Food redistribution in the EU: Analysis of existing frameworks

11 March 2019, Brussels

Saving Food Together

Task 2 - objectives

Task 2 – Mapping existing operational models from all EU MS

Objective

To map existing operational frameworks of the different redistribution models in all MS

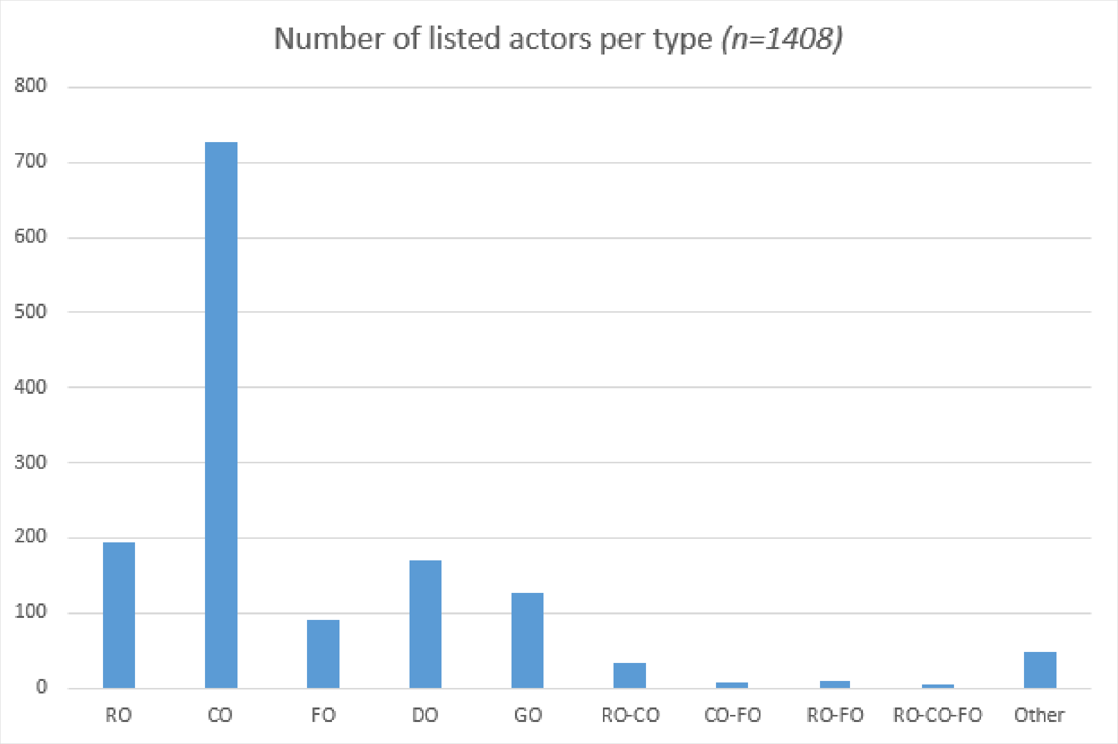
- Listing of operators & actors involved in food surplus donation across EU-28
- Mapping of redistribution models
- Assess the strengths & weaknesses of each food redistribution framework/model
- Analyse how food redistribution framework/models relate to existing national and/or EU regulatory and policy measures

Sub-task 2.1

Contact & Inventory Database

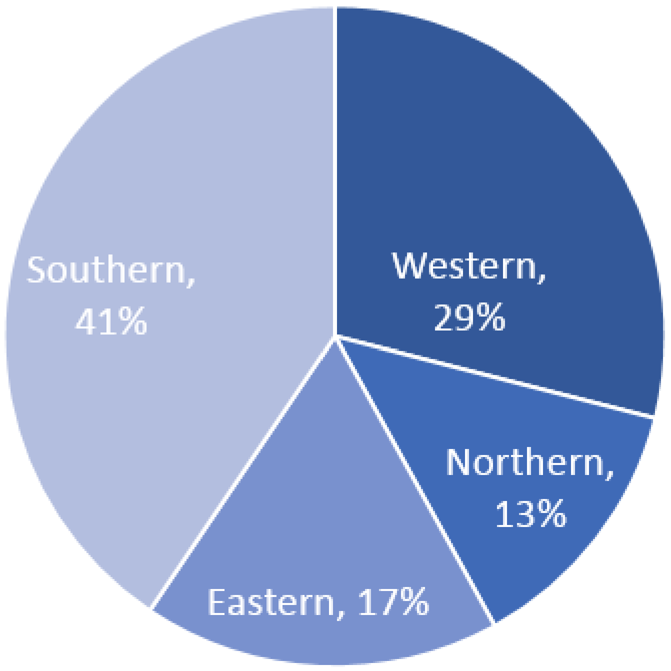
Methodological approach – key elements:

1. Literature review
2. Desk / online research (Country Experts)
3. Collection of actors (Excel template/database)



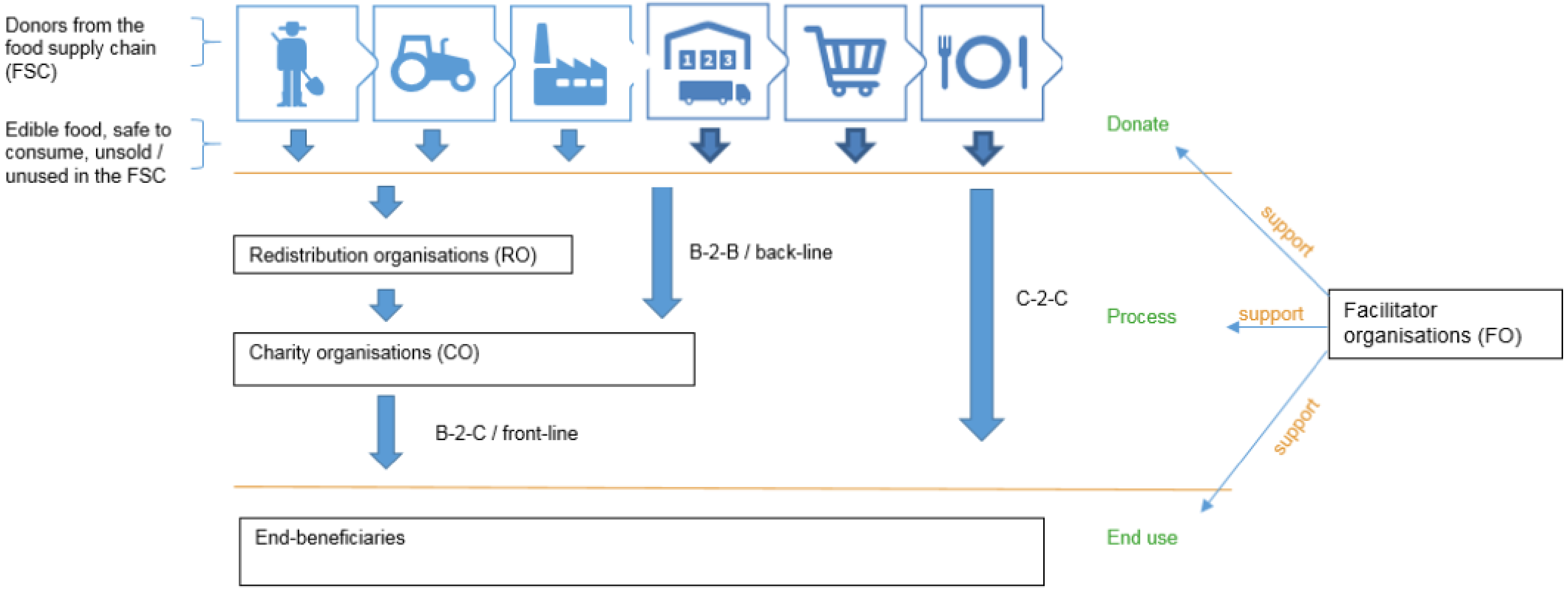
Type	N
RO	194
CO	727
FO	91
DO	169
GO	126
RO-CO	34
CO-FO	7
RO-FO	9
RO-CO-FO	4
Other	47

Regional geographic representation listed actors *(N=1408)*



Sub-task 2.2 Mapping Criteria

Operational model



Representation of the main operating models for food redistribution

Mapping Criteria

- Capacity & Food Products
- Infrastructure
- Sourcing Sectors & Recipients
- Logistics
- Organisational capacity
- Network relations

Sub-task 2.2 Mapping Criteria

Mapping criteria	Description
1. Capacity	Scale of operation (number of collaborators/beneficiaries)) Size of operation (amounts donated/redistributed) Staff & volunteer base
2. Food products	Type of products (date marking categories) Categories of products, including fruits & vegetables, bread & bakery products, meat & fish, dairy products, etc.
3. Sourcing sectors	Food supply chain sectors Use of FEAD and/or CMO sources
4. Infrastructure	Warehouses, outlets, cold storage facilities and IT related items.
5. Logistics	Means of transport Transportation Supply & demand alignment Food safety / hygiene regulations Quality assurance Financial costs & financial means
6. Network relations	With Donor organisations and (other) Charities / Facilitator organisations With national competent authorities and DO irt food safety & regulatory issues

Sub-task 2.2 Mapping Criteria

Mapping criteria

Methodological approach – key elements:

1. Literature review
2. Input from the Advisors
3. Semi-structured, open-ended interviews by the CE

Scoping interviews

- 90 interviews in total
- 28 MS covered
- Mixed representation per MS of RO, CO and FO
- RO → 1st option = National foodbank representative (via FEBA)
- Implemented: July 2018 – February 2019

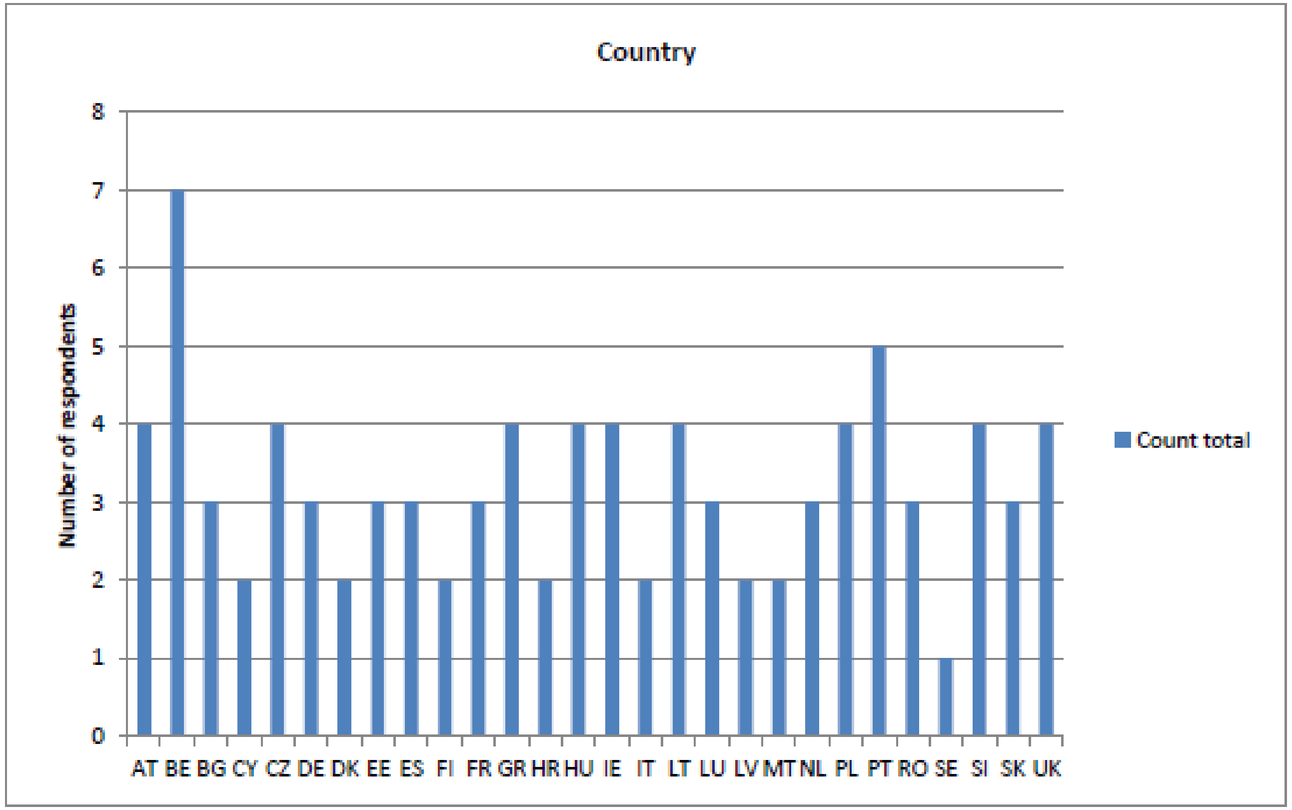


Figure 6 Number of respondents by EU MS (n=90)

Sub-task 2.2 Mapping Criteria

- **Age** of the organisations: young, most after 1990, 1/3rd after 2010
- **Scale and types of products**: different scale, mostly mixed product model
- CO tend to be smaller than the RO in terms of range of products distributed. In addition, the organisations in the Eastern region are also a bit smaller on average.
- The number of end-beneficiaries per year per organisation varies from a few hundred per year for smaller organisations to several million beneficiaries per year for very large organisations

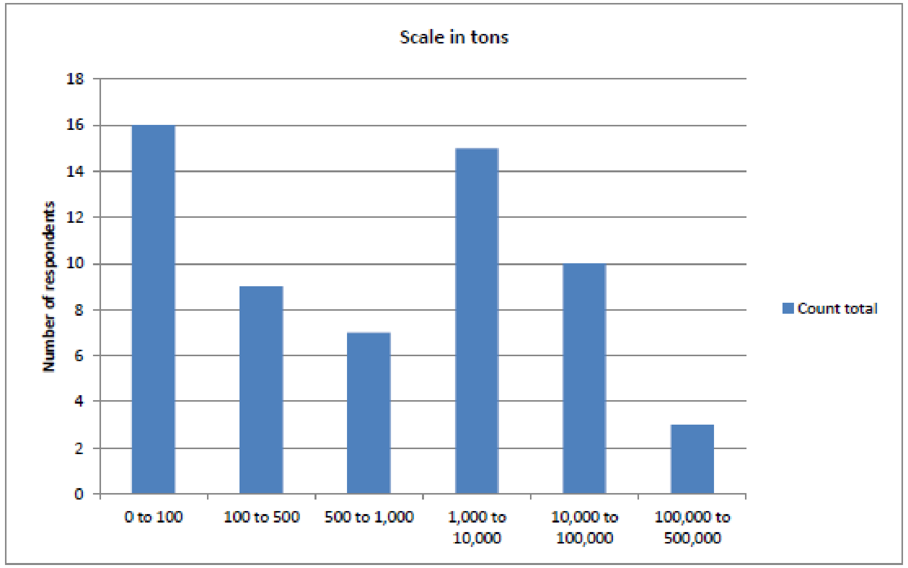


Figure 4 Number of organisations by volume of redistributed food (n=60)

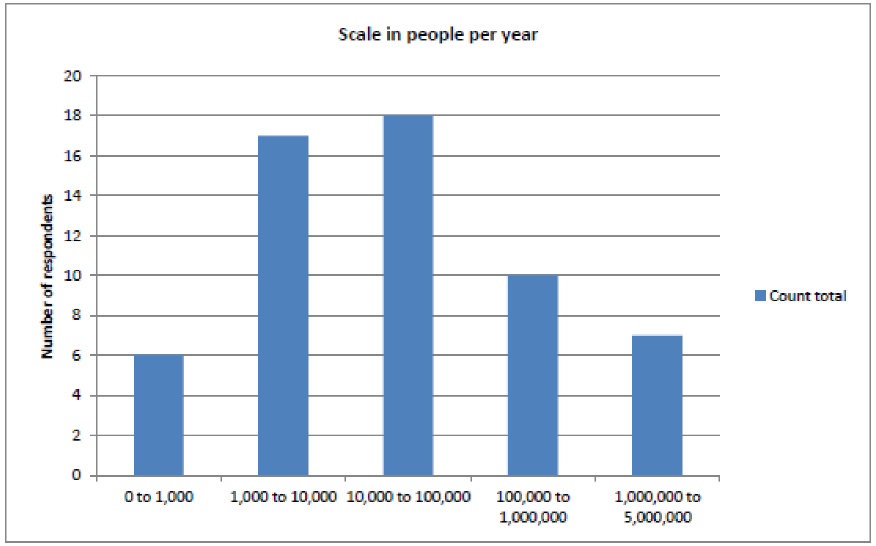


Figure 5 Number of organisations by number of beneficiaries per year (n=58)

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Sub-task 2.2 Mapping Criteria

- Volumes redistributed have been increasing in recent years. Just 11% of the organisations were observing a decrease (N=27). Most organisations were expecting an increase (86%) in the coming years.
- Reasons for organisations to expect a decrease in redistributed volumes are: less people in need of help, less food surplus available.
- The numbers of warehouses vary, with most organisations having 1-2 or 2-5 warehouses

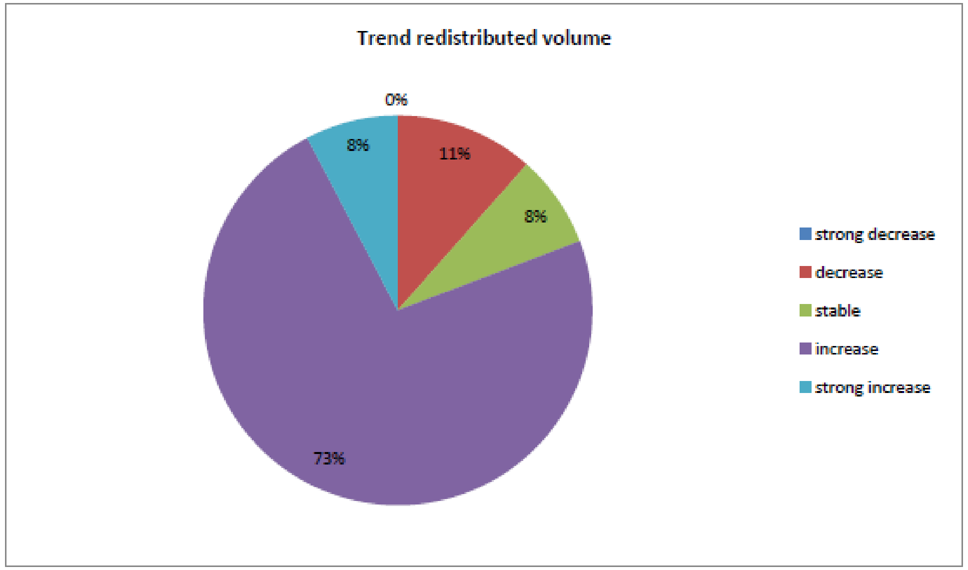

Figure 7 Share of respondents by trend in redistributed volume (n=26)

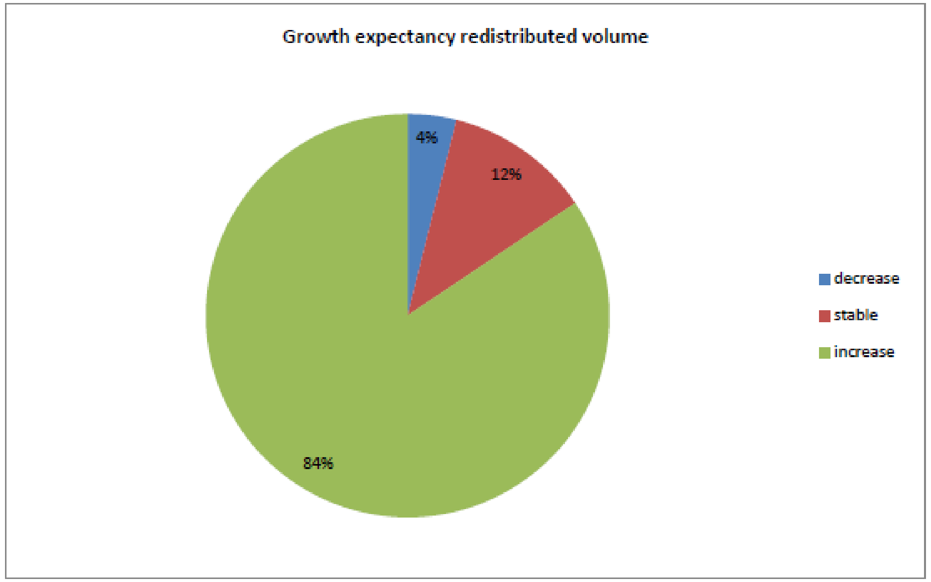

Figure 8 Share of respondents by expectation of future redistributed volume (n=77)

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Sub-task 2.2 Mapping Criteria

- **Type of products:** Mostly Bread + F&V + dry; about 60% of the organisations are also redistributing meat and fish products (incl. 1/3 only processed). About 32 organisations reported to distribute prepared food or hot meals. The same number reported to distribute frozen food.

- 4 types:
  - Long shelf-life model
  - Fresh model
  - Mixed model without freezing
  - Mixed model with freezing

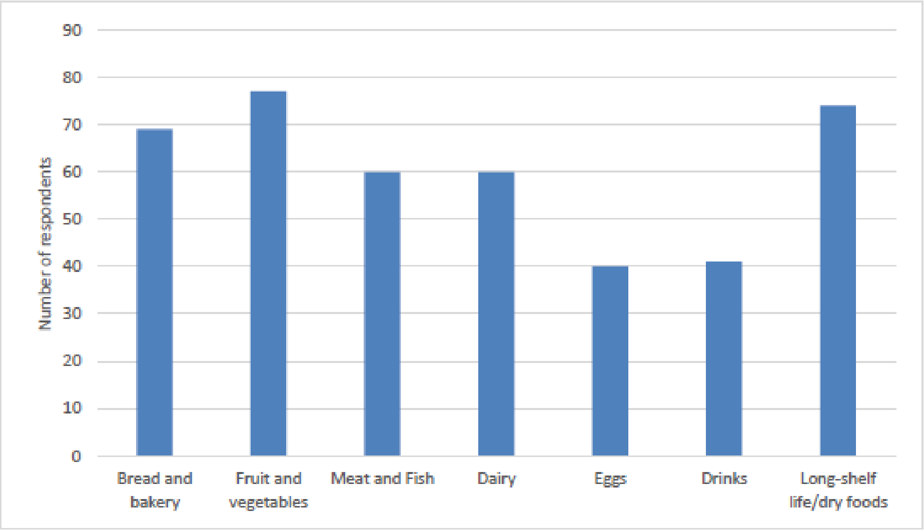

Figure 9 Number of organisations per type of products (n=83)

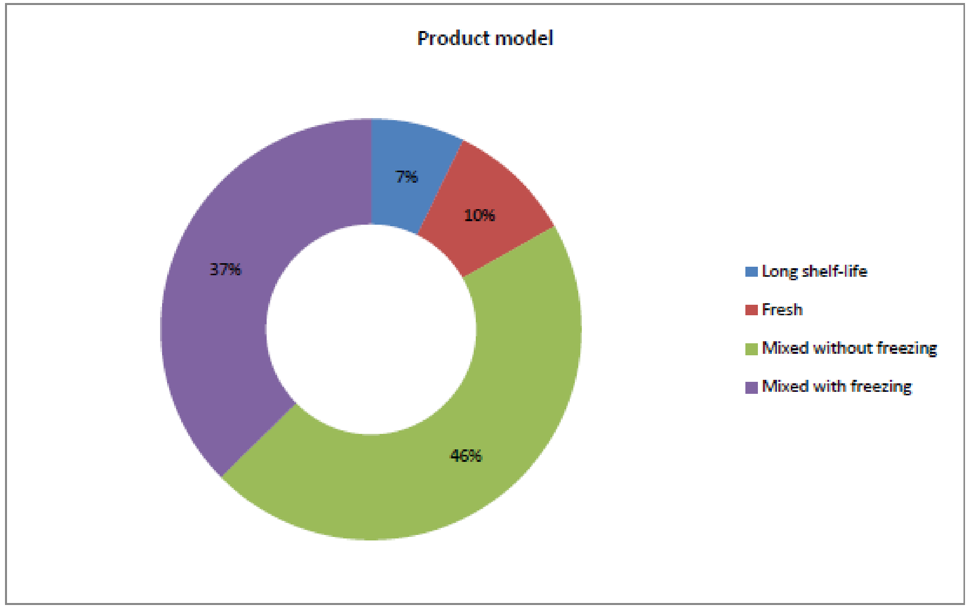

Figure 10 Share of organisations by product model (n= 83)

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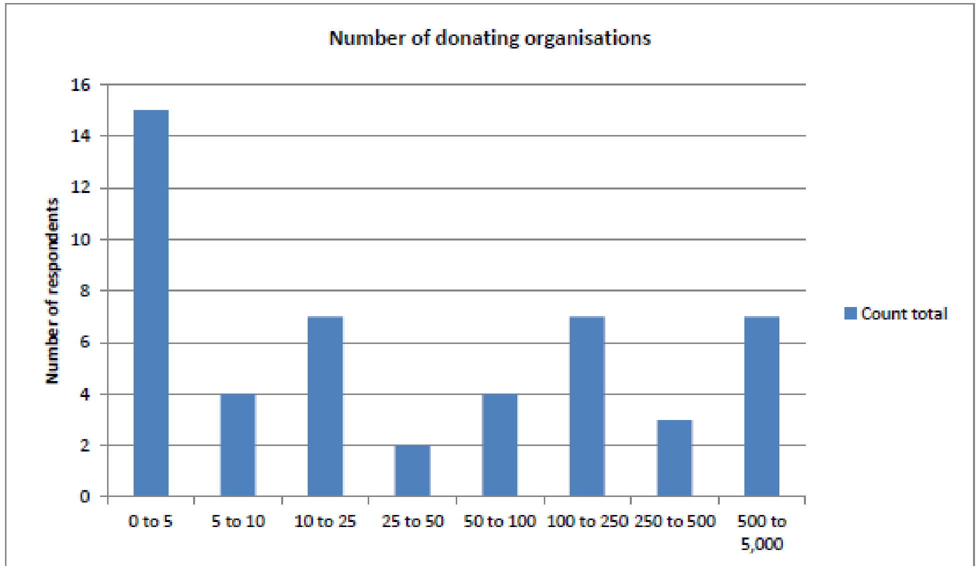
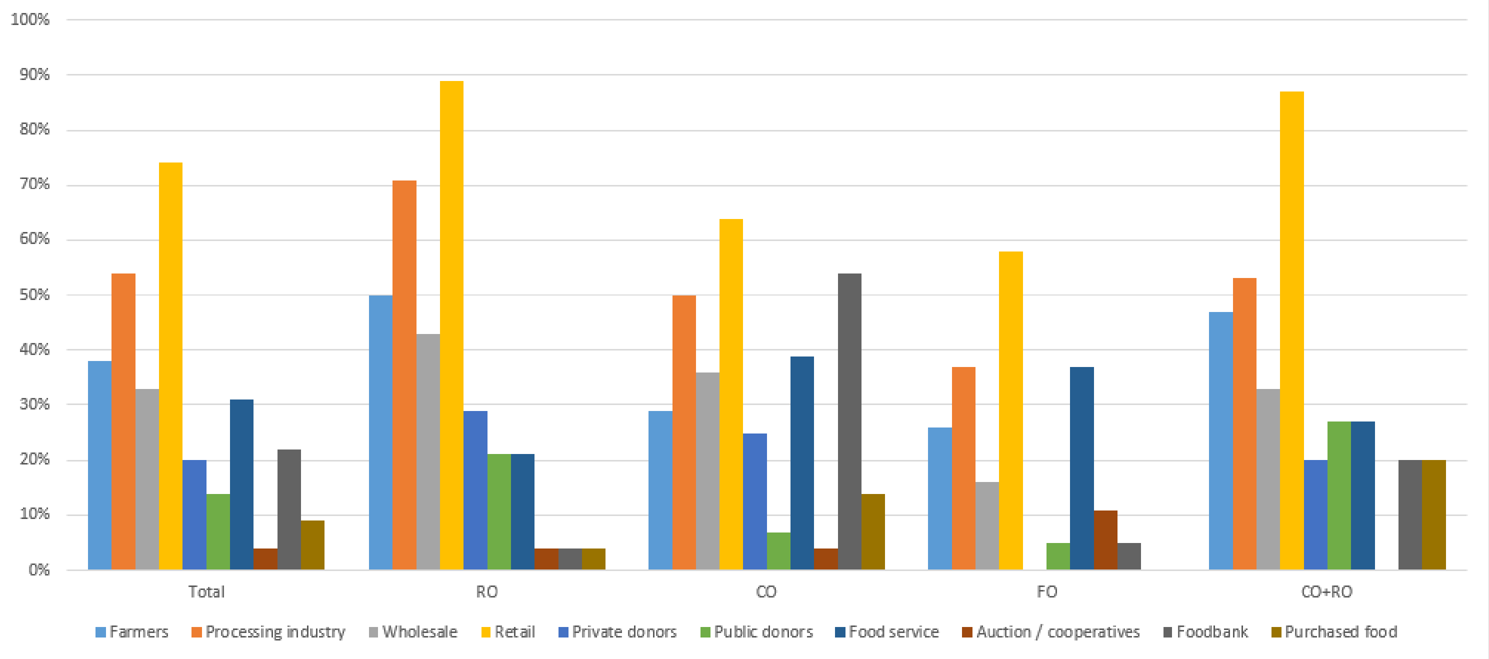
Sub-task 2.2 Mapping Criteria

Sourcing sectors and recipients:

- Retailers chains dominate
- Some organisations have indicated to distribute purchased food in addition to the surplus food, others mainly rely on purchased food.
- The numbers of donors vary per organisation



- A number of organisations participates in FEAD or gets food from farmers that get CMO funding; Some willing to do in the future. Some used FEAD in the past, but not anymore; some are not eligible to apply for the programme; some just never heard of it; some don't want it; some indicate administrative barriers; use of CMO much lower, doubts whether (donors are) acquainted.



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Sub-task 2.2 Mapping Criteria

- Some organisations redistribute food to a few charities, other organisations have a very large network of receiving charities (several thousands)
- **Infrastructure and logistics**: little sophisticated equipment like cool/freeze vans and a dedicated logistic centre
- Identification of various delivery models:

Delivery models	
RO, CO and mixed RO+CO	The food is picked up at the donor's site (including gleaning), and/or a food bank in case of COs. Sometimes the food is delivered to the organisation by the donor.
RO	Involved in re-packaging and sorting into the larger batches, which are either picked up by the CO or are delivered to the CO.
CO and mixed RO+CO	Are involved in re-packaging and sorting into the smaller batches, and/or in preparing meals. The food is then picked up by the beneficiaries or delivered to the beneficiaries.
RO, CO and mixed RO+CO with multiple outlets/warehouses	Food is often transported between the organisation's different sites.
FO	Do not transfer food from their site but, rather, are involved in facilitating the process (e.g. matchmaking, quality control, awareness campaign).

Sub-task 2.2 Mapping Criteria

Organisational capacity:

- Charities have the least employees. Most organisations rely on regular employees in combination with a volunteer base. A few organisations operate with volunteers only, and few have only employed personnel. Most organisations said to have about 10 to 50 regular volunteers.

- A source of (partly) paid and voluntary staff are the so-called 'special groups' within the society, e.g. people with disabilities, day release prisoners, asylum seekers, people from the civil service, or people that participate in government funded reintegration programmes

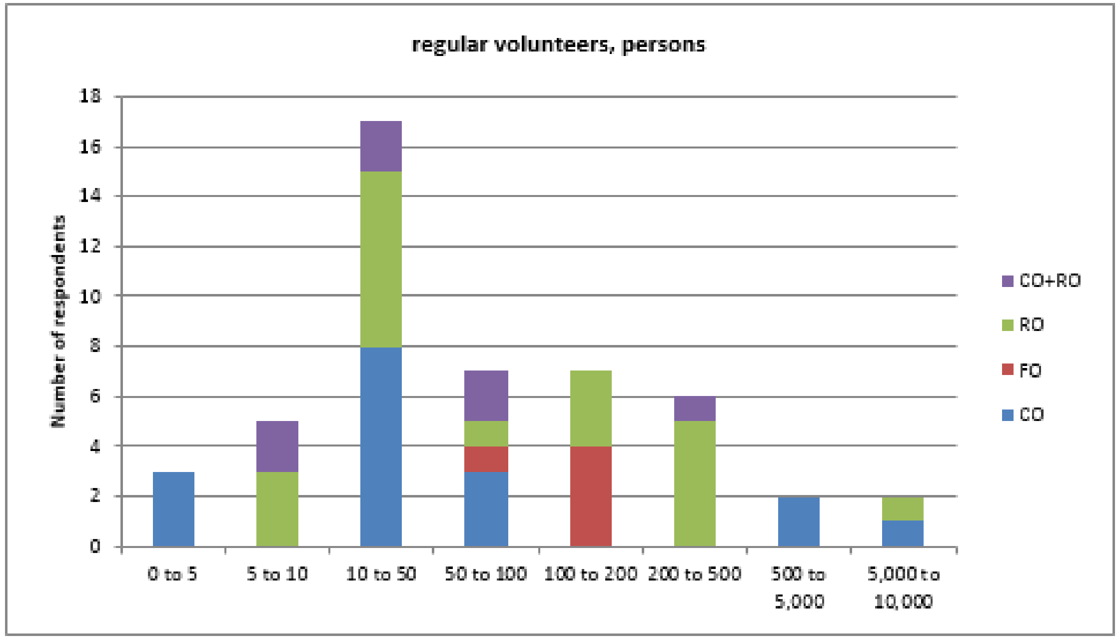
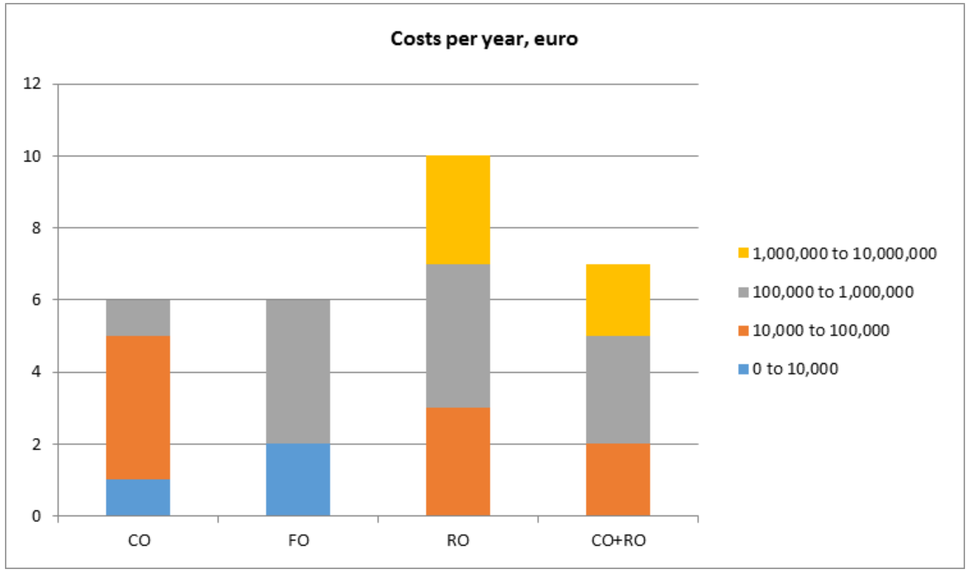


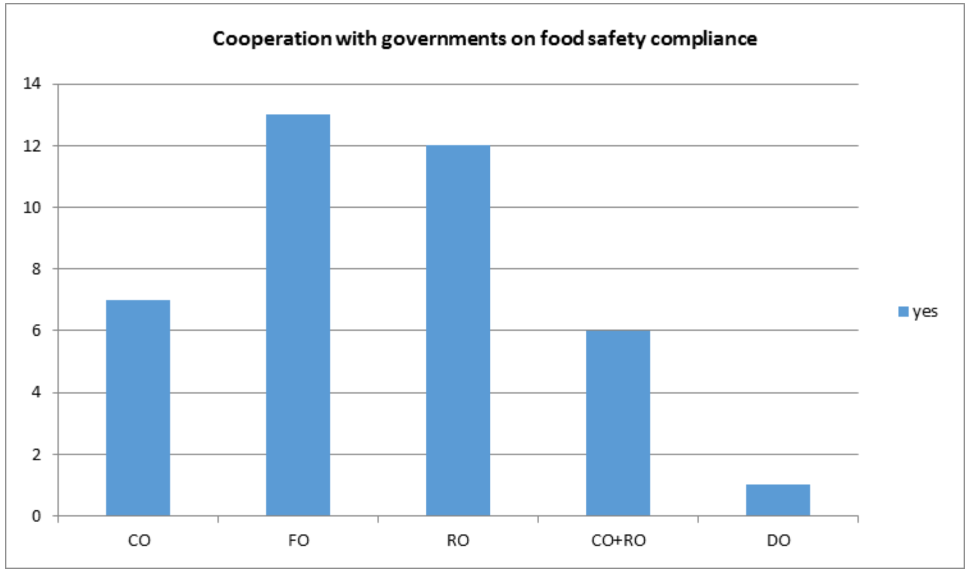
Figure 25 Number of regular volunteers (n= 49)

Sub-task 2.2 Mapping Criteria

- **Operational costs: ROs and CO+ROs have highest costs;** personnel, house and storage rental, and logistics and transportation. Other costs are energy, website and IT solutions, purchased food and other goods for distributing, legal assistance and food safety control.
- Large difference in operational costs per beneficiary (few – 150 Euros); Eastern MS tend to have lower costs per beneficiary.
- Financial sources: donations, subsidies, public funding, operational credit, entrepreneurial activities, fee/payment models.



- **Network relations: for demand, supply and food safety issues.** Including matching supply and demand of food surplus recovery and transfer, transport and logistics, food waste and/or poverty awareness, capacity issues, quality control and compliance with food safety and food hygiene issues



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Sub-task 2.2 Mapping Criteria

Food Donation Data

FEBA member food banks distributed the equivalent of 2,7 million meals every day, which equals to **501 thousand tonnes** of food distributed to **6.6 million people** in Europe in 2017. 16,200 employees were involved in this process, of which 86% are volunteers.

FEBA Member Country	# of FB & Branches	Qty Collected Total T	Qty Collected per Source: EU withdraw T	FEAD T	Industry T	Retail T	In-store food drive
Austria	1	615	0	0	130	486	
Belgium	9	16,488	660	8,079	4,122	3,298	330
Bulgaria	1	287		0	176	111	
Czech Rep.	14	2,338	0	609	250	1,167	312
Denmark	2	920		0	552	368	0
Estonia	15	1,874	0	675	270	865	64
France	102	112,876	4,598	22,912	26,987	46,194	12,185
Greece	1	1,014	48	681	183	46	57
Hungary	1	9,222	0	0	633	8,326	263
Ireland	1	356		82	200	40	34
Italy	21	90,901	8,985	46,443	17,214	9,465	8,794
Lithuania	6	7,466	160	2,154	350	4,350	452
Luxembourg	1	67	0	0	0	0	67
Netherlands	8	15,123	1,043	0	14,080	0	0
Poland	32	67,116	15,724	34,926	5,779	9,100	1,587
Portugal	23	23,202	5,500	289	11,572	731	5,110
Slovakia	1	2,424	653	277	135	1,329	29
Spain	77	148,924	29,774	44,152	24,381	19,108	31,509
United Kingdom	24	15,827	0	0	3,724	10,911	1,192
TOTAL	340	517,041	67,144	161,279	110,739	115,895	61,983

FEBA Member Country	Qty Distributed Total T	# of partner charities	# of beneficiaries	" Workforce": Volunteers "regular"	Salaried	Social contracts	Total
Austria	615	117	19,000	18	12	1	31
Belgium	16,266	626	145,408	303	0	18	321
Bulgaria	280	52	7,844	6	4	0	10
Czech Rep.	2,180	478	96,000	16	53	3	72
Denmark	920	200	10,000	180	14	3	197
Estonia	1,874	110	9,500	200	20	0	220
France	100,916	5,300	970,000	6,154	530	276	6,960
Greece	970	173	37,515	9	8	0	17
Hungary	9,065	354	155,000	40	10	0	50
Ireland	338	60	3,500	2	4	3	9
Italy	84,074	8,042	1,584,271	1,790	129	0	1,919
Lithuania	7,275	666	123,671	389	46	17	452
Luxembourg	64	11	400	10	0	0	10
Netherlands	15,624	168	134,000	120	0	0	120
Poland	69,024	3,342	514,763	174	202	39	415
Portugal	23,790	2,658	369,105	374	77	23	474
Slovakia	2,424	128	105,000	145	1	0	146
Spain	147,909	8,148	1,537,134	3,217	158	380	3,755
United Kingdom	14,061	10,178	753,172	650	137	0	787
TOTAL	497,669	40,811	6,575,283	13,797	1,405	763	15,965

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Sub-task 2.2 Mapping Criteria

Food Donation Data (Reported by the Scoping Interview Respondents)

Quantitative Indicator	Amounts
Amount of surplus food donated to the organisation, in tons	853.531
Amount of surplus food redistributed, in tons	845.616
Amount of surplus food redistributed to CO, in tons	366.220
Amount of surplus food redistributed to end beneficiaries, in tons	456.908
Number of donating organisations	22.098
Number of receiving charities	34.601
Number of receiving end beneficiaries	19.709.809

- Acceptance level (from DO to RO/CO): estimated 97%
- Redistribution level (from RO/CO to CO/End-beneficiaries): estimated 94% of accepted food surplus

Sub-task 2.3 Maturity levels

T2.3 Analysis of strengths & weaknesses

- Analytical framework
- Scoping interviews with D&R experts and MS respondents
- Online survey
- Interactive working session with Subgroup on Food Donation

➢ For four different types of organisations, a number of operational models were defined

	Model 1	Model 2	Model 3	Model 4
CO	Small CO with kitchen and deliveries, no storage	Small / medium size CO with pick-up model	Small CO, pick-up and delivery, with storage	Large charities
RO	Large national food banks	Smaller national food banks	Smaller ROs that are not national food banks	
RO+CO	Large national food banks with local outlets	Small food banks with local outlets	Local Red Cross model	
FO	NGOs targeting food waste	Online platforms to connect donors and beneficiaries	Management, legal, logistical support	Social supermarkets, social fridges

Sub-task 2.3 Maturity levels

- Age: Organisations that are older will have more established operational models and will also tend to be larger; The younger organisations are most typically facilitating organisations.
- Size: For all types of organisations the amount of redistributed food tends to increase with the age of the organisation.
- Sourcing sectors: Positive relation is confirmed for ROs.
- Recipients: For all types of organisations the number of beneficiaries tends to increase with the age.
- Infrastructure & logistics: Positive correlation was found for the number of warehouses.
- Organisational capacity: Positive correlation with the number of volunteers.
- No significant relations were found with the frequency of the various barriers for redistribution.

Table 15 Relationship between maturity and the operational models

	Age	Mean age	Size in tons	Mean size, in tons	Size in employees	Mean employees
CO, model 1	+	33	0/-	3	0	8
CO, model 2	-	15	0	26	0	17
CO, model 3	--	13	0	1508	0	10
CO, model 4	0	22	+	506	+	522
RO, model 1	-	6	0/-	1014	0	38
RO, model 2	0/-	16	0	1160	-	11
RO, model 3	++	24	++	34400	++	166
CO+RO, model 1	0	25	++	207764	++	16190
CO+RO, model 2	-	12	0/-	6065	-	177
CO+RO, model 3	+	63	0/-	1081	0	3129
FO, model 1	+	20	0	562	0	15
FO, model 2	-	7	+	4939	0	27
FO, model 3	+	21	0	300	0	3
FO, model 4	-	6	0	13	0	7

++ and + , and - - and - indicate significant differences from other group members (organisation types CO, RO, CO+RO, FO), while 0 indicates no significant difference from group mean.

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Subtask 2.4 Barriers

	Top-4 limitations	Least and most frequently mentioned limitations per model
Charity organisations	1. Volunteers / Staff 2. Financial resources 3. Number of donations/donors 4. Storage capacity	• Model 1: Small charities with kitchen, deliveries, no storage. Organisations have reported fewer problems with logistics, financial resources and storage capacity. • Model 2: Medium charities with storage and pick-up by beneficiaries. Organisations report fewer logistical problems, but more financial limitations. • Model 3: Medium charities with storage and delivery to beneficiaries. Organisations report more problems with ICT systems and volatile supply/demand. • Model 4: Large charities. Organisations report limitations concerning logistics, donor guidelines and liability issues.
Redistribution organisations	1. Financial resources 2. Logistics 3. Staff / volunteers 4. Regulatory barriers	• Model 1: Smaller food banks with limited geographical coverage. Organisations report fewer limitations in the number of donations. • Model 2: Smaller national food banks. Organisations report more problems with regulations and general awareness about food waste. • Model 3: Large national food banks. Organisations report more problems with logistics and cold chain, but fewer problems with regulations.
CO + RO organisations	1. Regulatory barriers 2. Financial resources 3. Staff / volunteers 4. Logistics / storage capacity	• Model 1: Large national food banks with local outlets. Organisations report issues with liability and with training of volunteers/staff. • Model 2: Small food banks with local outlets. Organisations report fewer problems with training, ICT and cold chain. • Model 3: Local Red Cross model. Organisations report issues concerning opening hours of donors and perishability.
Facilitating organisations	1. Regulatory barriers 2. Financial resources 3. Staff 4. Logistics	• Model 1: NGOs targeting food waste. Organisations report about logistics, financial resources and storage capacity. • Model 2: Online platforms to connect donors and beneficiaries. Organisations report problems with number of donors, but fewer issues concerning storage and logistics. • Model 3: Management, legal, logistical support. Organisations mention ICT tools to match supply and demand and opening hours of donors as limitations. • Model 4: Social supermarkets, social fridges: Organisations report about regulatory barriers and the fact that FEAD is not available due to strict rules.

Subtask 2.4 Relation to legislation

- Most actors participating in this study are highly aware of the applicable legislations regarding food safety and hygiene, information (mainly date marking items) and fiscal instruments (VAT issues).
- Legislative barriers are not necessarily the top limitations for food donation and redistribution (33/94 respondents)
- Main legislative barriers are related to food & hygiene regulations
- More important are barriers related to:
  - Financial costs
  - Organisational capacity

Barrier ID code	Member State	Operational Model	Food Safety	Food Information	VAT / Taxation	Interpretation	FEAD / CMO	Other Governmental funding	Other
1	AT	CO+RO Model 3	1						
2	AT	RO Model 2				1			
3	BE	FO Model 2			1	1			
4	BE	FO Model 4			1		1		
5	BG	CO Model 1	1		1				
6	BG	RO Model 2			1				
7	CZ	FO Model 1							1
8	CZ	RO Model 2	1						
9	DE	CO+RO Model 3	1						
10	DE	FO Model 2	1						
11	DK	RO Model 2	1						
12	EE	CO Model 3						1	
13	EE	CO+RO Model 3							1
14	ES	CO+RO Model 1	1						1
15	ES	CO+RO Model 3				1			
16	FI	CO Model 2						1	
17	GR	FO Model 2	1						
18	HR	RO Model 3				1			
19	HU	RO Model 2	1			1			
20	IE	CO Model 2	1						
21	LT	CO Model 4	1						
22	MT	CO Model 2			1				
23	MT	CO+RO Model 2					1		
24	NL	CO Model 2	1						
25	NL	CO+RO Model 2							1
26	PL	FO Model 4			1				
27	PL	RO Model 3				1			
28	PL	RO Model 3			1				
29	RO	RO Model 3							1
30	SE	CO+RO Model 2			1				
31	SE	DO				1			
32	SI	FO Model 1				1			
33	SI	RO Model 2							
		totals	*12*	*0*	*8*	*8*	*2*	*2*	*5*

Thank you for your attention!

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