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The carbon footprint of the activities of the Food Bank of Navarra

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* Link to the report: https://bancoalimentosnavarra.org/wp-content/uploads/2020/10/Informe-Huella-Carbono-BAN.pdf

1. Context, concepts and methodology

1. Context

1. Concepts and methodology

Carbon footprint of an organization

- Measures the total GHG emissions caused directly or indirectly by an organization.
- Unit: tonnes of CO_2 equivalent (t CO_2e)
- GHG emissions are measured in terms of CO_2, since it is the GHG with the greatest influence on global warming

* GHGs: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydroflucarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), nitrogen trifluoride (NF_3)

1. Concepts and methodology

Calculation of GHG emissions

GHG emissions (t CO_2e) = Activity data x Emission factor

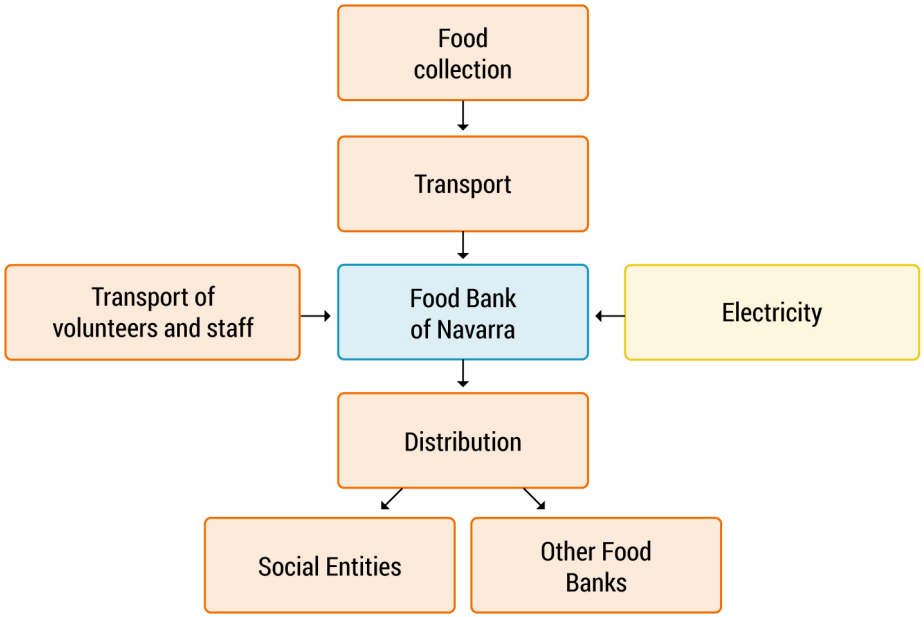
Activity data: Data on the magnitude of a human activity resulting in emissions.
Source: Consumption invoices, vehicle mileage, food records destined to certain locations, interviews of volunteer transport.

Emission factor: A coefficient that quantifies the emissions of a gas per unit activity.
Source: MITECO, OCCC, ADEME, MCP.

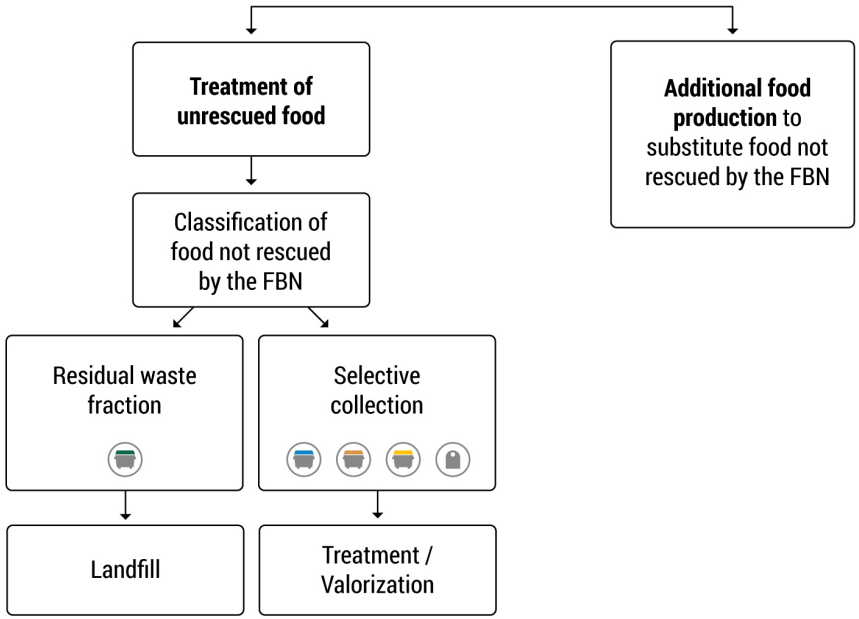
Source: MITECO (2016), GHG Protocol (2005), ISO 14064-1 (2019), IPCC (2019)

1. Concepts and methodology

Emissions generated "With the action of FBN"



Emissions avoided by using food "Without the action of the FBN"



Annual carbon balance of the FBN =
+ Emissions generated by the FBN
– Emissions avoided by the use of potentially disposable food

2. Carbon footprint of the activities of the FBN

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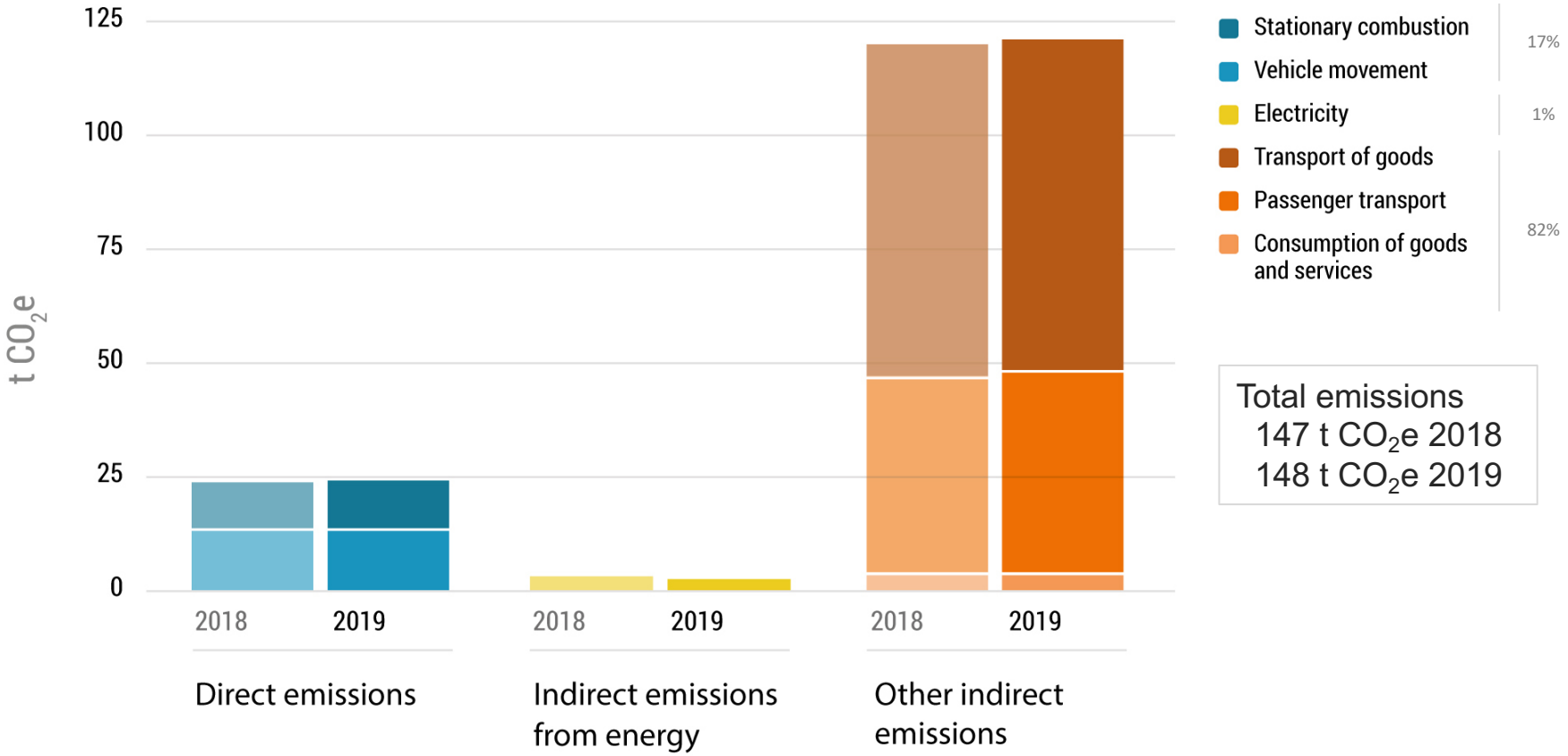
GHG emissions from the FBN activities in 2018 and 2019



3. GHG emissions in a scenario "without the action of the FBN"

3. GHG emissions in a scenario "without the action of the FBN"

GHG emissions as a result of two elements:

- **The additional food production** that would be necessary for the beneficiaries to feed in the absence of the FB.
- **The waste management**, mostly organic, that the food wasted would generate in controlled landfills or during its treatment.

3. GHG emissions in a scenario "without the action of the FBN"

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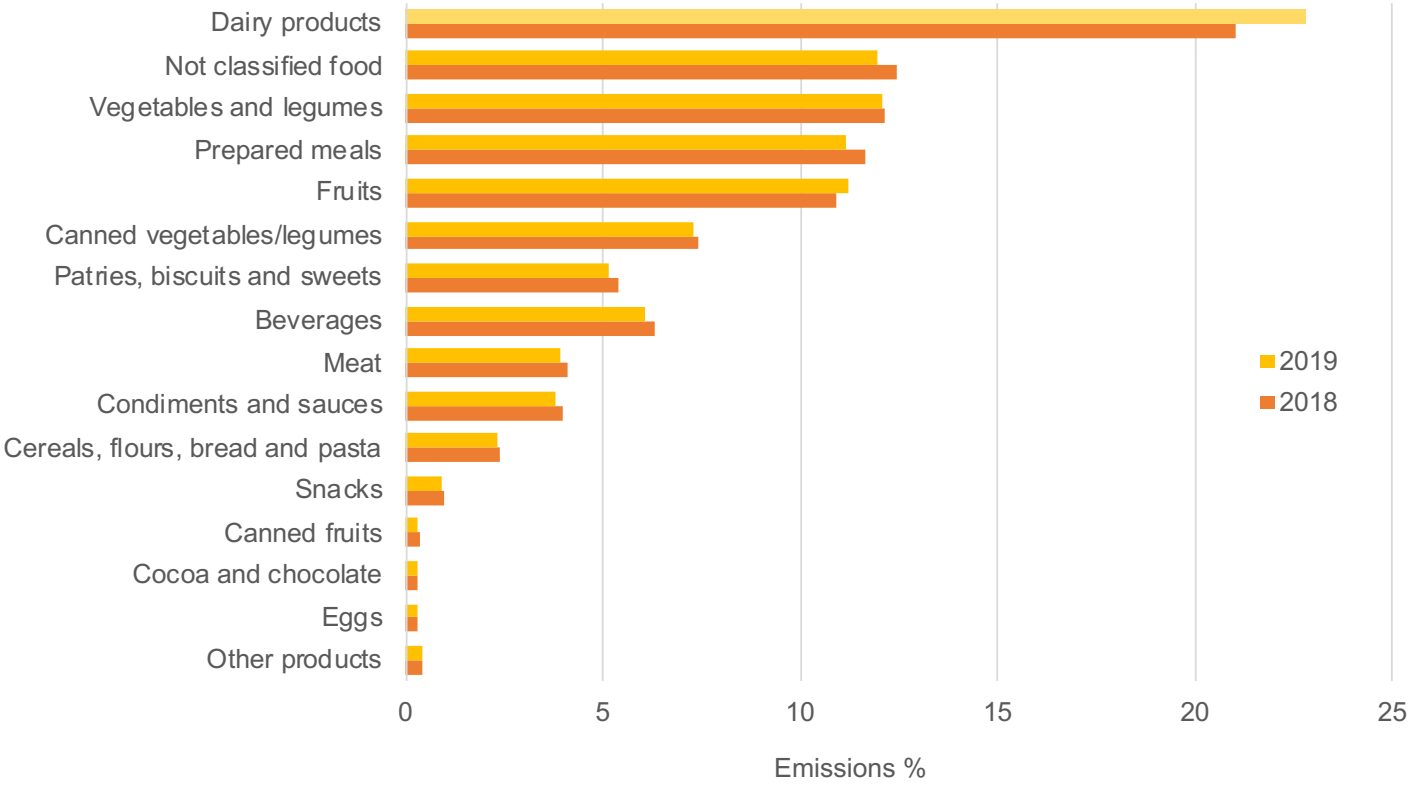
GHG emissions of the main categories of food not wasted by the action of the BAN in 2018 and 2019



Total emissions
4,272 t CO_2e 2018
3,914 t CO_2e 2019

Activity
2,768 t 2018
2,434 t 2019

3. GHG emissions in a scenario "without the action of the FBN"

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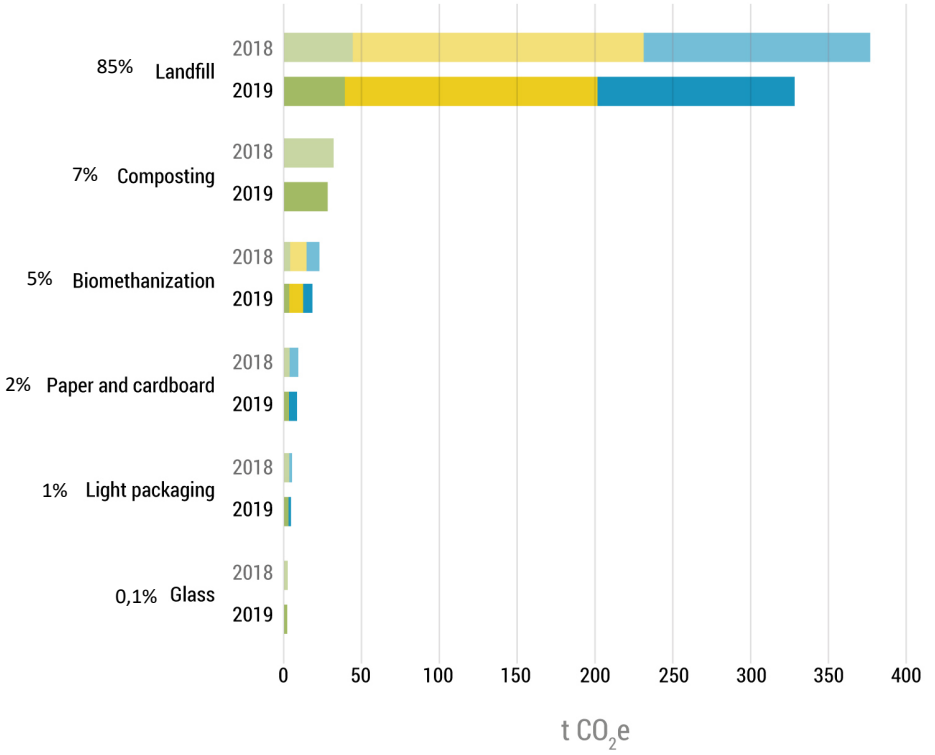
GHG emissions related to waste management by type of treatment and location in 2018 and 2019



Total emissions
443 t CO_2e 2018
390 t CO_2e 2019

Type of treatment	Activity (Tons)		Emissions (t CO_2e)	
	2018	2019	2018	2019
Landfill	601	529	376	330
Composting	179	158	31	27
Biomethanization	1.114	980	22	20
Paper and cardboard	180	158	9	8
Light container	307	270	5	4
Glass	47	42	0,4	0,3
Others	339	298		
Total	2.768	2.434	443	390

4. Annual carbon balance of the FBN

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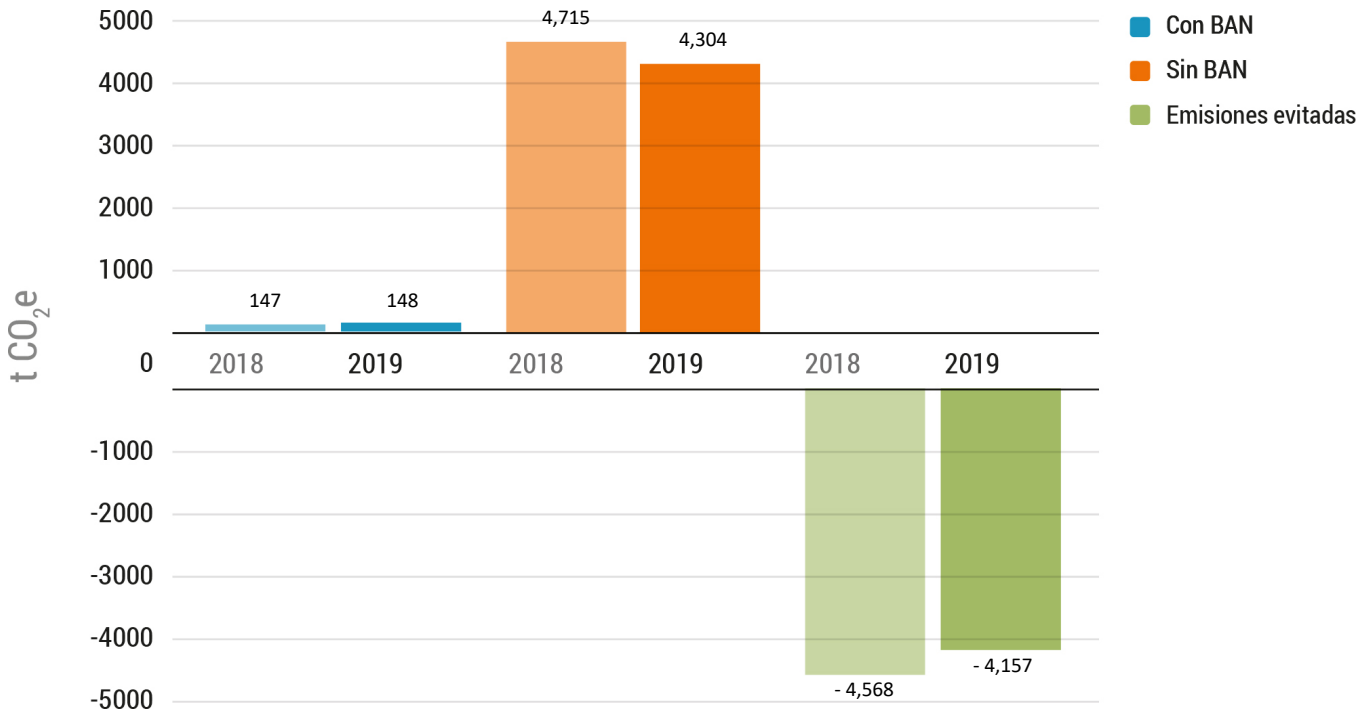
GHG emissions in the scenarios “with” and “without” the action of the BAN, and emissions avoided by the BAN in 2018 and 2019



In summary

- The **carbon footprint of the FBN** was 147 t of CO_2e in 2018 and 148 t of CO_2e in 2019, mostly associated with the transport of food and volunteers.
- In both 2018 and 2019, the **emissions avoided** by the use of food, which would otherwise be wasted, are notably higher than those generated by the activities of the FBN.
- Consequently, the activity of the FBN prevented the emission of 4,568 t of CO_2e in 2018 and 4,157 t of CO_2e in 2019.
- These results highlight the **importance, not only social but also environmental**, of the FBN, since it prevents a large amount of GHG from being emitted into the atmosphere.

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Thank you!

Questions welcome

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