

The EU food system monitoring framework and dashboard

Presentation at policy seminar "Accelerating Action to Reduce Greenhouse Gas Emissions in the Food Value Chain"

Brussels, 13 June 2025

Outline

- What is the EU food system monitoring framework?
- Why to monitor?
- What to monitor?
- How to monitor?
- Data sources and data points of the indicators
- Example of indicator visualization
- GHG related indicators in the system
- Next steps



What is the EU food system monitoring framework?

https://datam.jrc.ec.europa.eu/datam/mashup/EU FOOD SYSTEM MONITORING/index.html





 A tool to assess the transition towards the sustainability of the food systems in the EU

- Main components
 - A conceptual (data) model to describe the main elements FS and its sustainability aspects
 - Indicators to measure the state/progress
- Main deliverable
 - Dashboard published on 26/11/2024

https://publications.jrc.ec.europa.eu/repository/handle/JR C137971



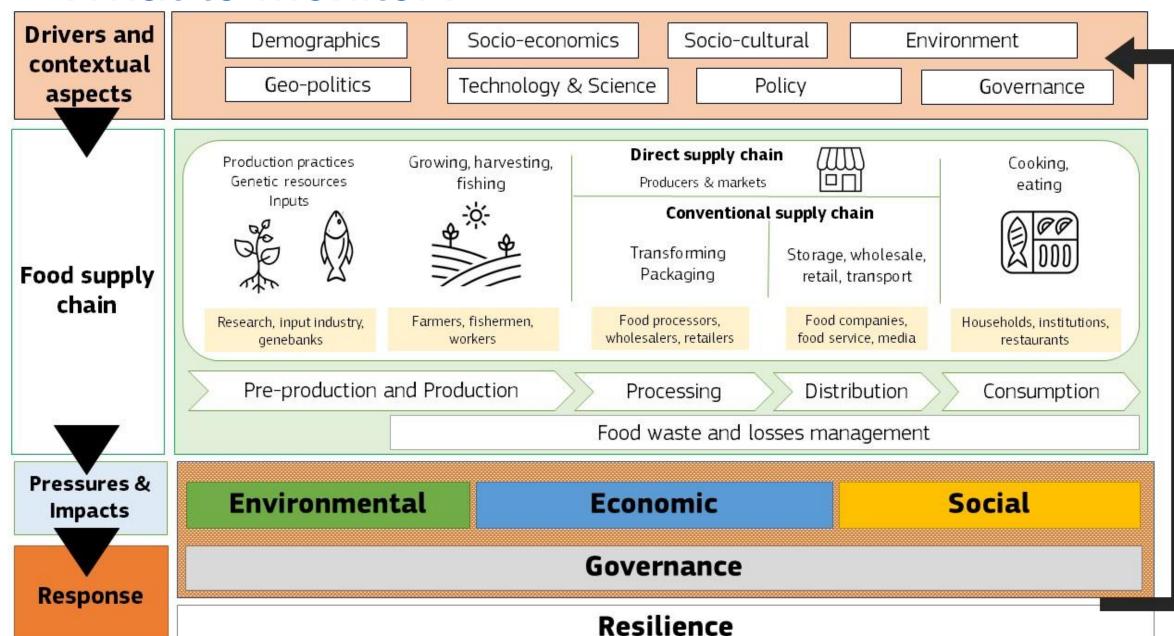
Why to monitor?

- Pivotal role of food systems to
 - preserve balance among environment and human activities (FAO 2024, 2018),
 - > stay within the planetary boundaries (Conijn et al., 2018; Gerten et al., 2020; Springmann et al., 2018),
 - achieve Sustainable Development Goals (Food and nutrition security, Fair working conditions, Mitigating climate change).
- Collect knowledge scattered in different monitoring and reporting systems
- Track policy impact, foster research and dialogue





What to monitor?



How to monitor?

Environmental

Climate change

GHG emissions

Pollution and antimicrobials

- Pollution
- Antimicrobials

Sustainable use of resources

- Land and Soil
- Water
- · Aquatic living resources Energy

Biodiversity

- Biodiversity conservation and restoration of natural ecosystems
- · Genetic biodiversity of food production systems

Cross-cutting environmental

- · Food loss and waste
- · Circular economy
- Consumption footprint

Economic

Fair economic viability in food value chain

- Sectorial growth
- Market power and business structure
- Income distribution
- Price
- Trade

Development and logistics

- Technology and digitalisation
- Transport. accessibility and infrastructure

Social

Fair, inclusive and ethical food system

- Employment and working conditions
- Social protection and poverty
- Animal welfare

Food environment

- Food messaging
- Food availability
- Food affordability
- · Properties of food Food heritage

Nutrition and Health

- Nutrition and healthy, sustainable diets
- Health impact from
- Food security

Holistic view of the food supply chain:

- primary food production
- food processing
- distribution
- consumption (including health)

Comprehensive assessment of sustainability aspects are organised in:

- > 3 thematic dimensions (Environmental, **Economic and Social)**
- > 12 thematic areas (out of which 2 are horizontal)
- 38 domains

Select relevant indicators

- Screen existing for fitness for the purpose
- Develop own (JRC)

Horizontal

Governance

- Strategic planning and policies
- Effective implementation
- Accountability
- Shared vision

Resilience

- Preparedness
- Shock resilience
- Adaptation
- Transformation



Data sources and data points of the indicators

- Currently: public data (more than 300 indicators screened)
 - Statistics reported by MS to ESTAT,
 - Datasets of the JRC and EU agencies (includes both reported and modeled data),
 - Datasets of international organisations (FAO, OECD).
- In the future: other sources, e.g.
 - Market intelligence data
 - Outcome of observatories set up by Horizon Europe projects and partnerships
- Data points of the indicators in the dashboard
 - Frequency: in general yearly, but slowly changing phenomena may have longer intervals
 - > Spatial resolution: most frequently at the level of MS. Some indicators (e.g. in Trade domain) are represented by a single value at EU-27 level.



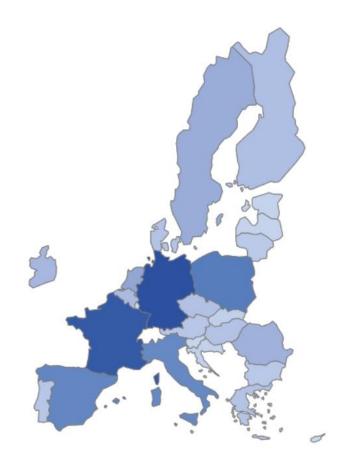
Example of indicator visualisation

kt CO2eq 164.53k

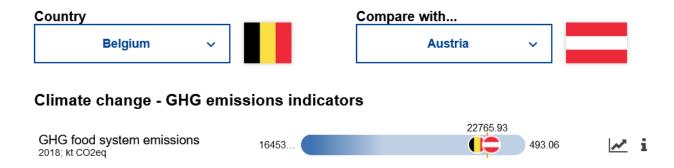
493.06

GHG food system emissions

2018



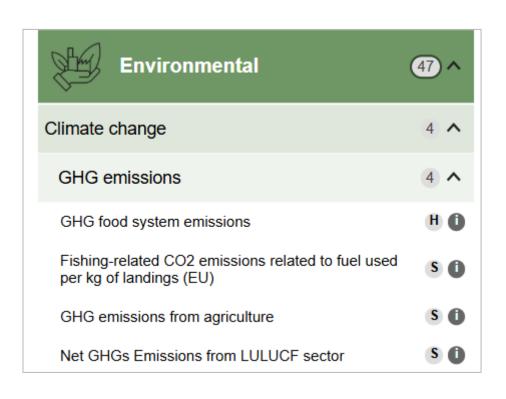
- EU overview
- Country profile (also in comparison)





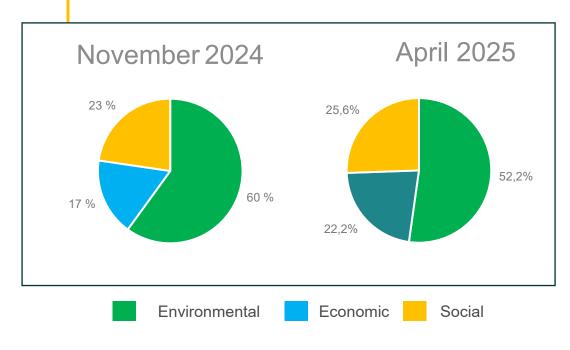
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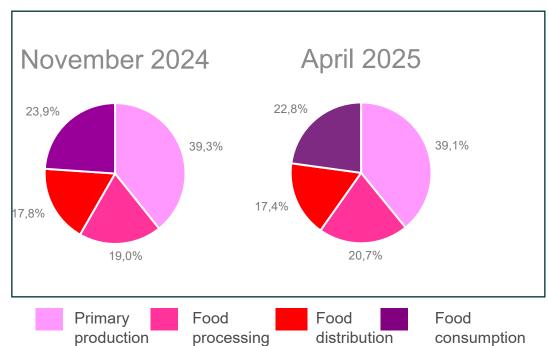
GHG related indicators in the system



- Publicly accessible indicators
 - One headline i(n the dashboard and the report)
 - ➤ Three secondary indicators (only in the technical report
- Other climate related indicators (adaptation) might be in other domains (e.g. agricultural practices beneficial for climate and environment in Sustainable use of resources - Land)

European





Next steps

- Development of new indicators giving priority to
 - Placeholders identified in the first phase of the project
 - Indicators linked to the middle of the supply chain food processing and distribution)
 - ➤ Economic and social indicators (to improve the balance with the environmental ones)
- Elaboration of the horizontal thematic areas (Governance and Resilience)
 - Scientific and technical framework for assessment
 - Indicators (including indices)
- GHG emissions indicators on disaggregated level
 - In pipeline: emissions related to livestock and food processing industry

European

Commission

Thank you!



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