FoSSNet
CONFERENCE 2025

Food Systems Science: Establishing a Common Framework and Network

First European Food Systems Science Conference

FoSSNet's stocktake on Food Systems Science and Education in Europe

26th March

Thom Achterbosch
Wageningen University & Research

Funded by the European Union

UK Research and Innovation

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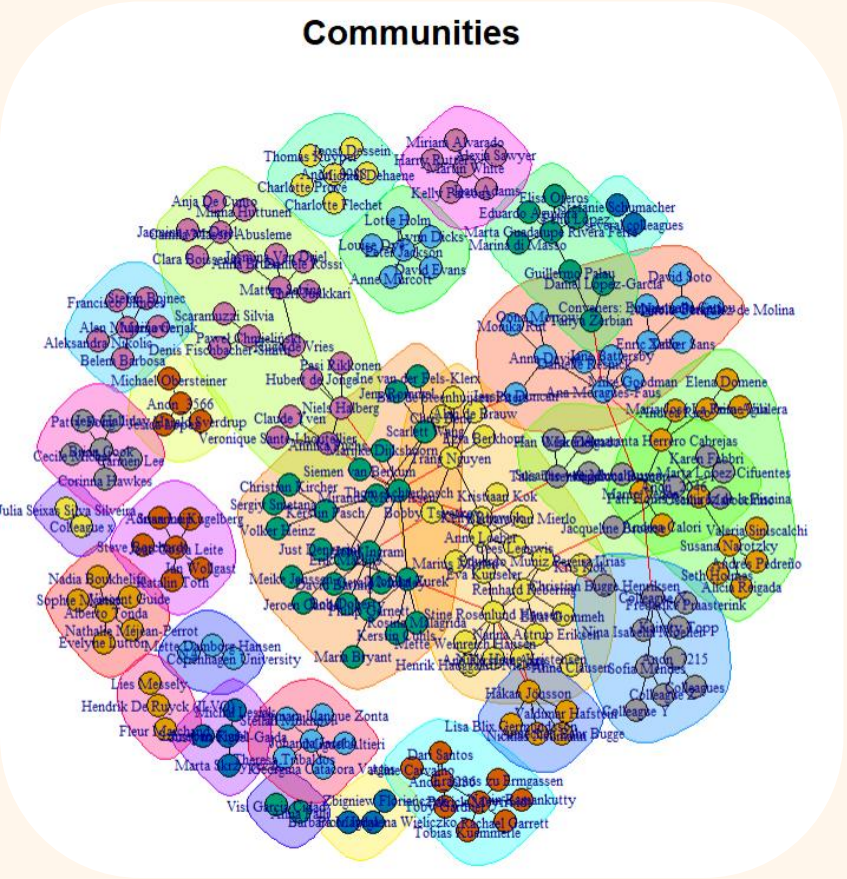
FoSSNet's stocktake of food systems science and education in Europe

Thom Achterbosch, Wageningen University & Research

25 March 2025

Motivation



"The Structure of Scientific Revolutions"

Social factors influence the acceptance of scientific knowledge

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Overview

Stocktaking on food systems science

1) Who's in the room?
2) Research needs and knowledge gaps
3) Themes, relations, themes, approaches in science and education
4) Examples and gaps

Makeup of the FoSSNet network

Preliminary results of the SNA

Social Network Analysis
Pre-conference survey

71 FossNet "core"

43 organisations

15 countries

- 71 respondents:
  - 33 FoSSNet consortium members (out of 63)
  - Others: external (invitees to the conference)
- 120 projects & 130 networks (related to FSS)

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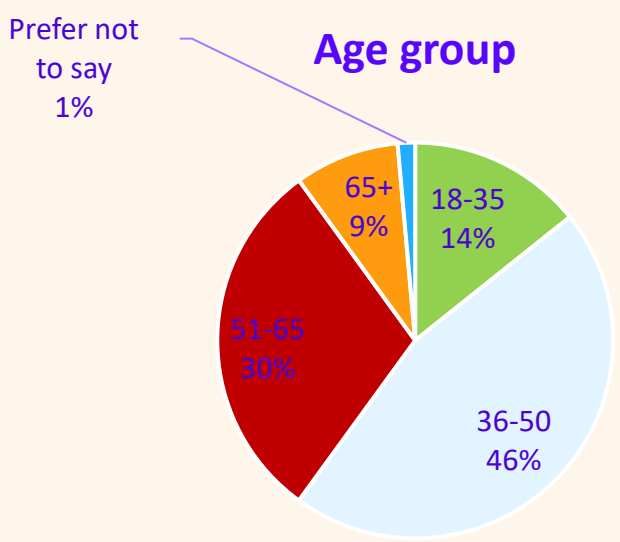
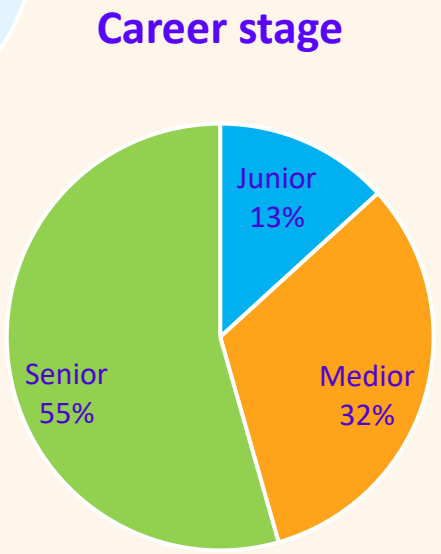
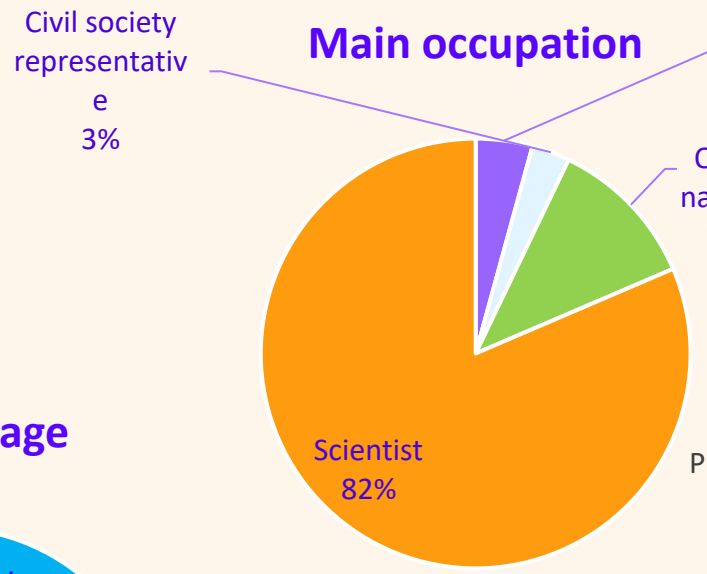
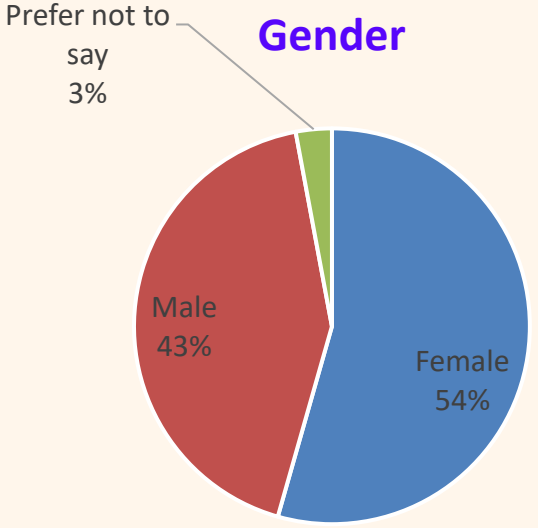
Survey remains open!

Diverse group of (mostly) scientists

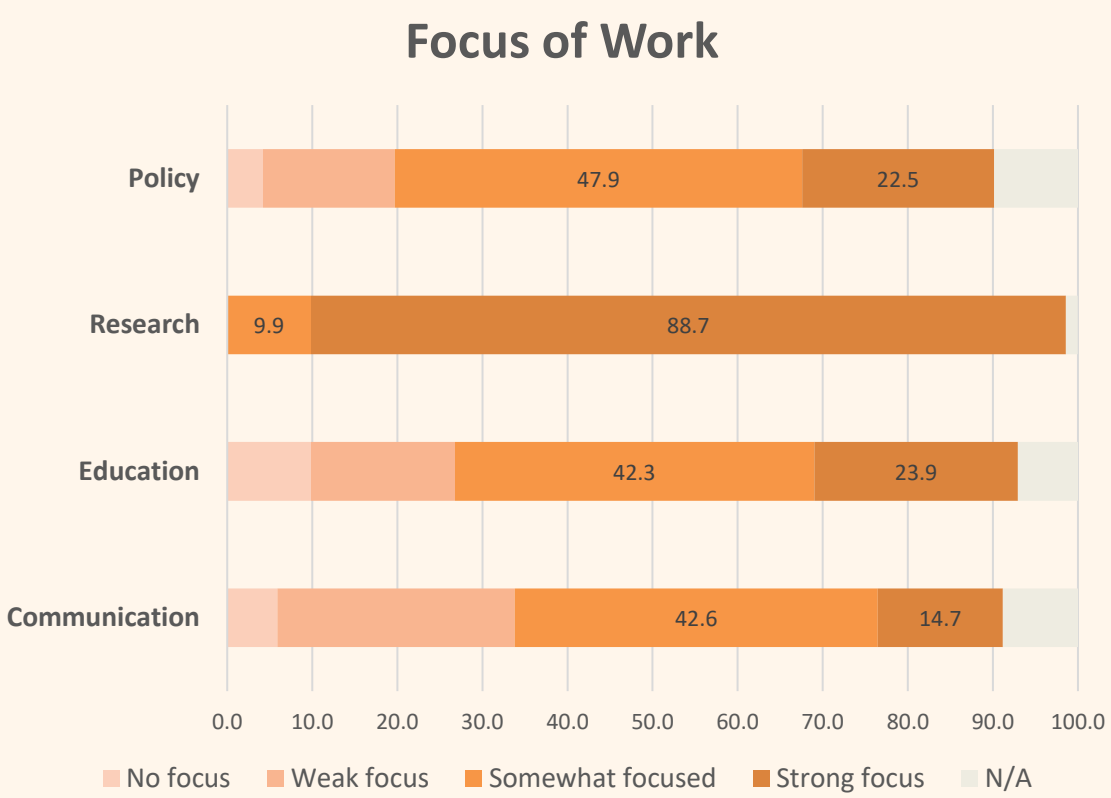


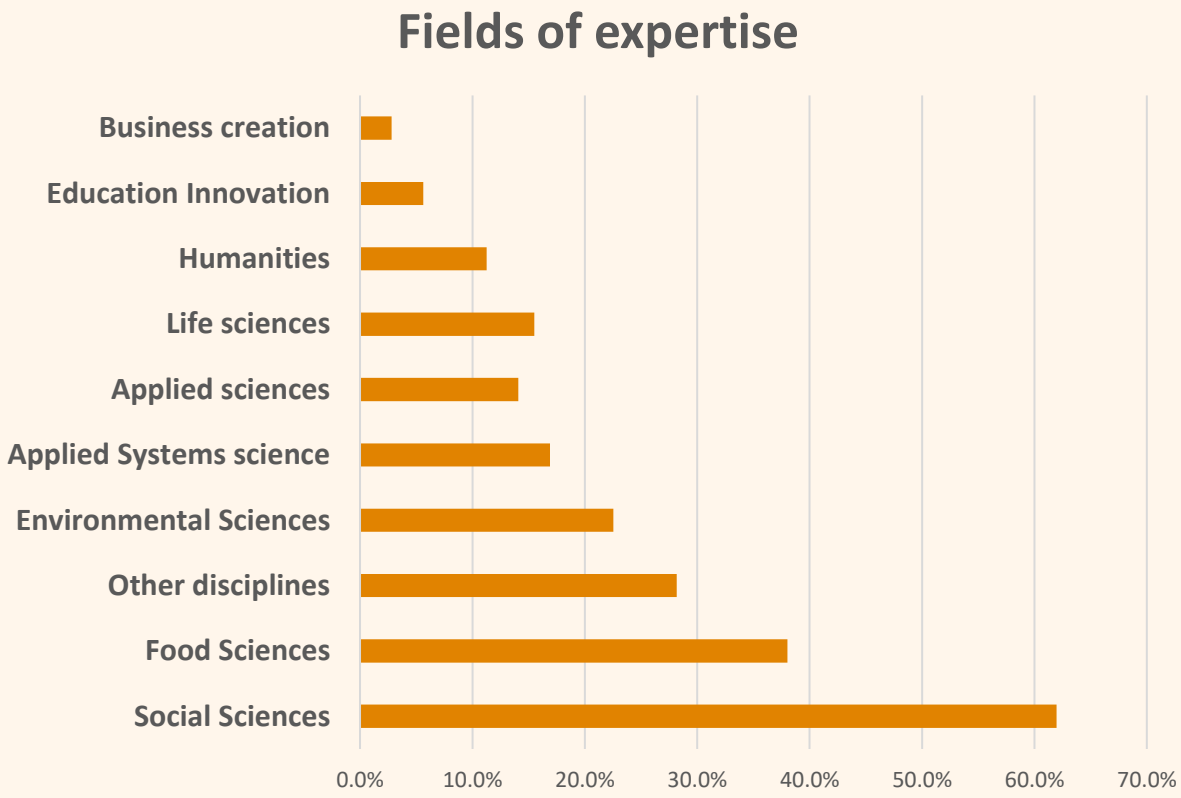






Diverse disciplines, social sciences as majority





The systems approach

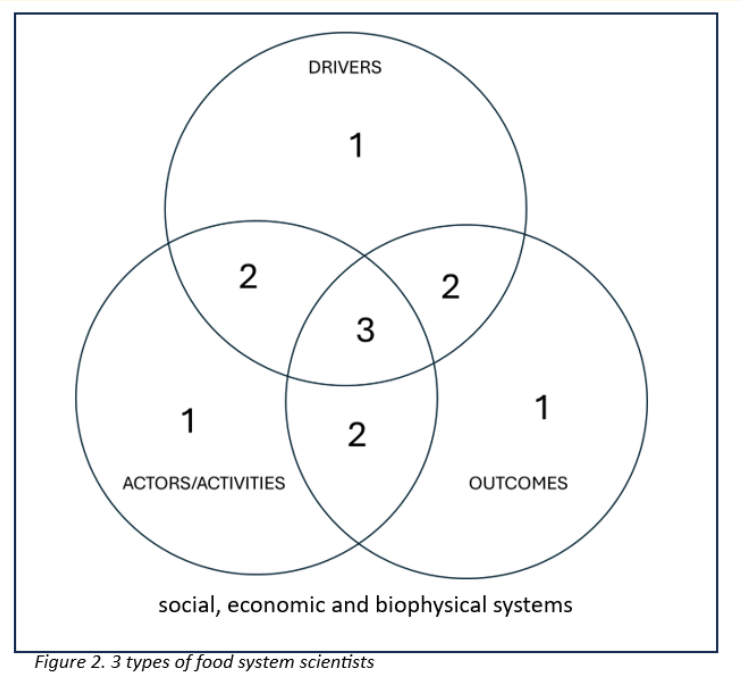
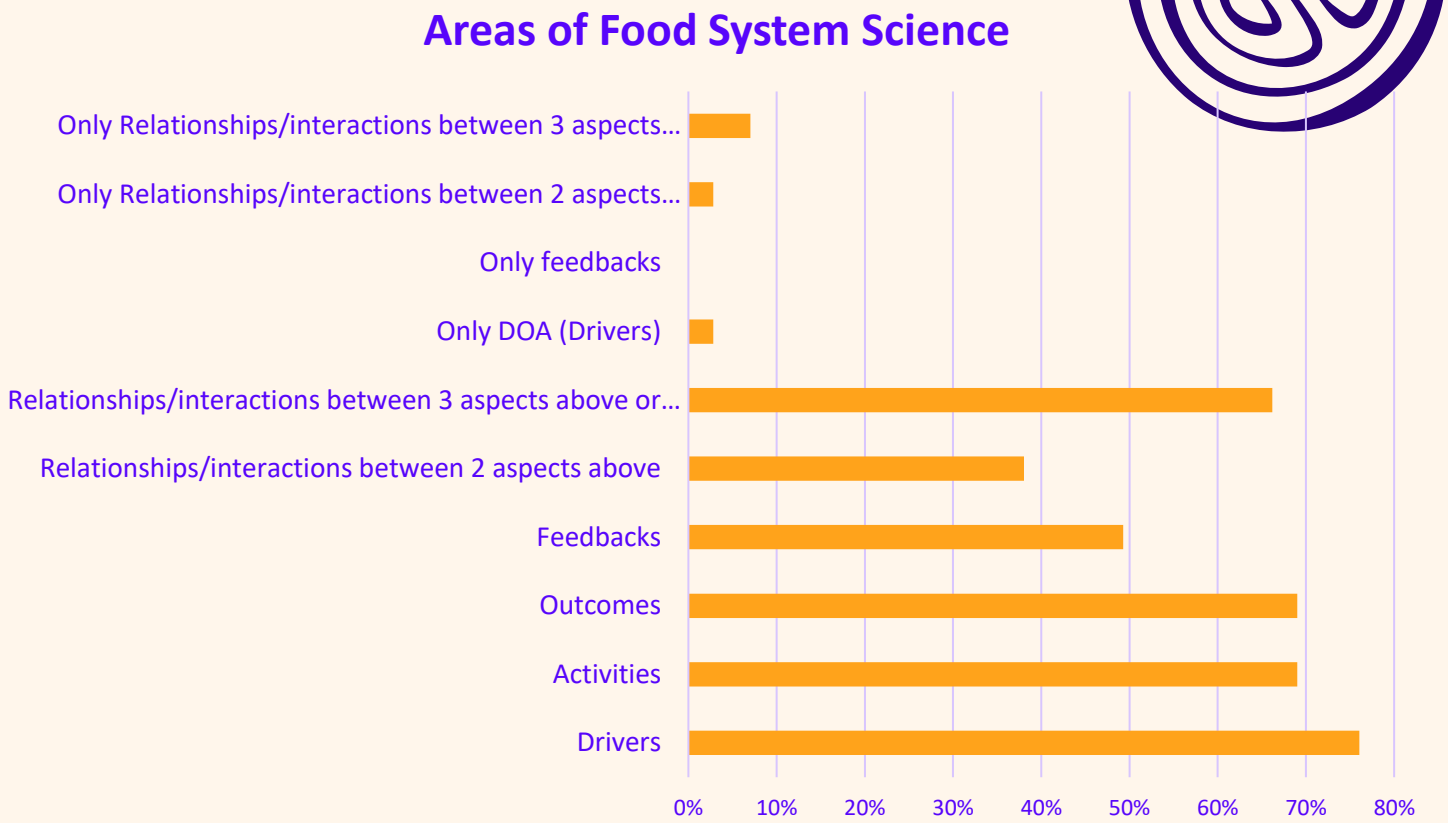


Figure 2. 3 types of food system scientists



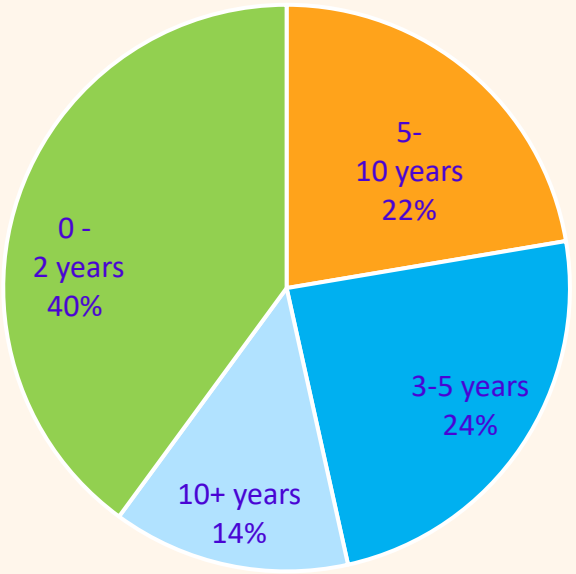
Relationships in FoSSNet

Preliminary results of the SNA

The network expands

Foundations of the relationships

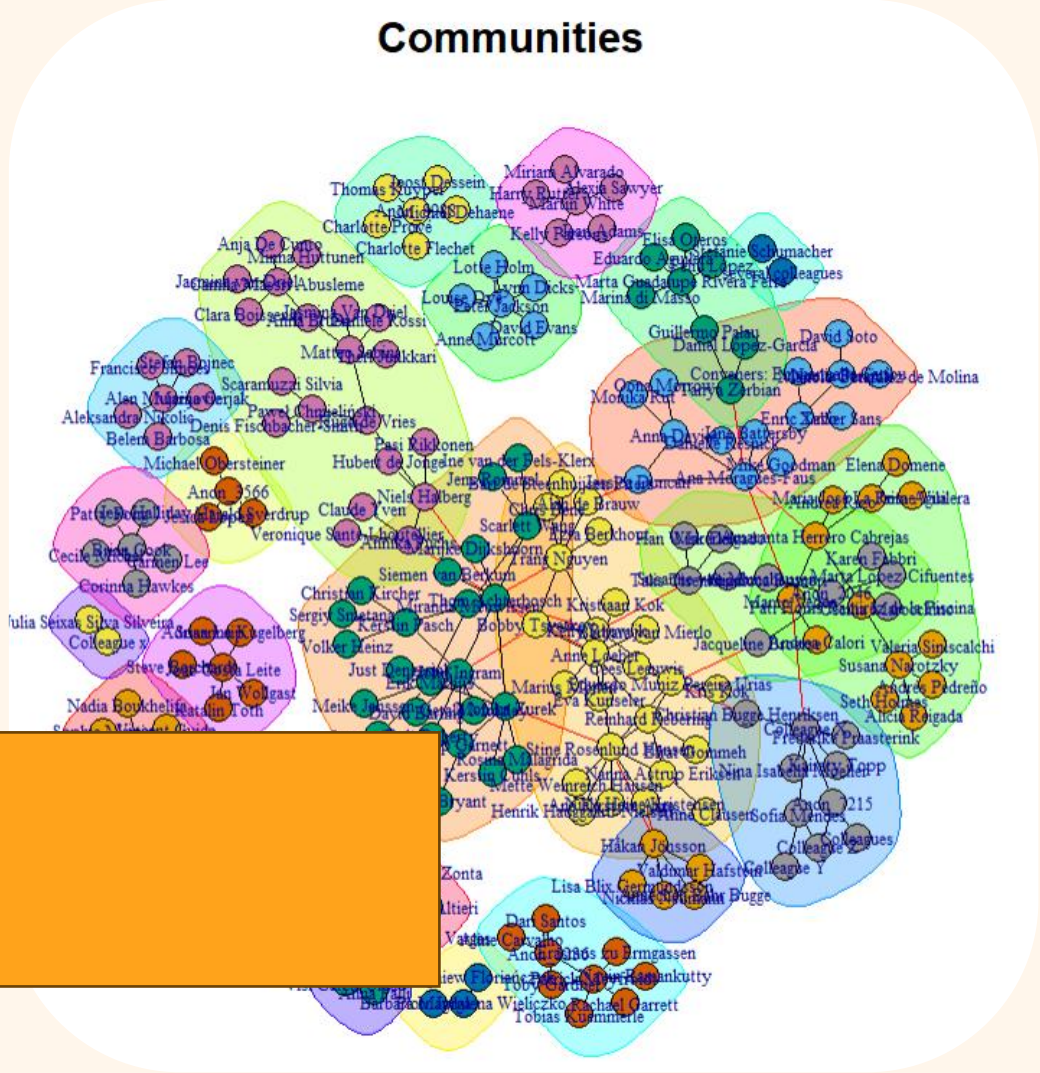
Duration of relationships



	Collaboration activities	% of all connections
RESEARCH	Working in projects together	79%
	Applying for research grants	60%
	Publishing scientific publications	58%
POLICY	Members of science advisory board steering committee	15%
	Development and formulation of policies	14%
	Other	8%
EDUCATION	Development of bachelors/masters/postgraduate programmes	13%
	Development of career trainings	11%
	Other	7%
COMUNICATION	Co-organisation of events and gatherings	44%
	Building partnerships	37%
	Collaboration on social media platforms and websites	17%

Communities as the basis

- Several well-defined communities within the network
- The need to balance: facilitating research collaboration while maintaining specialisation



IMPROVE MESSAGE

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Thank you!

26 March 2025

FoSSNet Partners

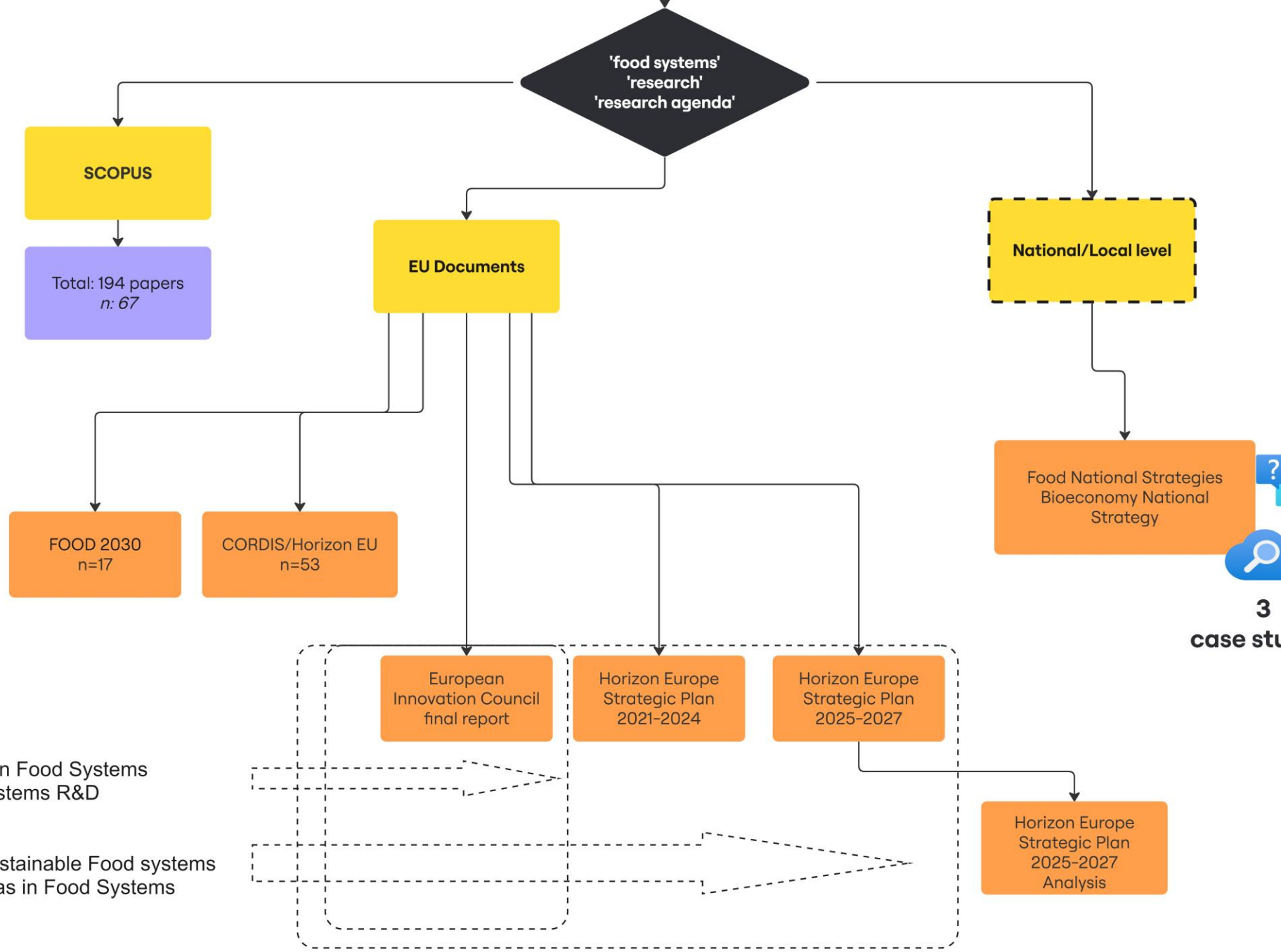
Pan-European mapping of research needs and knowledge gaps - Data collection

- Online systematic searches & complemented by input of FoSSNet partners

1. Systematic literature search
2. Food 2030 Publication list
3. Horizon Europe Food system research calls
4. FoSSNet Mapping Exercise
5. FoSSNet survey
6. Co-creation workshops for defining local food system research agendas (Territorial Labs) and systemic agenda (Lab on true pricing)

Document analysis

- Literature identification for mapping research needs and agendas in food systems
- 2019-2024



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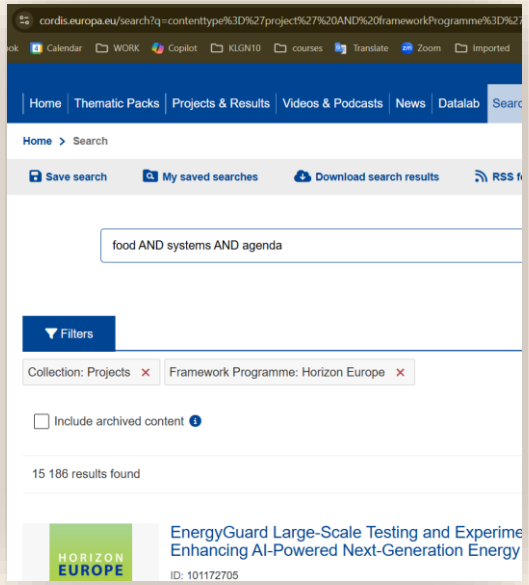
Food System research agenda mapping

an informatics approach

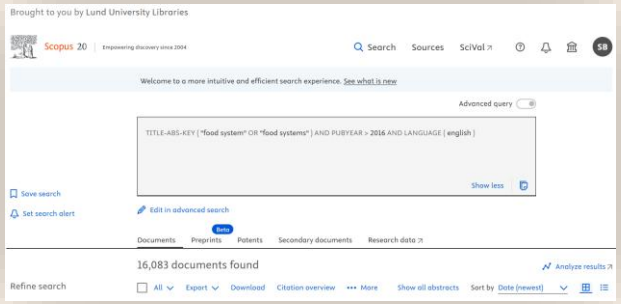
Strategy

Example texts (corpora) that can be studied

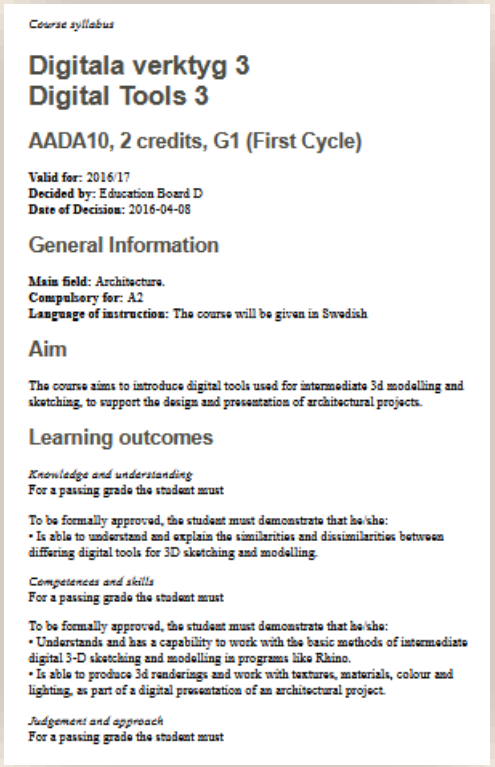
Cordis projects
53 projects



Scopus manuscripts
11800 abstracts



LU syllabi
13200



Course syllabus

Digitala verktyg 3
Digital Tools 3

AADA10, 2 credits, G1 (First Cycle)

Valid for: 2016/17
Decided by: Education Board D
Date of Decision: 2016-04-08

General Information

Main field: Architecture.
Compulsory for: A2
Language of instruction: The course will be given in Swedish

Aim

The course aims to introduce digital tools used for intermediate 3d modelling and sketching, to support the design and presentation of architectural projects.

Learning outcomes

Knowledge and understanding
For a passing grade the student must

To be formally approved, the student must demonstrate that he/she:
• Is able to understand and explain the similarities and dissimilarities between differing digital tools for 3D sketching and modelling.

Competences and skills
For a passing grade the student must

To be formally approved, the student must demonstrate that he/she:
• Understands and has a capability to work with the basic methods of intermediate digital 3-D sketching and modelling in programs like Rhino.
• Is able to produce 3d renderings and work with textures, materials, colour and lighting, as part of a digital presentation of an architectural project.

Judgement and approach
For a passing grade the student must

Website Scraping
1304

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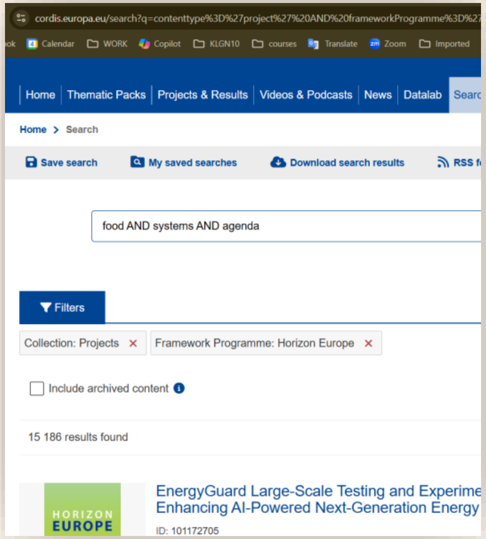
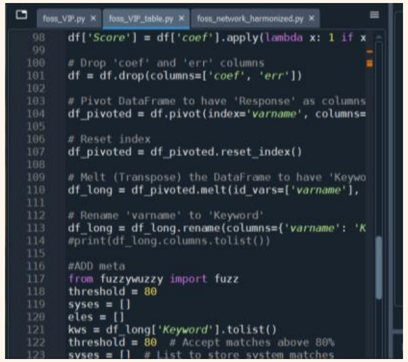
Data collection

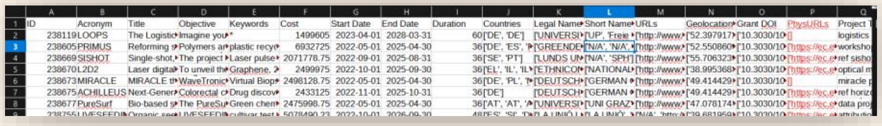
Cordis projects



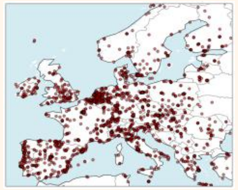
Data collection using Python

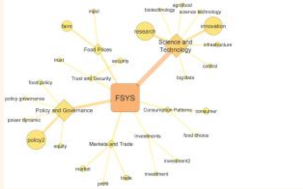


Create a database



Analyses





Food Systems Science Network

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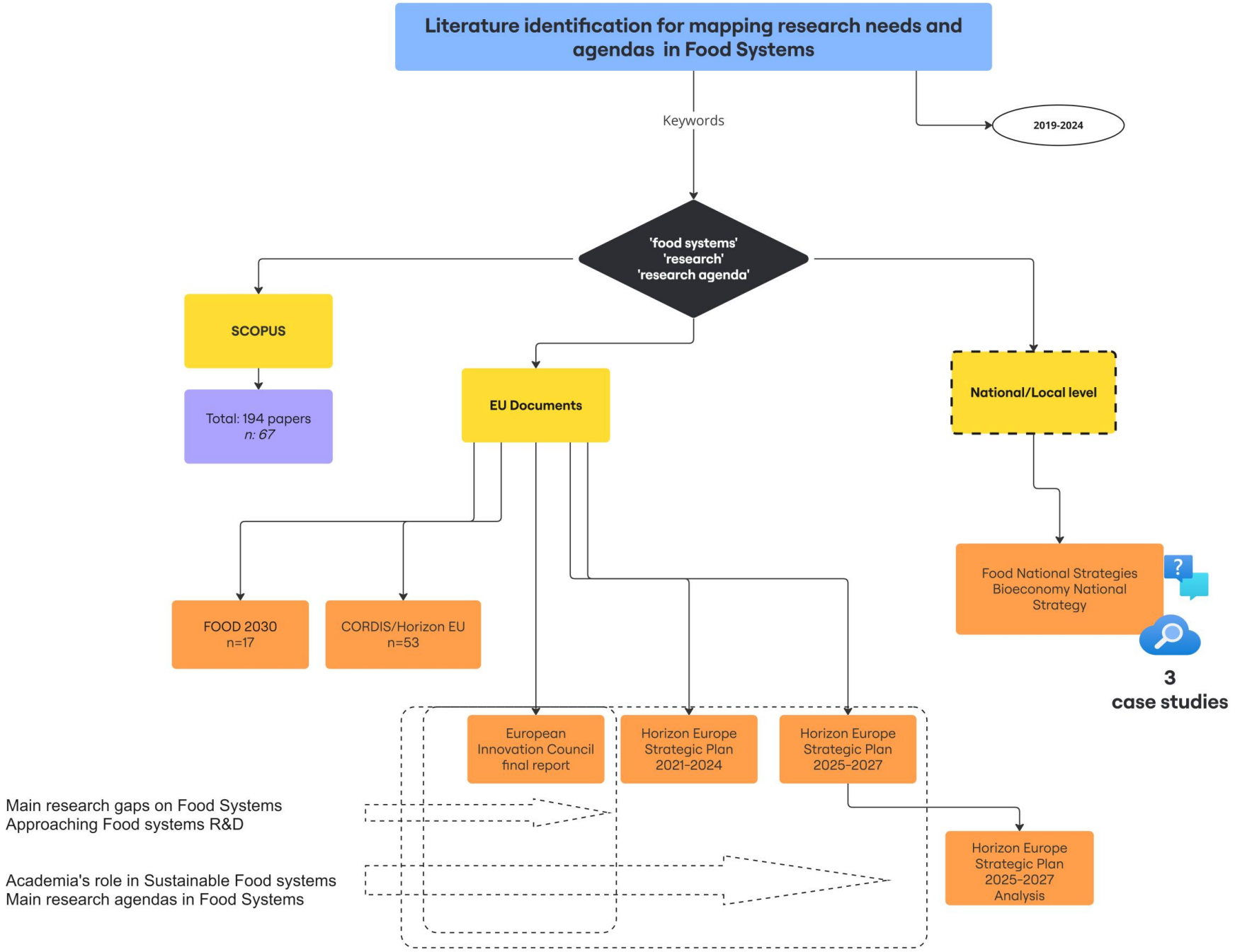
Pan-European mapping of research needs and knowledge gaps


Literature identification for mapping research needs and agendas in Food Systems
Keywords
2019-2024
'food systems'
'research'
'research agenda'
SCOPUS
Total: 194 papers
n: 67
EU Documents
National/Local level
FOOD 2030
n=17
CORDIS/Horizon EU
n=53
Food National Strategies
Bioeconomy National Strategy
3
case studies
European Innovation Council final report
Horizon Europe Strategic Plan 2021-2024
Horizon Europe Strategic Plan 2025-2027
Horizon Europe Strategic Plan 2025-2027 Analysis
Main research gaps on Food Systems
Approaching Food systems R&D
Academia's role in Sustainable Food systems
Main research agendas in Food Systems

	A	B	C	D	E	F	G	H	I
1	Datab	burc	Authors	Title	Year	Source title	DOI	Link	First comment/remarks about the article
2	Scopus	1	Curtis M.J.; Bulkan J.; Soma T.	Sovereign at heart: photovoice, food mapping and giving back in Alberni-Clayoquot	2024	Food, Culture and Society	10.1080/15528014.2023.2284048	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85178231445&doi=10.1080%2f15528014.2023.2284048&partnerID=40&md5=3fc089218e4f91029612a06842967ad9	This Alberni-Clayoquot study used photovoice and food asset mapping to e producers, photovoice culminated in exhibitions and a photobook. Food m food and health, ecology, localization, social relations, economics, and me increased regional food sovereignty. Findings support the complementarit based research, and the relevance of food sovereignty principles in Canad
3	Scopus	2	Thompson D.; Carter A.	Intersections between rural studies and food justice in the U.S.: some implications for today and the future	2024	Food, Culture and Society	10.1080/15528014.2022.2138319	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85141018892&doi=10.1080%2f15528014.2022.2138319&partnerID=40&md5=f81a6e234c131295e80de72c1299b756	This article examines integrating food justice into rural studies, addressing concerning US rurality. Analyzing food justice literature, it identifies key co contexts. The article argues that critical analyses of race/white supremacy scholarship can strengthen rural injustice studies, enabling interrogation c broader social justice engagement.
4	Scopus	3	Forsythe L.	Gender-based violence in food systems	2023	Nature Food	10.1038/s43016-023-00777-y	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85162579571&doi=10.1038%2fs43016-023-00777-y&partnerID=40&md5=5ed5cabbf98d00f485a2f616b62ab35f	Despite its pervasiveness, gender-based violence (GBV) remains under-re and policy. This oversight neglects the crucial intersection of GBV and the production to consumption. Integrating GBV into food system discourse is reasons, aligning the food sector with global efforts to combat GBV.
5	Scopus	4	Sarapura–Escobar S.; Hoddy E.T.	Safeguarding the land to secure food in the highlands of Peru: The case of Andean peasant producers	2022	Frontiers in Sustainable Food Systems	10.3389/fsufs.2022.787600	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85145376725&doi=10.3389%2ffsufs.2022.787600&partnerID=40&md5=630381198fdf60ae947a19e84b08371c	Andean agri-food systems rely on community land use planning to maintain policy often overlook local planning and community heterogeneity, includi article examines intersecting identities of Andean farmers and their contri intersectional lens, it identifies contributions to soil conservation, biodive highlighting the influence of social locations like gender, age, and ethnicity rights-based approaches for equitable resilience in Andean food systems.
6	Scopus	5	Golden C.D.; Ayroles J.; Eurich J.G.; Gephart J.A.; Seto K.L.; Sharp M.K.; Balcom P.; Barravecchia H.M.; Bell K.K.; Gorospe K.D.; Kim J.; Koh W.H.; Zamborain-Mason J.; McCauley D.J.; Murdoch H.; Nair N.; Neeti K.; Passarelli S.; Specht A.; Sunderland E.M.; Tekaieti A.; Tekiau A.; Tekoaua R.; Timeon E.	Study Protocol: Interactive Dynamics of Coral Reef Fisheries and the Nutrition Transition in Kiribati	2022	Frontiers in Public Health	10.3389/fpubh.2022.890381	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85132284263&doi=10.3389%2ffpubh.2022.890381&partnerID=40&md5=88cbdaf1b127ad750b3ac49a31914181	This study, embedded within Kiribati's 2019 Integrated Household Income HIES), examines the health status of a nationally representative I-Kiribati s clinical measurements, socio-economic surveys, and food systems researc seafood access, nutrition, and health. Focusing on 10 islands, the study inv resource governance, and food systems influence dietary patterns, establi
7	Scopus	6	Hunt L.; Pettinger C.; Wagstaff C.	A critical exploration of the diets of UK disadvantaged communities to inform food systems transformation: a scoping review of qualitative literature using a social practice theory lens	2023	BMC Public Health	10.1186/s12889-023-16804-3	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85173656272&doi=10.1186%2fs12889-023-16804-3&partnerID=40&md5=14bad9950104618996d2e4e8160ccd8a	This scoping review examined UK qualitative research (2010-2021) on disa Synthesizing 45 studies (n=2434) using social practice theory, it identified material factors, meanings, and competencies. While studies characteriz food systems are lacking. The review recommends transdisciplinary resear system transformation for these communities.
8	Scopus	7	Hall J.C.; Gum H.; Pietkoski K.	Wild alternatives: Accounting for and rethinking the relationship between wild game and food security in Appalachian food systems	2020	Applied Geography	10.1016/j.apgeog.2020.102329	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091260707&doi=10.1016%2fj.apgeog.2020.102329&partnerID=40&md5=f0d943d237fc618d667b1e61361762c6	This study examines the under-researched role of wild food in food security insecure West Virginia. Analyzing 2012-2017 harvest data, it found West Vi annually) exceeds in-state domesticated red meat production by 25% and insecure population with red meat for a year. This research highlights the n systems research.
9	Scopus	8	Ballamingie P.; Nimmo E.R.; Blay-Palmer A.D.; Stahlbrand L.; Knezevic I.; Ayalon R.; Lacerda A.E.B.	Integrating a food systems lens into discussions of urban resilience: Analyzing the policy environment	2020	Journal of Agriculture, Food Systems, and Community Development	10.5304/jafscd.2020.093.021	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85111616034&doi=10.5304%2fjafscd.2020.093.021&partnerID=40&md5=7617e7505c84107405b07b6adb0b50b4	This paper reflects on integrating food systems thinking into urban resilienc international agreements. It emphasizes considering small and mid-sized c strengthening urban-rural linkages. Deep adaptation to climate change an social innovation in policy are crucial for urban resilience. Examples from c these points.
10	Scopus	9	Berardy A.; Seager T.; Costello C.; Wharton C.	Considering the role of life cycle analysis in holistic food systems research, policy, and practice	2020	Journal of Agriculture, Food Systems, and Community Development	10.5304/jafscd.2020.094.009	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85097523251&doi=10.5304%2fjafscd.2020.094.009&partnerID=40&md5=4193ea4b300e50d8633977891b443c25	Life cycle assessment (LCA), while valuable, inadequately captures food sy redundancy. Its focus on functional units biases towards efficiency, favorin production. This commentary argues for complementary methodologies, in assessments, sustainable materialism, and scenario building, to provide a sustainability.

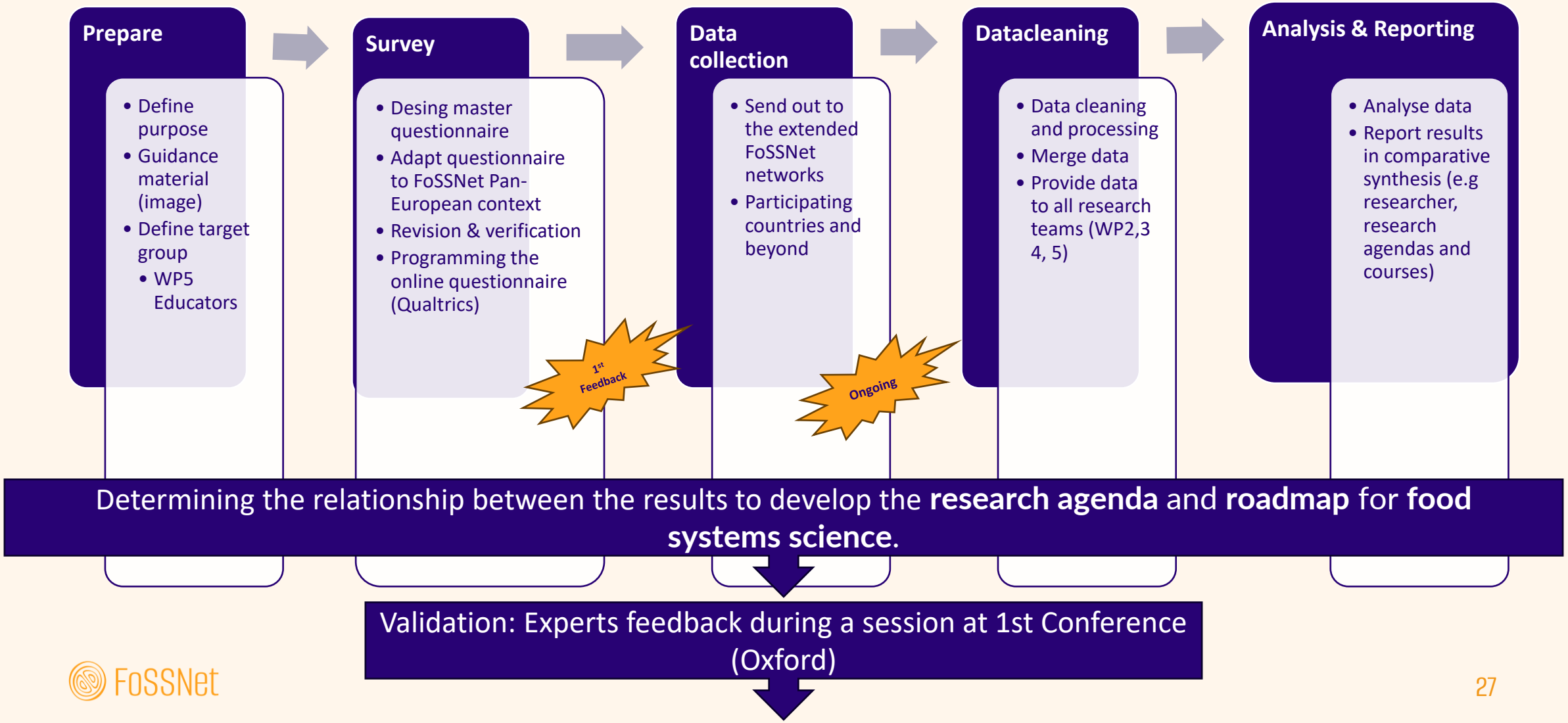
1. Literature - search strings | 2. Literature overview | 3. Other sources - Food 2030 | 4. CORDIS Sources - Horizon EU | 5. Other sources - EIC 2025 doc | 6. Horizon Strategic Plan 2024 | 7. Horizon Strategic Plan 2027

Data collection

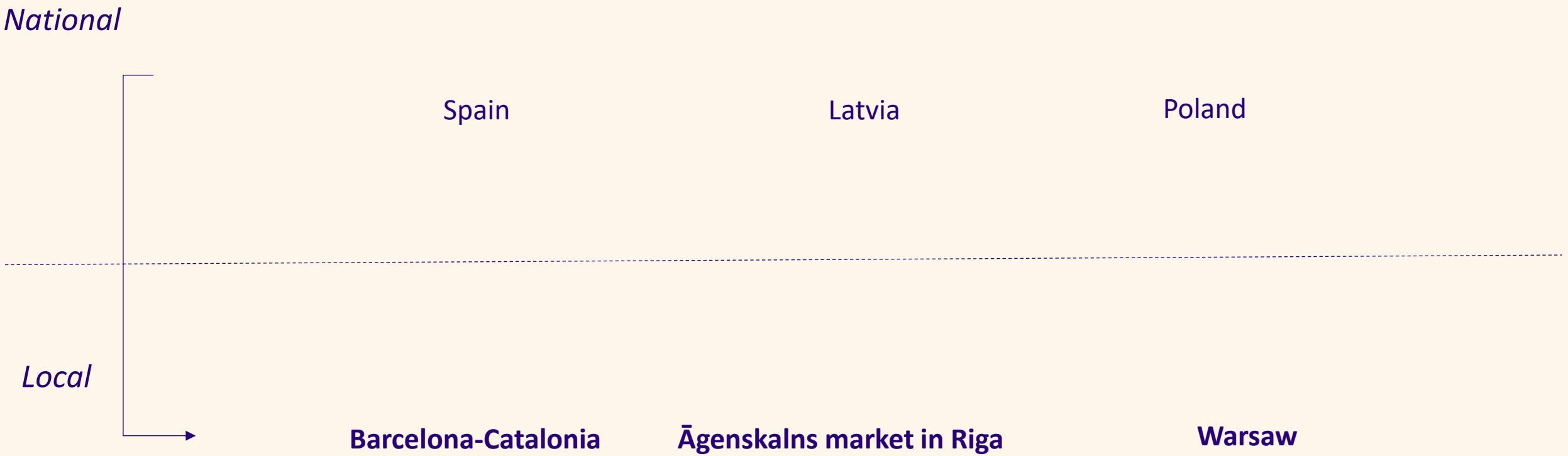
- Online systematic searches & complemented by input of FoSSNet partners

1. Systematic literature search
2. Food 2030 Publication list
3. Horizon Europe Food system research calls
4. FossNet Mapping Exercise
5. FossNet survey
6. Co-creation workshops for defining local food system research agendas (Territorial Labs)

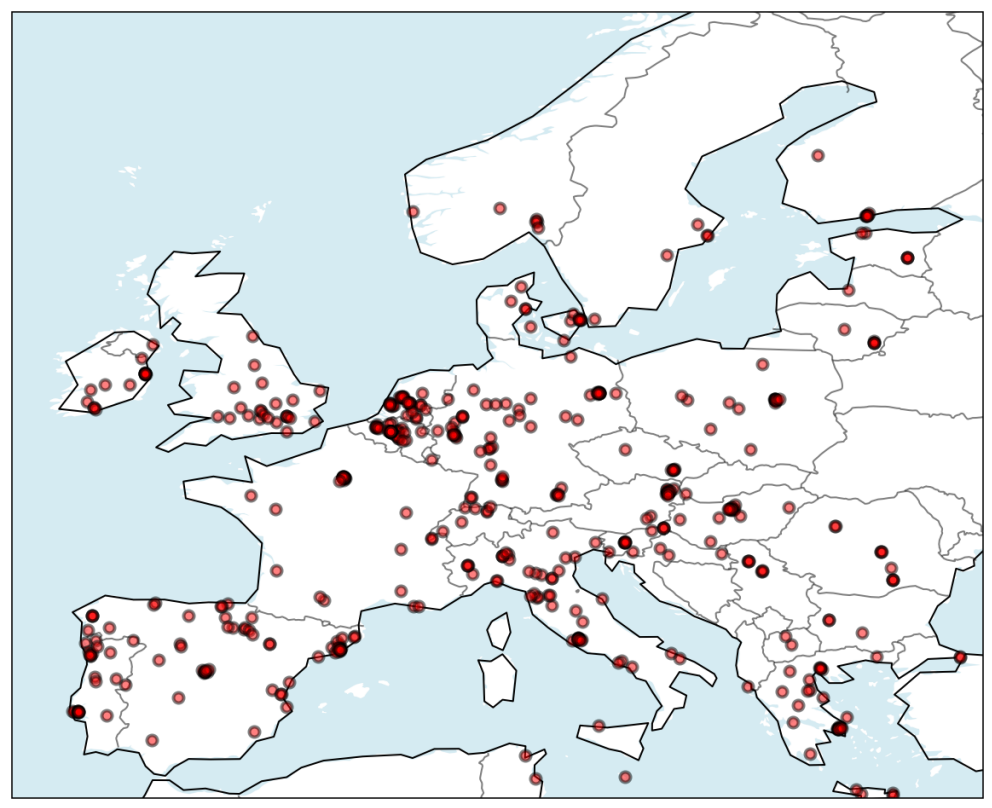
Methodology for the survey

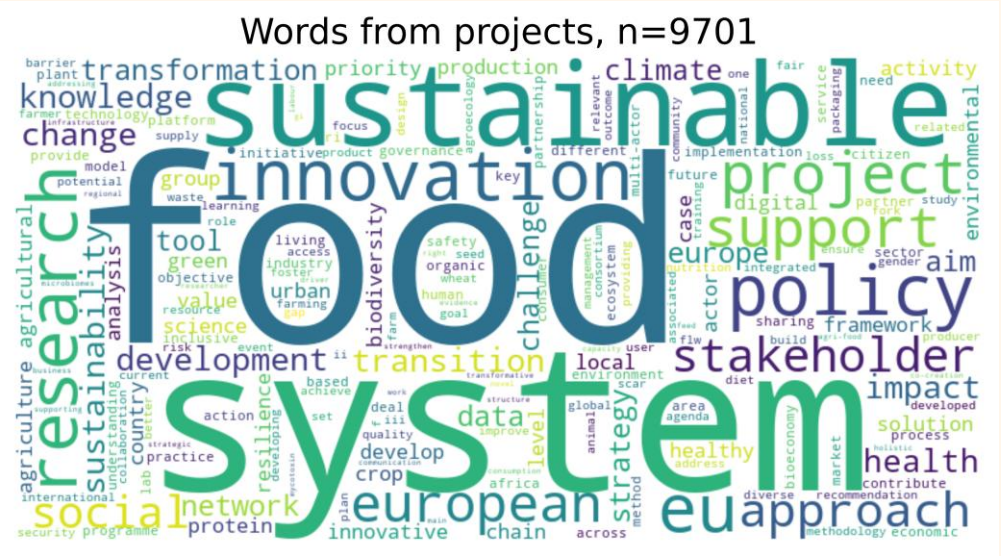


National/ Local level – Territorial Labs

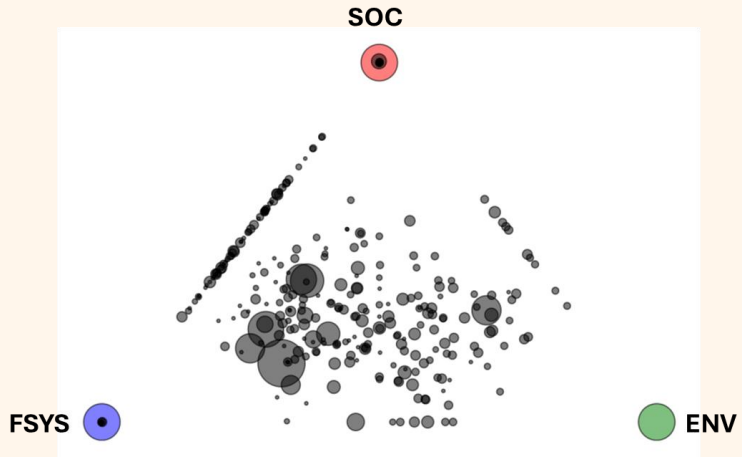


Meta Analyses





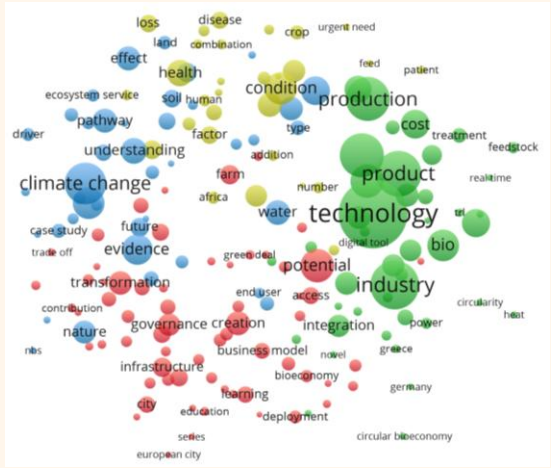
Funding in relation to FOSSNet Keywords

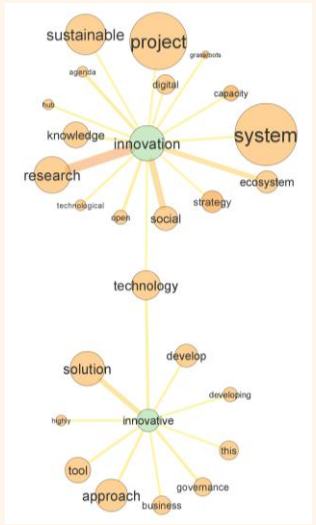


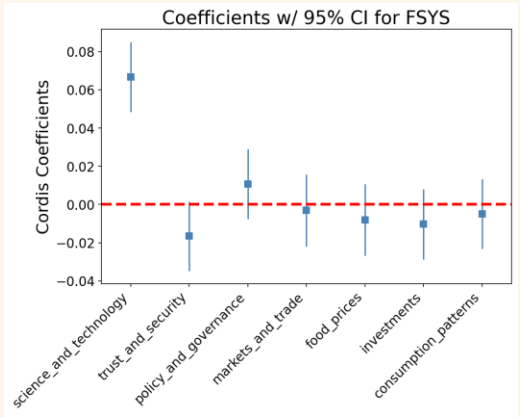
FoSSNet

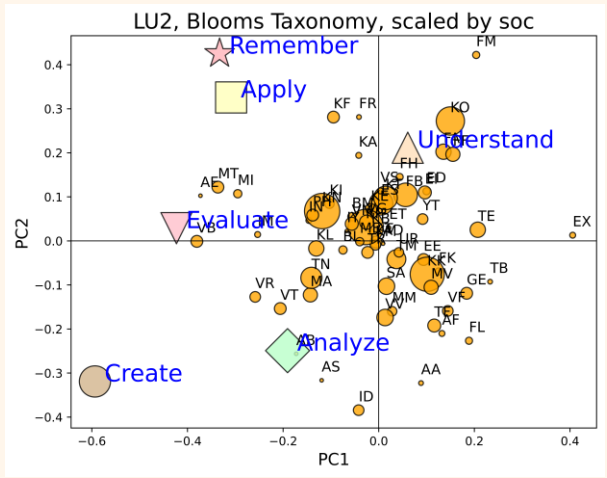
Main Analyses

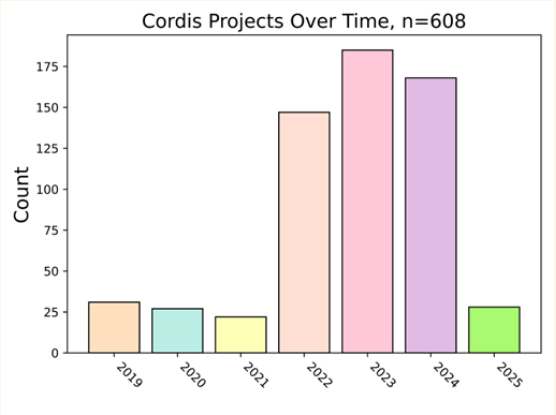
- Topic analysis
- Trends over time
- Gap analysis (underuse of key concepts)
- Context analysis and networks
- Blooms Taxonomy and FOSSNet











FoSSNet

Finding 1

Finding 2


WAGENINGEN
UNIVERSITY & RESEARCH


IN SUPREMÆ DIGNITATIS
1343


VU
VRIJE
UNIVERSITEIT
AMSTERDAM


LUND
UNIVERSITY


BSC
BALTIC
STUDIES
CENTRE


UNIVERSITAT DE
BARCELONA


DIL


eufic


eit
Food


Federal Office
for Agriculture and Food


INRAE


UNIVERSIDADE
CATÓLICA
PORTUGUESA


IRWIR PAN


UNIVERSITY OF
OXFORD

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CONFERENCE 2025

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Thank you!

Please contribute to the preconference survey

Forthcoming reports

- **Social network analysis of food systems science in the EU** — Trang Nguyen, Kelly Rijswijk, Bobby Tsvetkov, Thom Achterbosch et al.
- **Pan-European mapping of research needs and knowledge gaps** — Jesica Lopez, Hakan Jonsson, Stephen Burleigh et al.

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