



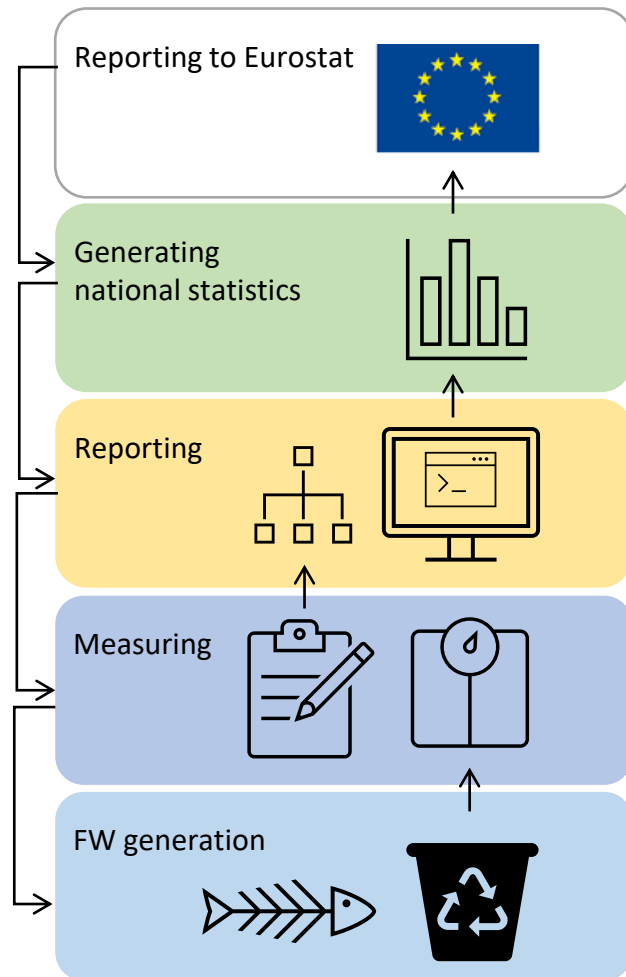
Norsk institutt for
bærekraftsforskning

1st meeting of the Food loss and waste monitoring sub-group

Challenges to monitoring food waste in the hospitality and food services sector - Experiences from Norway

Aina Elstad Stensgård





My presentation today

- I will focus on challenges related to:
 - Data gathering (a small part of the presentation)
 - Generation of national statistics under a negotiated agreement (main part of the presentation) and towards reporting to Eurostat
 - Based on what we have done in the Norwegian restaurants and food service sector

I will not address:

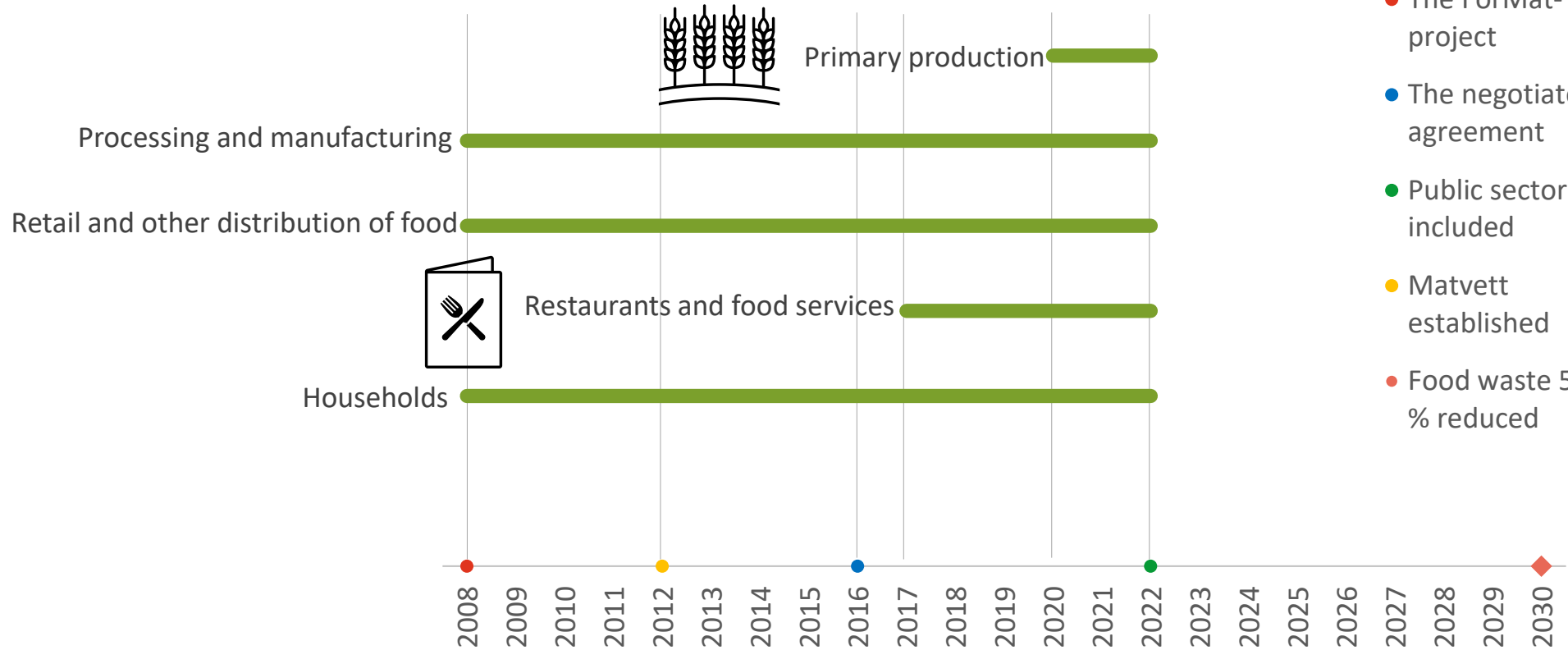
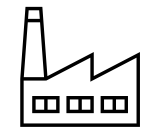
- Data quality
- Reporting formats
- How to get people onboard
- Prevention and reduction activities
- ++

Registreringskjema for fast og flytende matsvinn (Ikke spiselige dele)

Skole: Ringerike folkehøyskole
 Sted: MATSAL - SERVERING MÅLTIDER
 Veieperiode: 23.03.22-06.04.22

DATO	Antall spisende	FROKOST			LUNSJ				
		kg	dl	Merknader	kg	dl	Merknader		
23.03.2022	100	0,5			0,7		Mak, paldece	2,1	
24.03.2022	166							1,7	2,0
25.03.2022	160	0,1						1,5	1
26.03.2022	110	0,2	0,1		2,5	X		3,1	
27.03.2022	100	0,2	0,5					2,1	
28.03.2022	100	1,5	-					2,7	
29.03.2022	100	0,4	0,4		2,1	1,1		7,1	
30.03.2022	160				0,3	0			
31.03.2022	160								
01.04.2022	160	2	-		4,5			1,5	
02.04.2022	160	0,9	-						
03.04.2022	160	0,1	-						
04.04.2022	160	0,2	2,0		2,7		Reste mat	2,0	
05.04.2022	38	0,1	0		1,8			1,8	
06.04.2022									

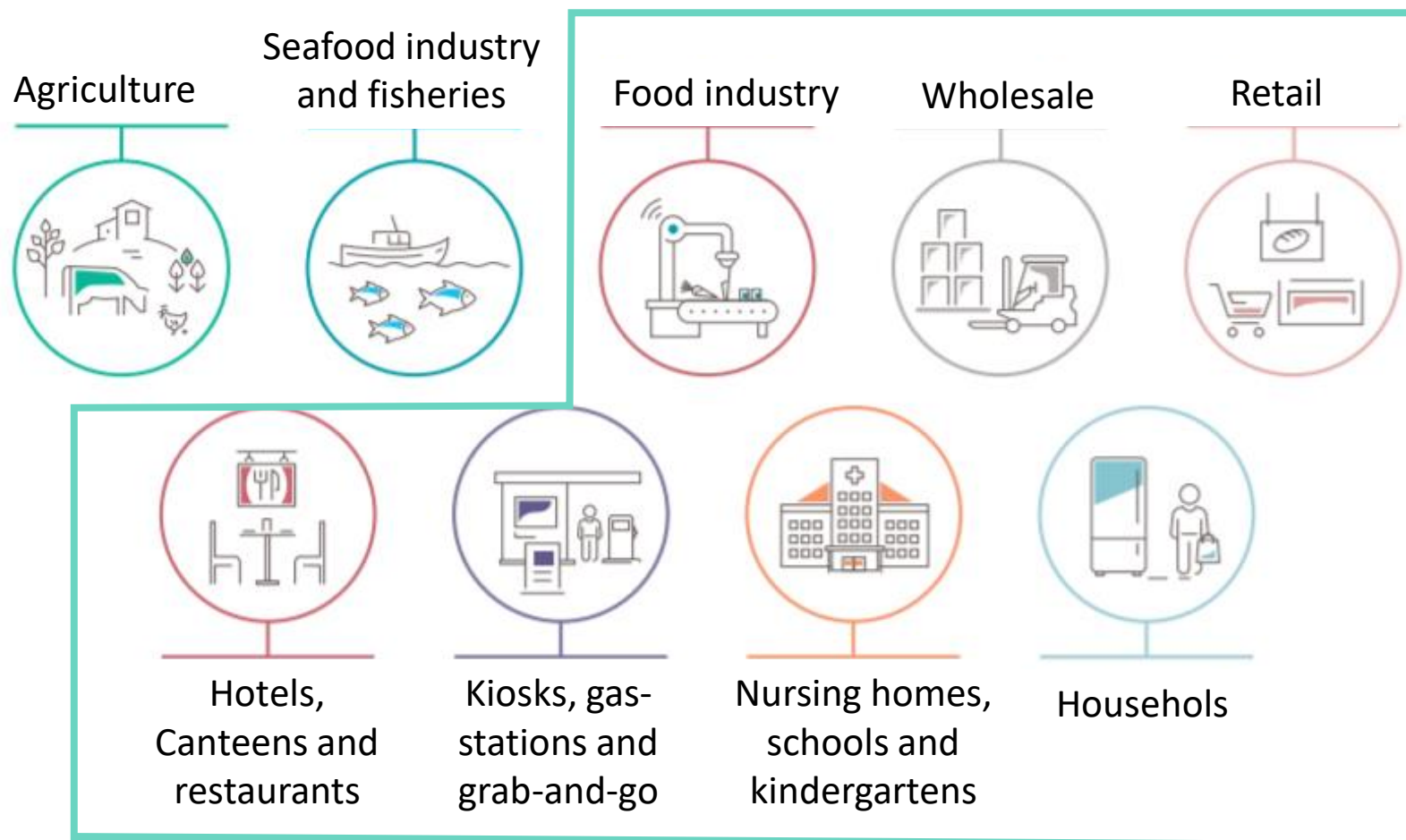
Shortly about the context: The Food waste mapping in Norway



The negotiated agreement

- Signed in 2017
- Definition: “Food waste consists of all useful parts of food produced for humans which are either discarded or removed from the food chain for other purposes than human food, from the time of slaughter or harvesting.”
- **Goal: To half food waste in Norway by 2030 (measured in kg/capita), using 2015 as baseline**
 - **Targets: 15 % in 2020, 30 % in 2025 and 50 % in 2030.**
- Voluntary, but with binding declarations of commitment.
- NORSUS, Sintef Ocean and The Norwegian agriculture agency collects data and report annually.

NORSUS report on behalf of all value chain steps, except the first two



And based on this work, NORSUS have also developed a basis for the FW reporting to EU on behalf of the Norwegian government

How do we work with the sector?

- Data is reported annually.
 - During the start of the reporting (2017-2020) data was reported twice a year.
- We have developed guidance documents and we conduct yearly workshops to ensure data quality, data completeness and correct reporting formats.
- The following data is reported:
 - Food waste per day, week or month (Voluntary to report edible fraction, process stage, product groups etc.)
 - Number of guests or other relevant denominator (Sector-KPI)
 - Turn over (for scaling purposes)
 - Meta data (e.g. changes in methodology for measurement) and data on causes and measures

General challenges for restaurants and food services

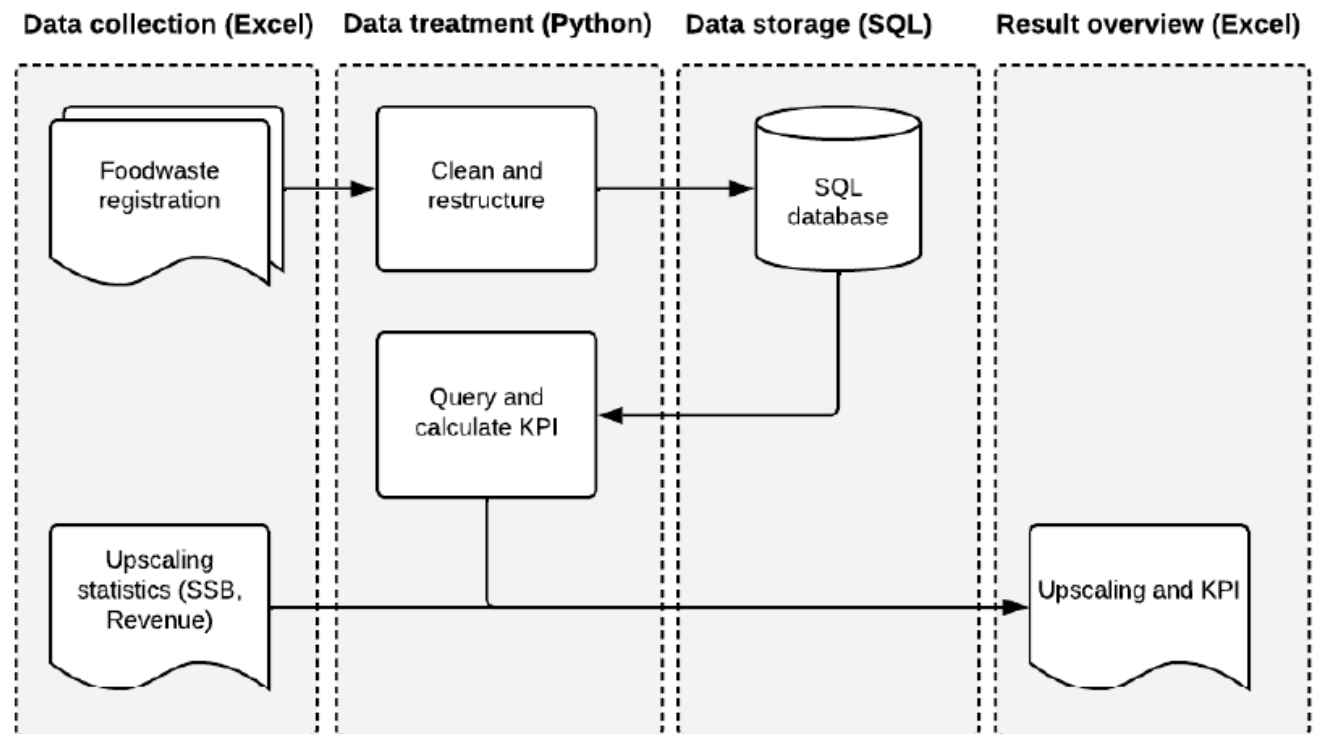
- Many actors
- Fragmented and heterogenous:
 - Several different sectors (EU: I, N, O, P, Q, R, S)
 - Large variety within sectors (e.g. retailers in Norway are more similar than restaurants are).
- The main objective for many of the actors is NOT related to food:
 - E.g. Nursing homes, kindergartens etc.
- COVID-19
- Costs of monitoring.

Nr of businesses per sector in Norway



To handle the many actors, we developed a system for analyzing and scaling the FW data

- Accept different formats:
 - E-smiley
 - WUOW
 - Winnow
 - Our own templates
- Python script
- SQL database



Specific (?) challenges in the Norwegian context: Getting a large enough sample

- The combination of having many, small actors in the sector, and the framework of a negotiated voluntary agreement challenges the sampling.
- Recruiting is a challenge!
- New reporting units each year


FVCS	Number of reporting units	Share of industry/service covered in Norway
Food industry	47 Companies	72 %
Wholesale	7 Companies	65 - 85 %
Retail	5 Chains	100 %
Private food service	700 + Hotels, canteens and restaurants	17 %
Nursing homes	8 Municipalities	12 %
Kindergartens	4 Municipalities	4 %
School (1-10th grade)	3 Municipalities	11 %

How to include new companies in the statistics?

The text in red shows how a company's data from its first reporting year (here 2017) is used again for the previous years in the edible food waste statistics (in this case 2015 and 2016). This approach means that the time series is annually corrected backwards in time each time new companies join the sector agreement.

Example	2015	2016	2017	2018	2019	2020
Company A (new in 2017)	2.1% waste (data for 2017)	2.1% waste (data for 2017)	2.1% waste (first reporting year)	2.0% waste	1.9% waste	2.0% waste
Company B (new in 2015)	4.8% waste (first reporting year)	4.0% waste	4.1% waste	2.9% waste	3.7% waste	3.1% waste

Specific (?) challenges in the Norwegian context: Scaling appropriately

- Mass of food (bought, sold, served or eaten)
- Number of meals
- Number of guests or users
- Turn over 
- Number of businesses
- Number of employees
- Number of m2
- Etc...

Not ideal, but our only available basis for the private sector in Norway...

- The mass does not necessary follow the money (e.g. Fast food vs. Fine dining).
- What turn-over should we use? (incl. VAT?, incl. Other services?). This is often limited by the accessible statistic.
- The turn-over is often challenging to receive (some are reluctant to share this)

Specific (?) challenges in the Norwegian context: Scaling appropriately

- Mass of food (bought, sold, served or eaten)
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- Etc...



Only for the public-sector.
Not ideal, but better than turn-over

Specific (?) challenges in the Norwegian context: **Not all businesses are in the «correct» NACE**

- H 50: Sea- and coastal passenger transport
- B 6: Extraction of crude petroleum and natural gas



Specific (?) challenges in the Norwegian context: **Not all businesses are within one NACE**

Given that our basis for scaling in the private food service sector is turn-over, we (and the reporting companies) have struggled to split the turn-over for different activities (e.g. cleaning services and canteen services).



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Thank you!

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