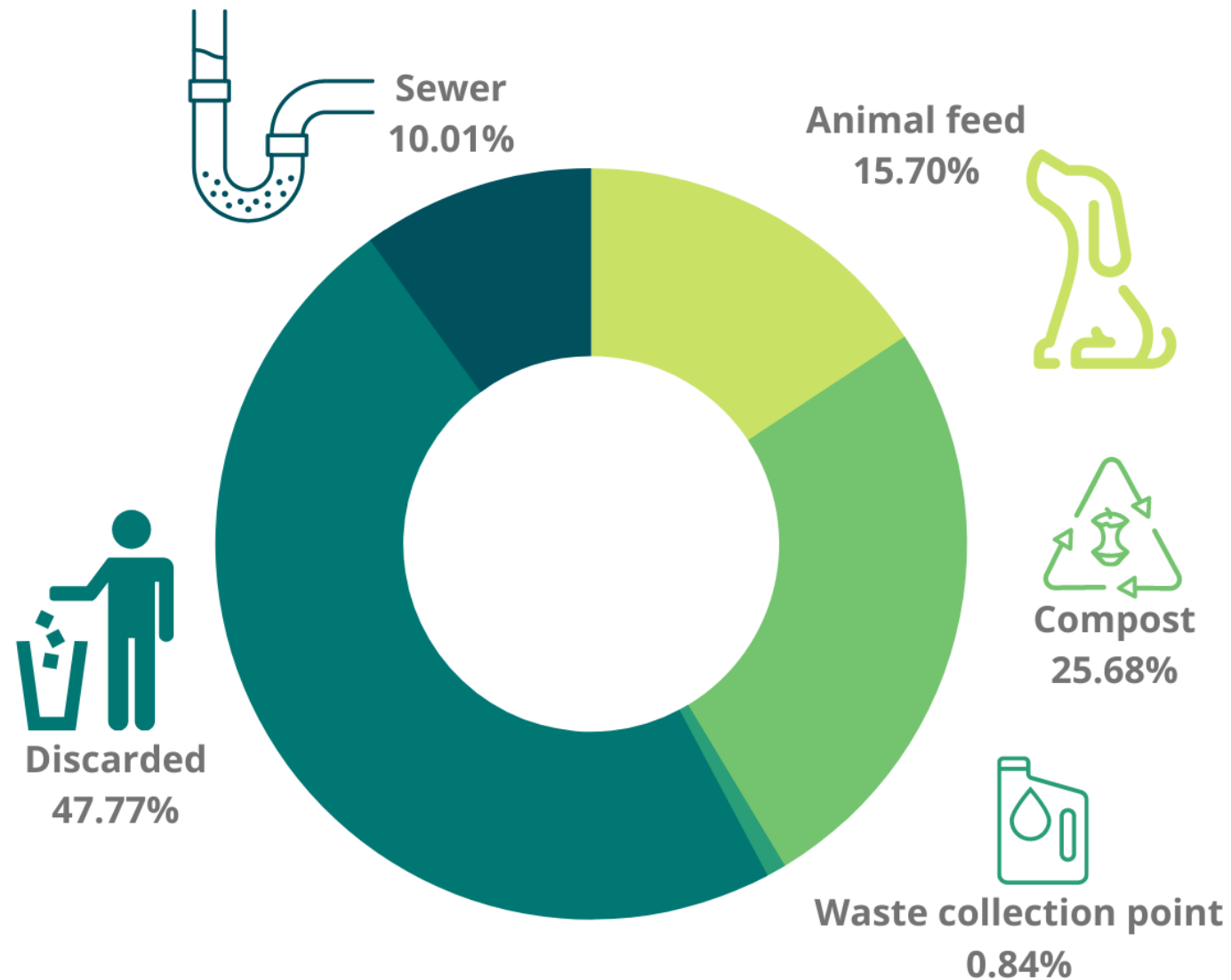
Household FW trends (2016-2021)

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Real wastage (the avoidable fraction) has decreased by 24% since 2016

Σ

	Avoidable	Unavoidable	Potentially avoidable	Σ
2021 (282 households)	25.19	35.72	4.60	65.50
2019 (165 households)	31.96	30.81	2.72	65.49
2016 (100 households)	33.14	32.00	2.90	68.04

0 25 50 75
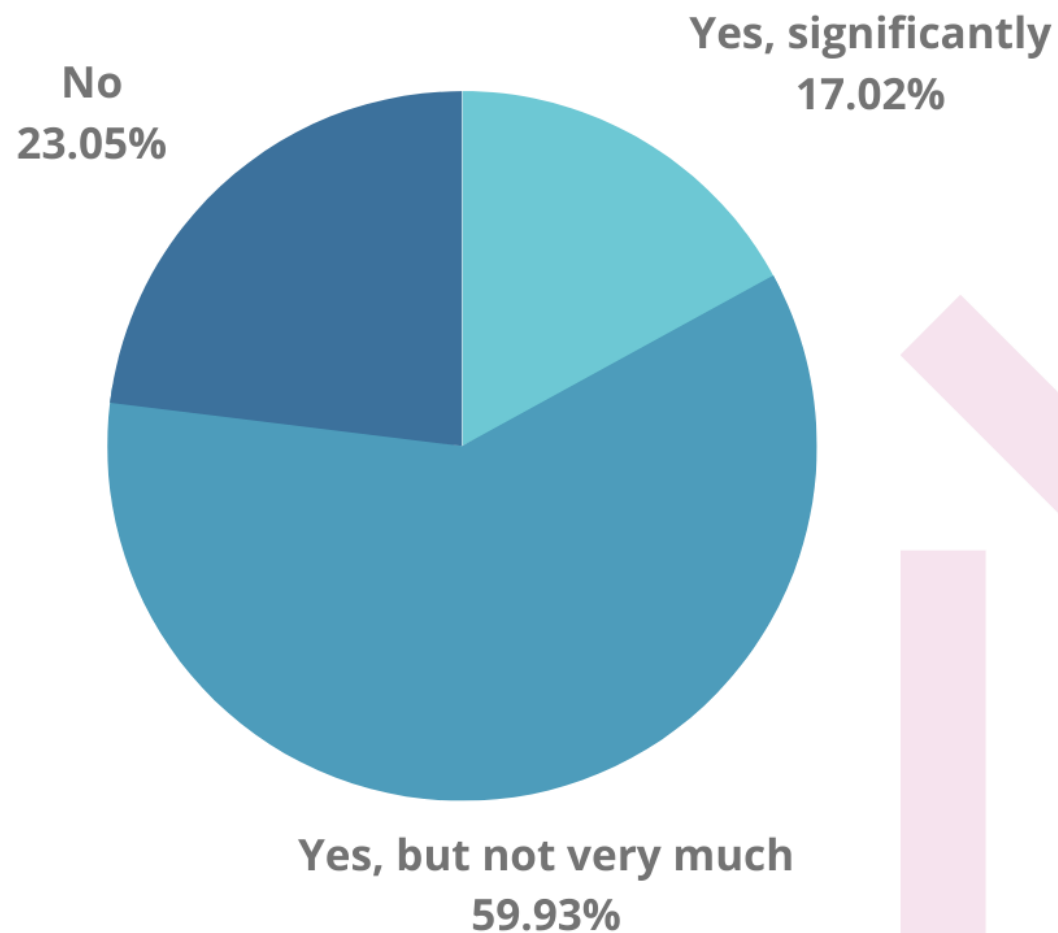
Amount of food waste (kg/capita/year)
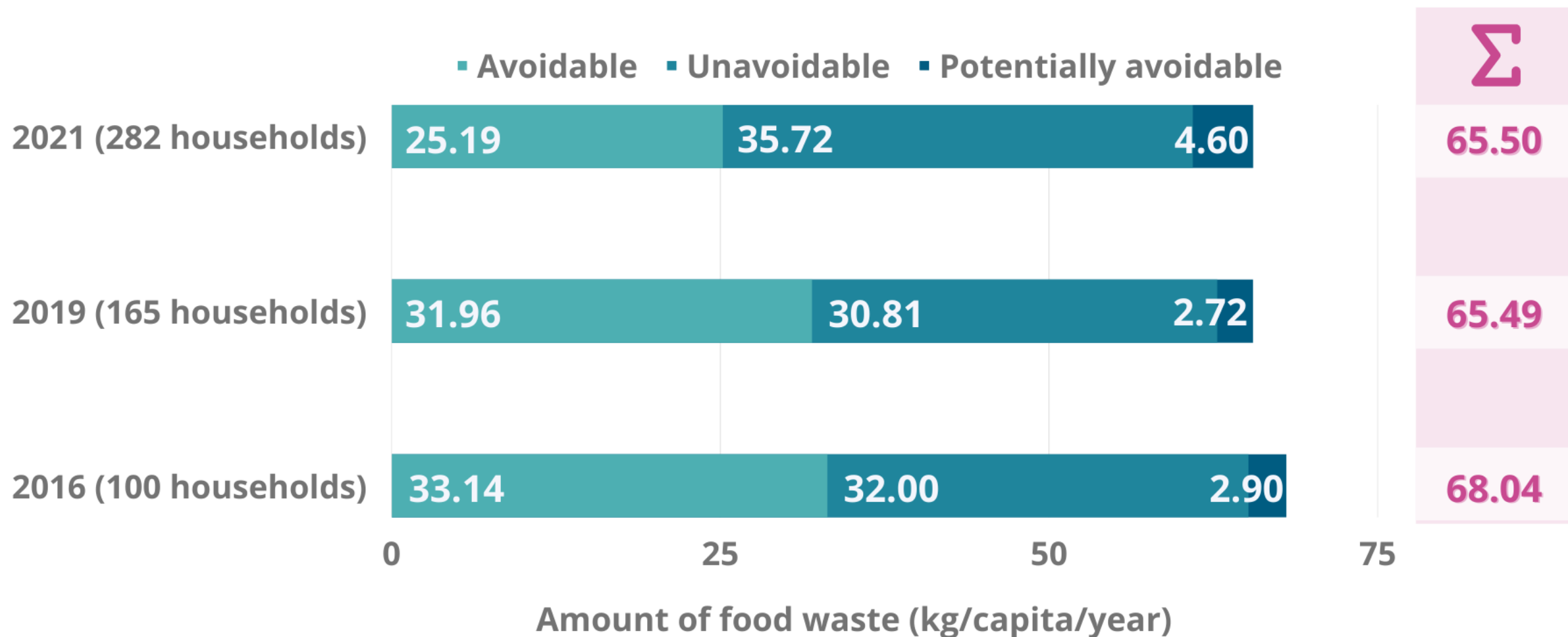
Preliminary estimation by households

Amount of food waste estimated by households is 33.7 kg/capita/year which corresponds to an average underestimation of **48.5%**.

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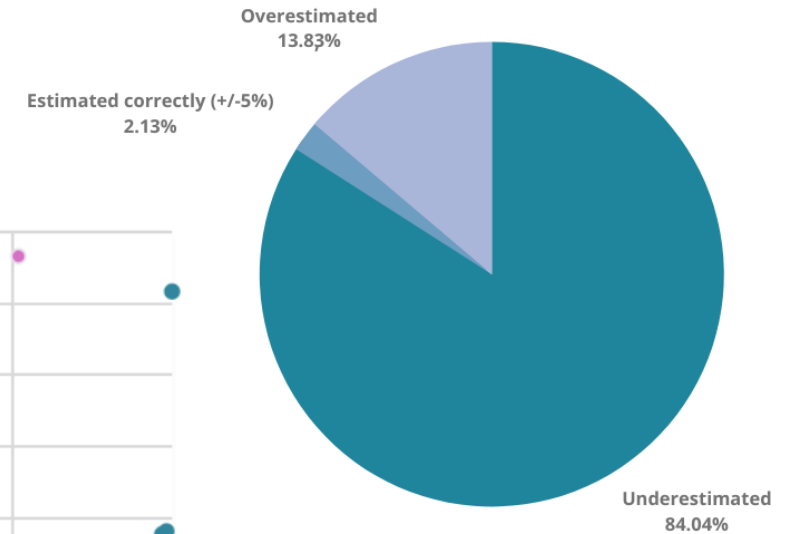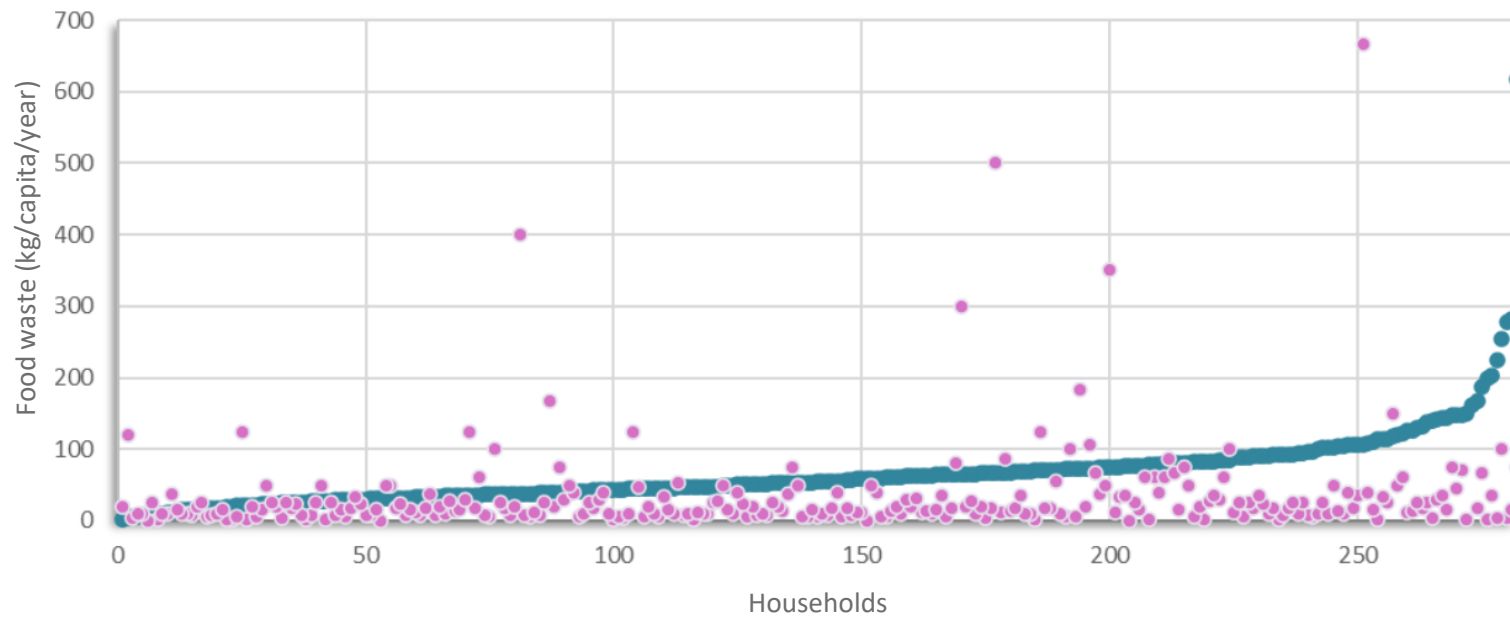
Consumer perspectives on FW reduction

Would your household be capable of cutting food waste levels?

No
23.05%

Yes, significantly
17.02%

More than 3/4 of the hoseholds would be able to reduce food waste.

Yes, but not very much
59.93%

Household FW survey 2022

- Sample size: 522 households

- Data processing in progress

- Expected release of the results:
  - July 2023 publication of preliminary results
  - End of 2023 scientific publication
  - Possible presentation of the results on EU FLW Platform meeting

- Assessment of the effect of inflation on food waste levels
  - Actual food waste trends
  - Specific questionnaire addressing the impact of the inflation on FW

SMP-FOOD-2022-FoodWaste-NCA-Hungary

- Cooperation with national authorities of Member States responsible for the measurement of food waste and the implementation of food waste prevention programs

- Granting authority: Health and Digital Executive Agency (HaDEA)

- Beneficiary: Food Chain Safety Centre Hungary

- Exploring alternative ways (possibly in-depth methods as set out in (EU) 2019/1597) for the measurement of food waste

- Stakeholder involvement

- National guide development on FW measurement in compliance with (EU) 2019/1597

- Targeted sectors:
  - Households (funding for regular HH survey in 2023)
  - Hospitality and food services
  - Retail

- Results will be published and presented in 2024 in EU FLW Platform meetings and FLW Prevention Hub

Lessons learnt

- Household FW has still the largest share in total FW
- Sound measurement methods are necessary to support MS reporting exercise
- Monitoring all FW material streams is important for comprehensive evaluation (e.g. animal feed and sewage, even if legally not regarded as waste)
- Dedicated EU funding schemes are highly beneficial for policymakers, researchers and citizens to foster national programmes
- Horizontal EU initiatives, such as ECFWF and Citizens' Panel on Food Waste are extremely valuable
- National programme has been successful – actual wastage decreased by 24% since 2016 in Hungarian households
- Education (especially in young age) should be a key element in national programmes
- Consumers underestimate their food waste levels
- Consumers are capable of reducing FW in the household only to a limited extent
- EU common reduction targets should be rationally defined, in accordance with research findings and evidence from practitioners (i.e. avoidable vs total FW)

Thank you very much for your attention