

The protein transition: A silver bullet missing a target?

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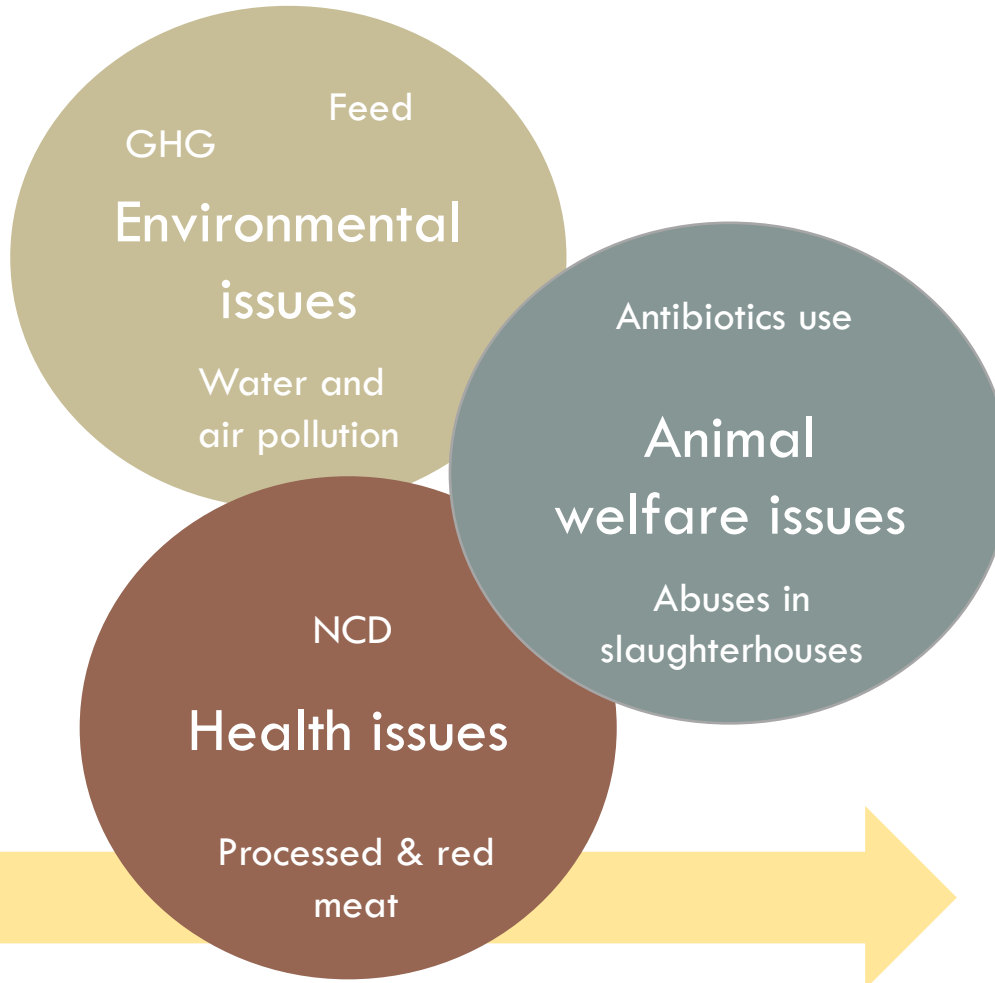
The current ways of producing and consuming proteins are not sustainable

Overproduction of animal proteins

Overconsumption of animal proteins

Inefficiencies (e.g. food waste, feed-food competition)

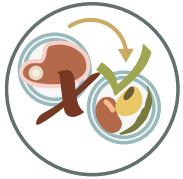
CURRENT SITUATION



PROTEIN TRANSITION

REDUCED MEAT CONSUMPTION

The diversity of proposed solutions



Shift in diets



Novel food and meat replacements development

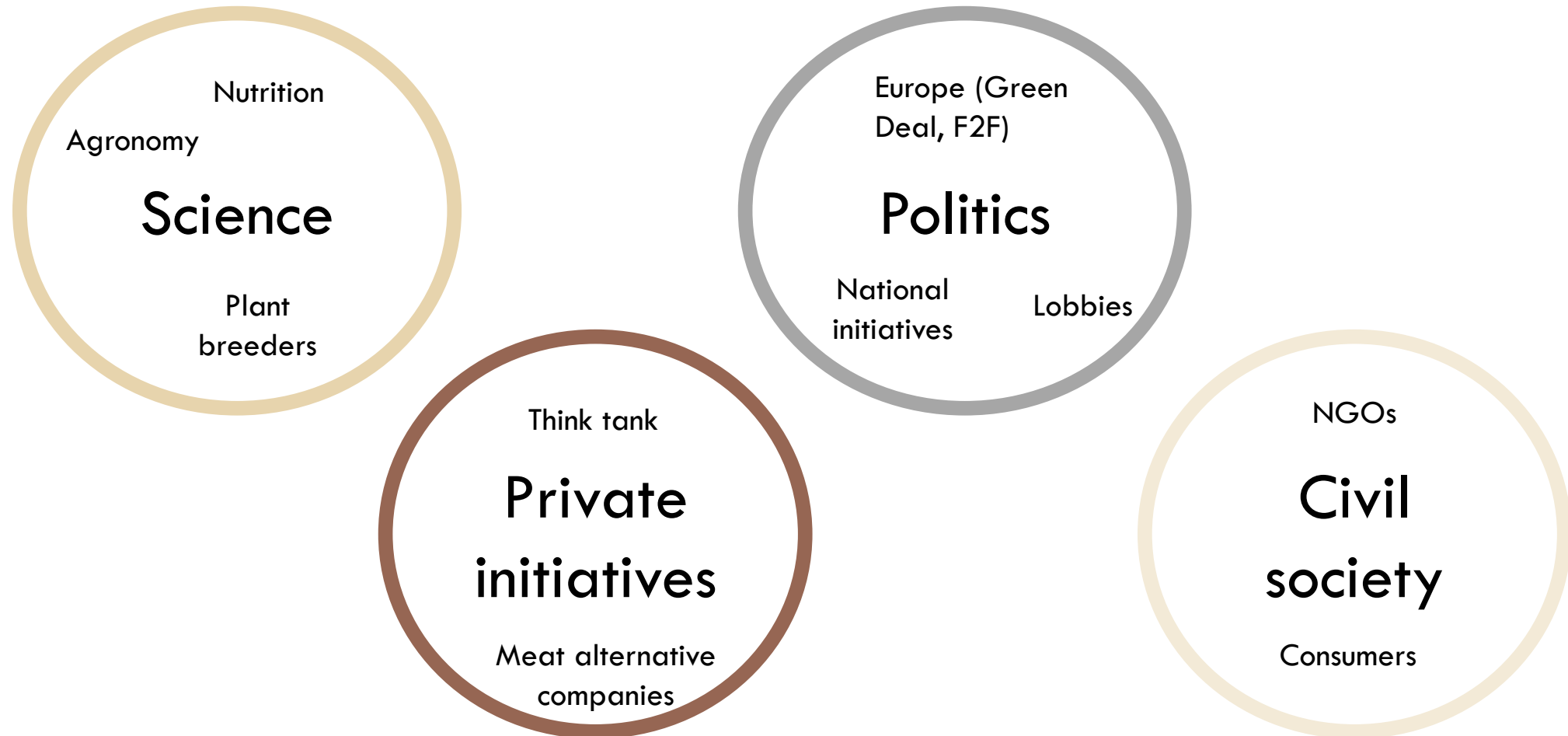


New farming practices (e.g. agroecological practices)



Food system reconfigurations (e.g. circular food systems)

The diversity of solutions is interlinked with the diversity of actors involved in the protein transition



| What is the current state of knowledge regarding the protein transition?

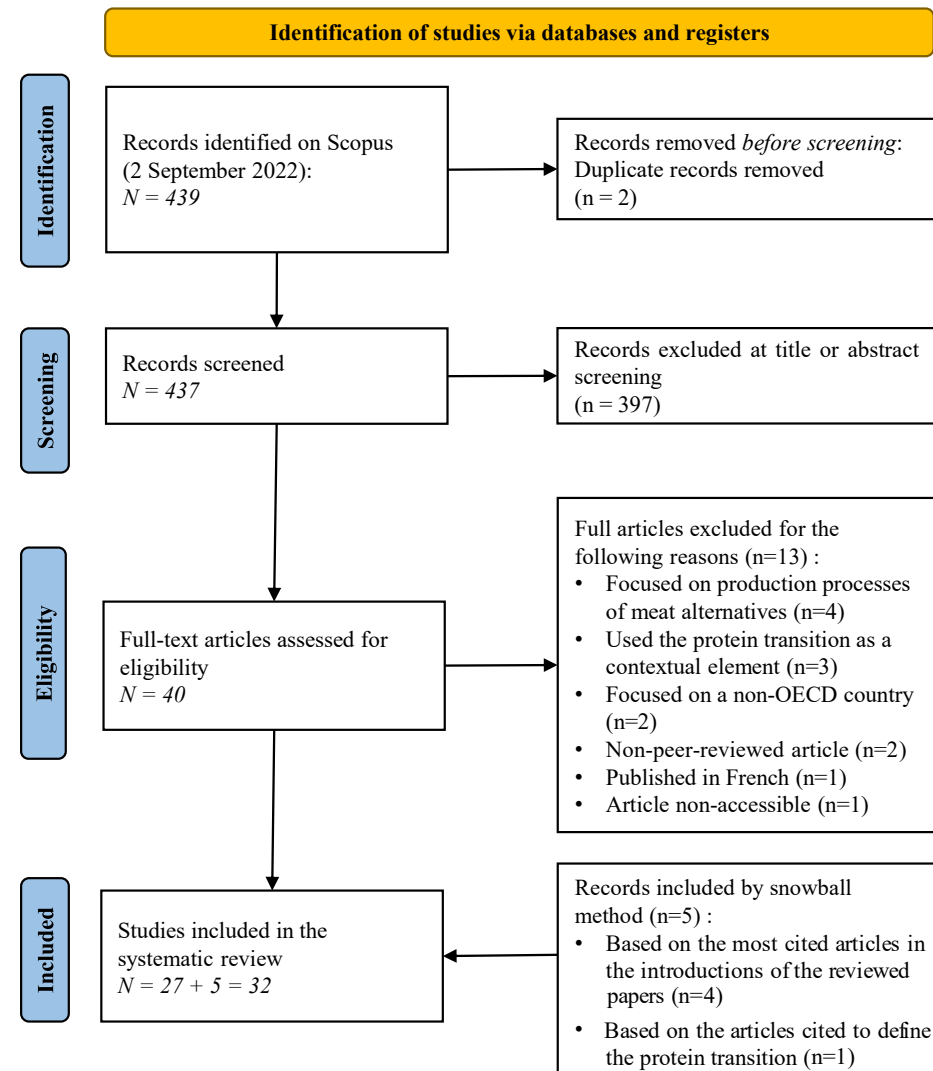
We performed a systematic review of the protein transition in scientific literature

By applying the PRISMA guidelines and the snowball method, we included 32 articles in the systematic review.

Search words:

“protein transition” OR “protein shift”
OR “sustainable protein consumption”
OR “sustainable protein production”

e.g., Katz-Rosene et al. (2023),
van Zanten et al. (2019), Röös et al. (2016)



We focused on three main research questions

1) What are the definitions and interpretations of the PT?

2) What are the key targets that the PT promises to achieve?

3) What are the narratives of the PT?

Three targets that the protein transition aims to achieve

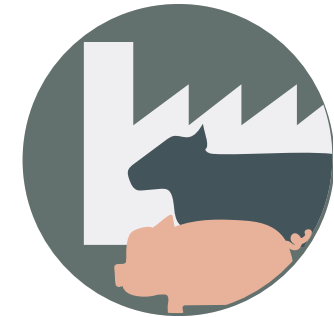
Reducing the environmental impacts of protein production and consumption



Providing healthy diets for a growing population



Preventing specific negative effects of industrial livestock production systems



Empirical evidence supporting the effectiveness of the protein transition in achieving those targets reveals complex and nuanced conditions to be verified.

We focused on three main research questions

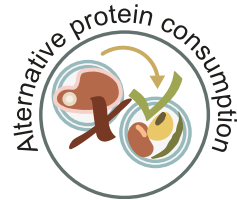
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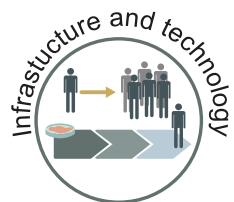
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Three narratives of the protein transition

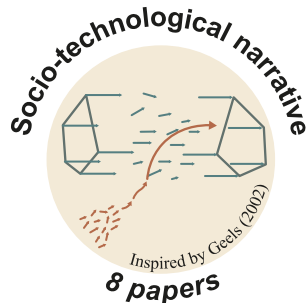
Current situation



NEW DIET NARRATIVE



NEW PROTEIN NARRATIVE



NEW REGIME NARRATIVE

Reduced meat consumption

** 12 + 10 + 8 = 30 + 2 unclassified papers

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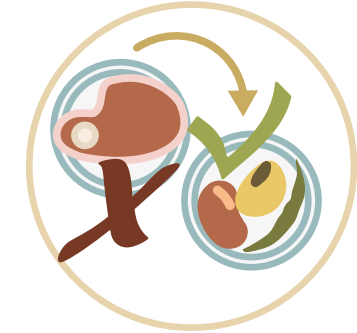
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The protein transition is mainly defined from a shift in consumption patterns

A shift from a high animal protein diet to a richer alternative protein intake.



Blind spots:

- The diversity of perspectives (e.g. food or feed?)
- The lack of integration of the production perspective
- The food systems perspective
- The functional reduction (i.e. the focus on proteins)

The three narratives are associated with different policy interventions

Consumer narrative

- Taxes and nudging policies to encourage consumption changes
- Labelling and certification to aid in making informed choices
- Training and educational frameworks on the benefits of reducing animal protein consumption

Techno-centred narrative

- Research and development in alternative proteins
- Funding and subsidies towards alternative proteins
- Adapted regulatory frameworks for novel protein sources
- Public-private partnerships

Socio-technological transition narrative

- Difficult to pinpoint specific policy interventions
- Regional and national coordinated action plans involving a multi-stakeholder collaboration
 - Overcoming political silos to foster holistic policymaking

The risks of imbalance

Coexistence of solutions and narratives is possible at an early stage of the transition.

However, an imbalance of interest favouring one narrative over the other can lead to a situation that hinders the development of alternative solutions.

→ We might need to take a step back before engaging if a transition path that we are not needing & miss the target



Are we missing a narrative?

1) Are we tackling the initial problems?

	Consumer narrative	Techno-centred narrative	Socio-technological narrative
Overproduction	X	X	?
Overconsumption	✓	✓	✓
Inefficiency	?	?	✓

2) Are the solutions up to the challenge?

Ex-ante assessments of long-term impacts

Challenges and ways forward



1) Acknowledge the different perspectives, but also the points of contention and debate



2) Broaden the scope



3) Strengthen weaker transition narratives



4) Make sure that the proposed solutions and narratives are up to the challenge

Thank you for your attention and feel free to reach out
after the presentation for discussions

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Bibliography

Katz-Rosene, R., Heffernan, A., & Arora, A. (2023). Protein pluralism and food systems transition : A review of sustainable protein meta-narratives. *World Development*, 161, 106121. <https://doi.org/10.1016/j.worlddev.2022.106121>

Röös, E., Patel, M., Spångberg, J., Carlsson, G., & Rydhmer, L. (2016). Limiting livestock production to pasture and by-products in a search for sustainable diets. *Food Policy*, 58, 1-13. <https://doi.org/10.1016/j.foodpol.2015.10.008>

van Zanten, H. H. E., Van Ittersum, M. K., & De Boer, I. J. M. (2019). The role of farm animals in a circular food system. *Global Food Security*, 21, 18-22. <https://doi.org/10.1016/j.gfs.2019.06.003>