

The paradoxes of the protein transition

Duluins Océane (Presenter) & Philippe Baret

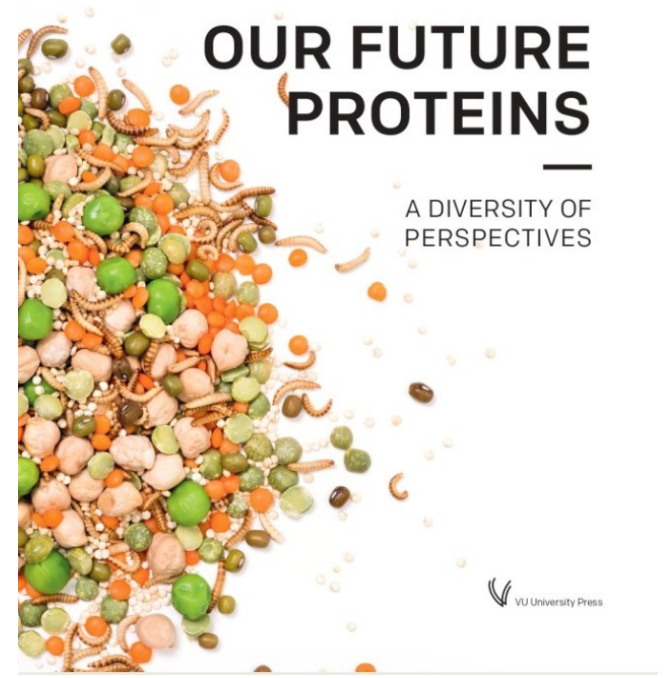
187th Seminar of European Association of Agricultural Economists

12-14 June 2024



The protein transition high on the agenda

STACY PYETT
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EU protein strategy

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RAPPORT Octobre 2020

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By Dr Henning Stein 5 mins read

24th November 2023

[nature](#) > [nature food](#) > [articles](#) > [article](#)

Article | [Open access](#) | Published: 03 January 2024

A systematic review of the definitions, narratives and paths forwards for a protein transition in high-income countries

[Océane Duluins](#) & [Philippe Vincent Baret](#)



Personal background

Bioengineer by training

PhD student, Sytra Team, UCLouvain and teaching assistant

My approach

Bioingeneer approach with strong influences from the social and political sciences

A systems approach applied to the protein transition context

Connecting the dots, looking at interrelations, feedback and dynamics

A three-act presentation with one objective

- 1) Context & methodology
- 2) Paradoxes presentation
- 3) Conclusions and perspectives

Explore, debate, and hopefully converge on critical insights that will guide our path through the protein transition

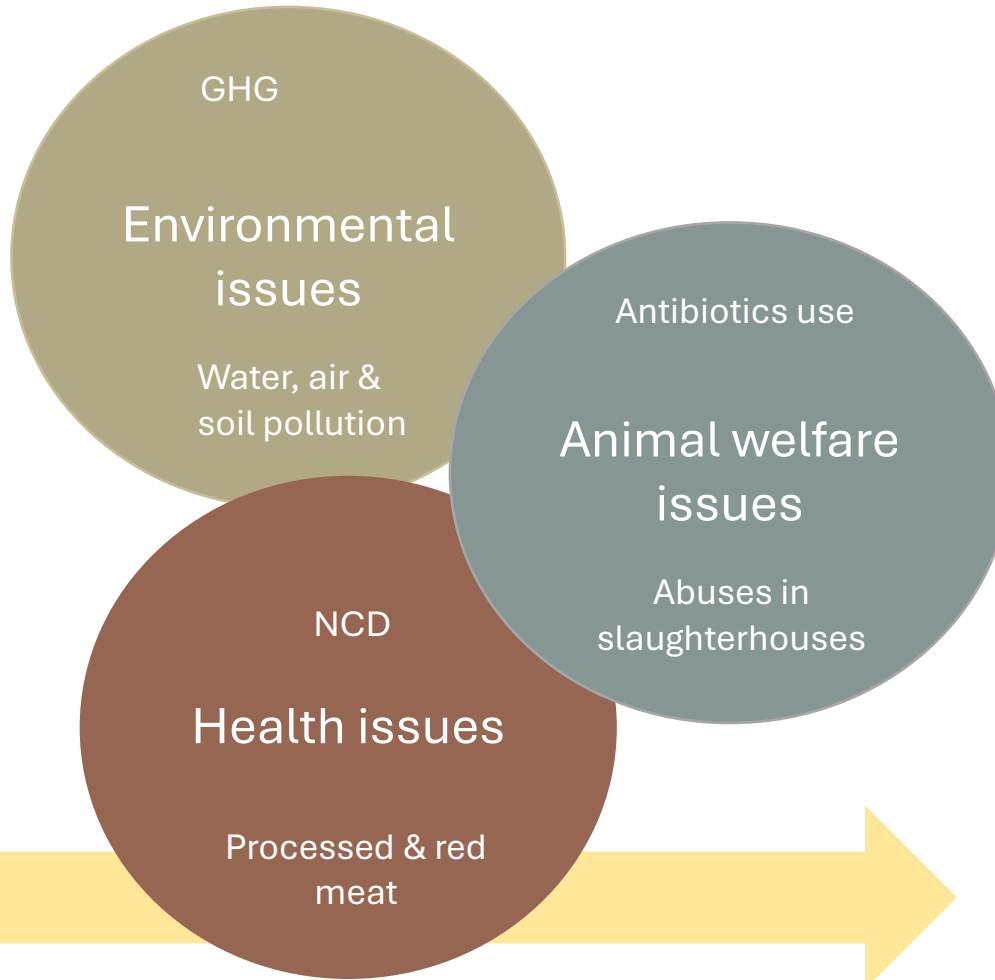
The emergence of the protein transition concept

Overproduction of animal proteins

Overconsumption of animal proteins

Inefficiencies (e.g. conversion from plant to animal, feed-food competition)

CURRENT SITUATION

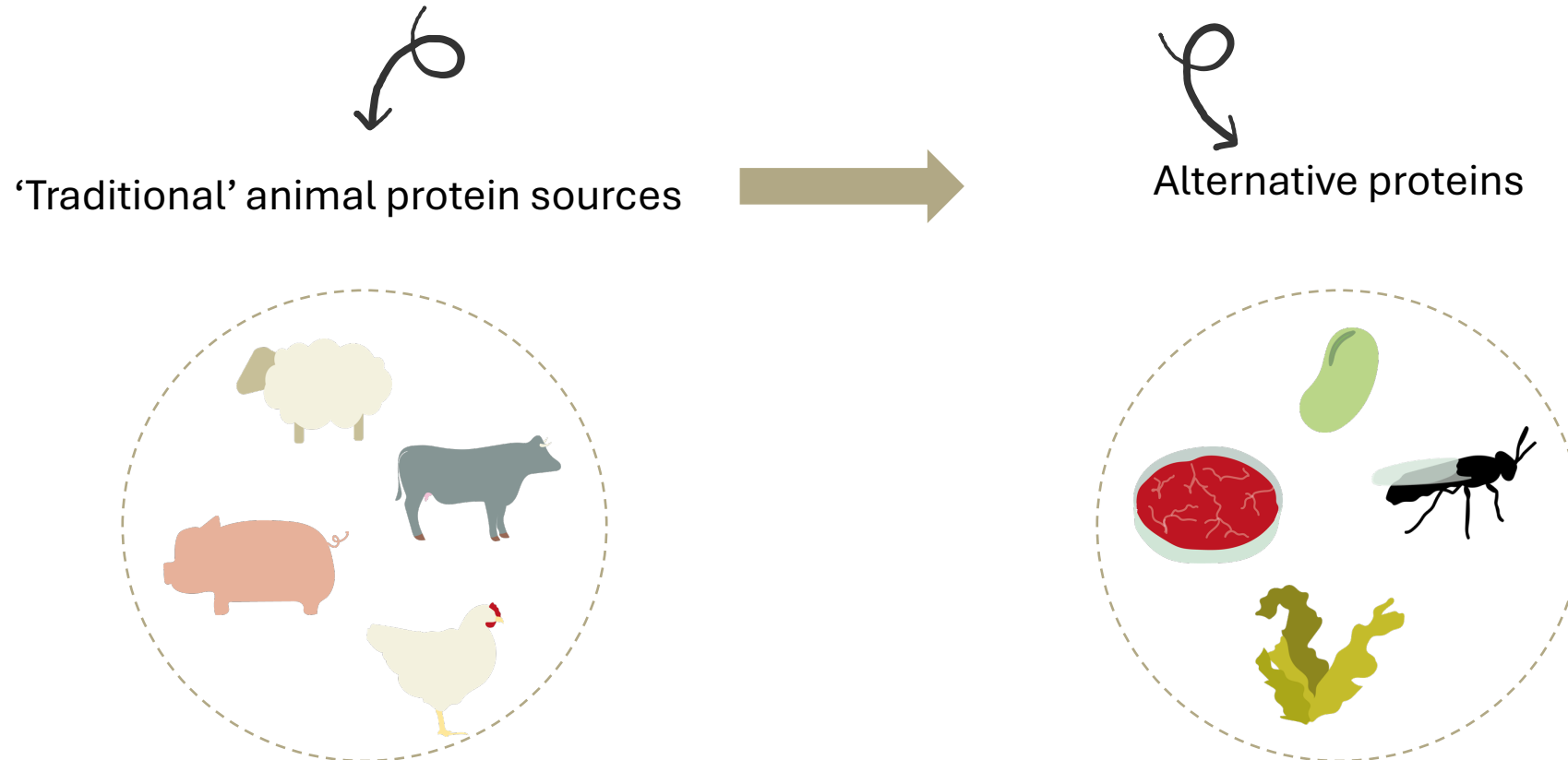


PROTEIN TRANSITION

REDUCED MEAT CONSUMPTION

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

“A dietary shift from animal-sourced foods to alternative protein sources” (Duluins & Baret, 2024)



The protein transition is simultaneously a scientific concept, a political topic and a commercial product object

Science



Behavioural science
Food technologies
Nutrition
Agronomy

Private companies



Alpro
Oatly
Nestlé
Beyond meat

Politics

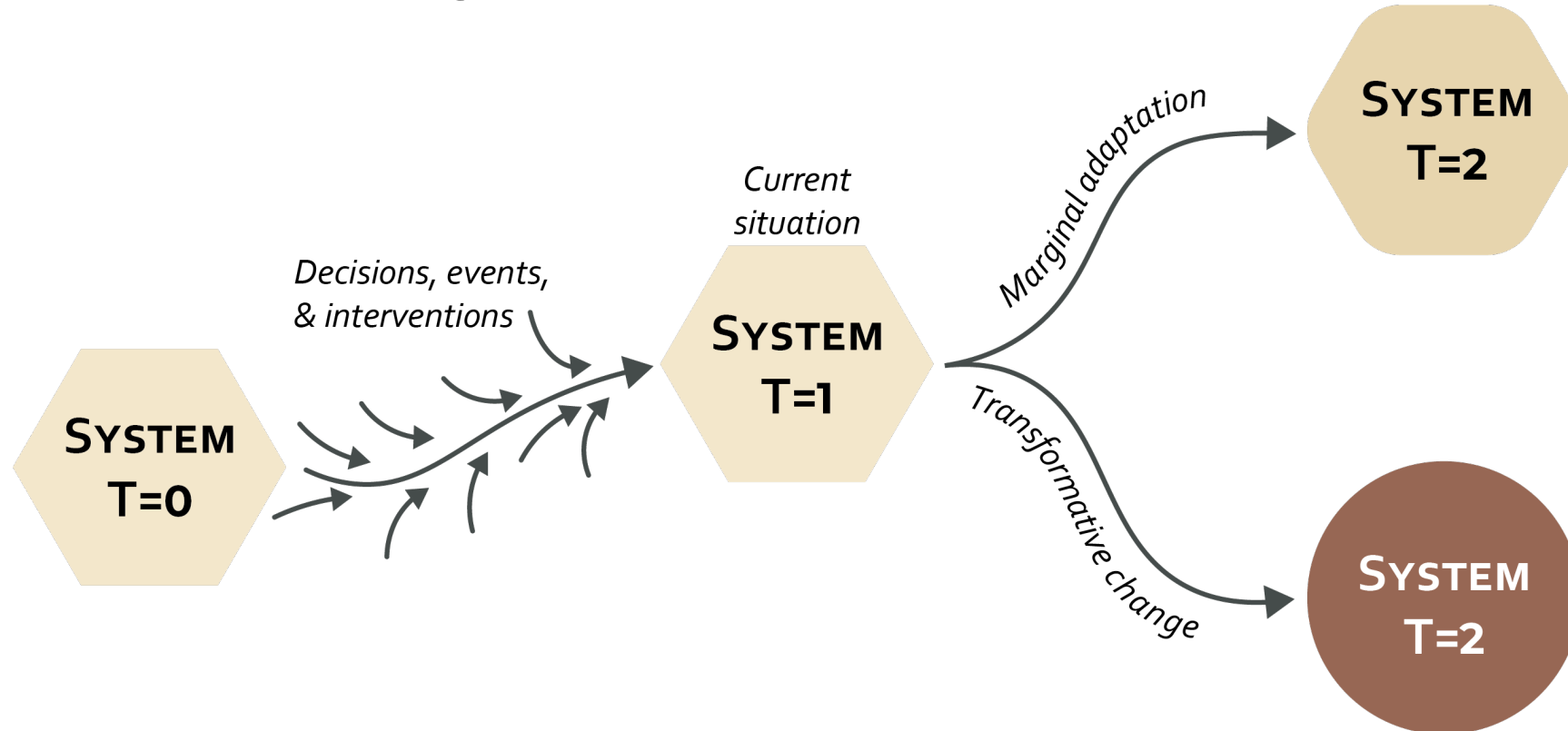


F2F, Green Deal
Resolution (EP)
Report (EC)
National initiatives

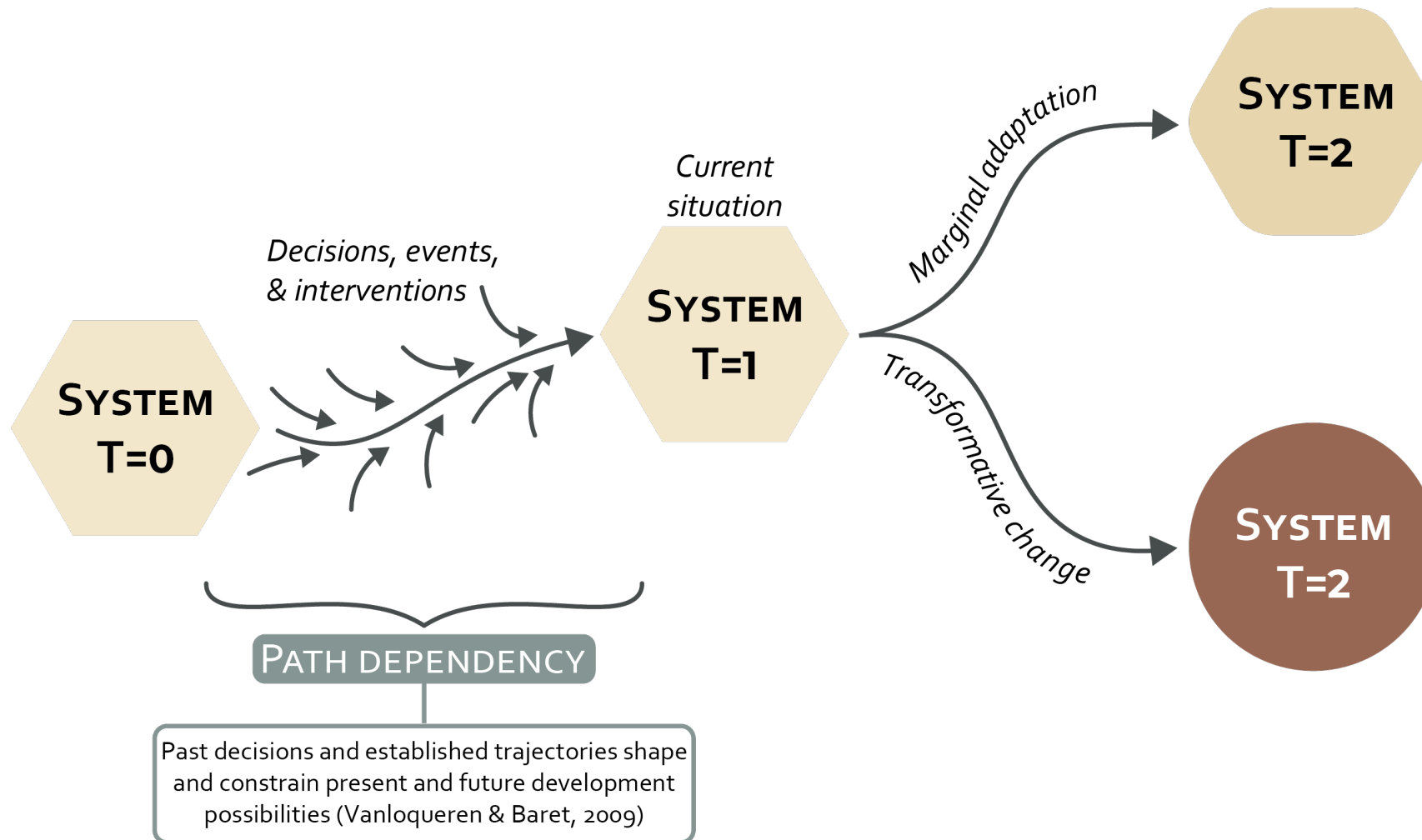
The paper's context & methodology

Perspective paper (still in the review process) based on extensive literature review & 19 expert interviews

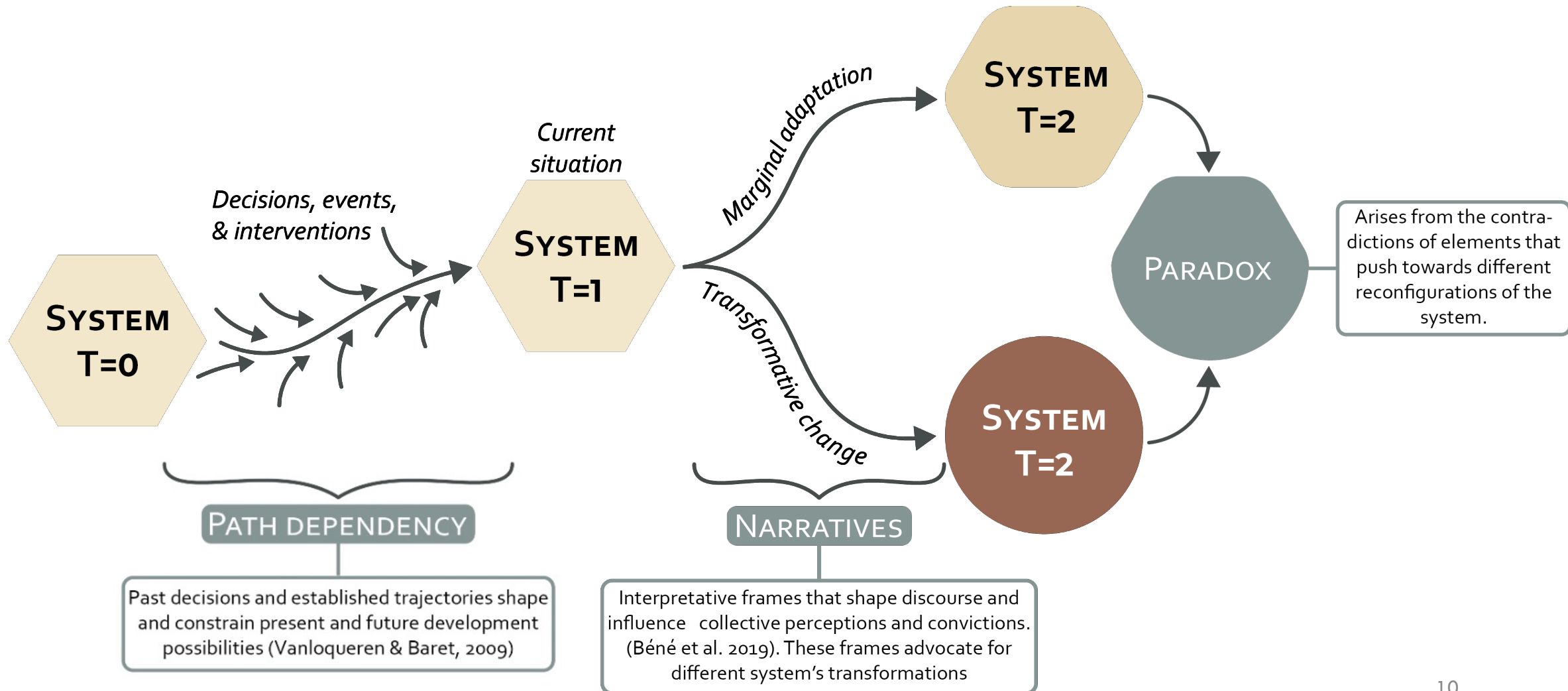
Conceptual framework using paradoxes, narratives, and path dependency



The paper's context & methodology



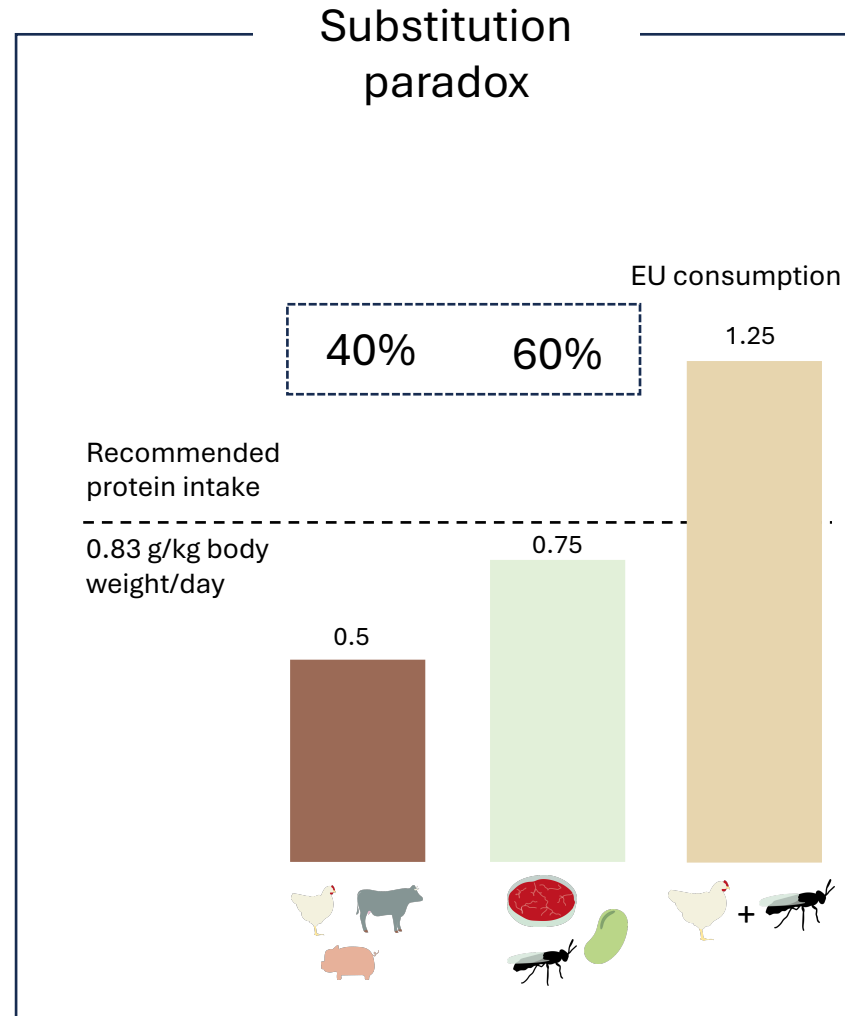
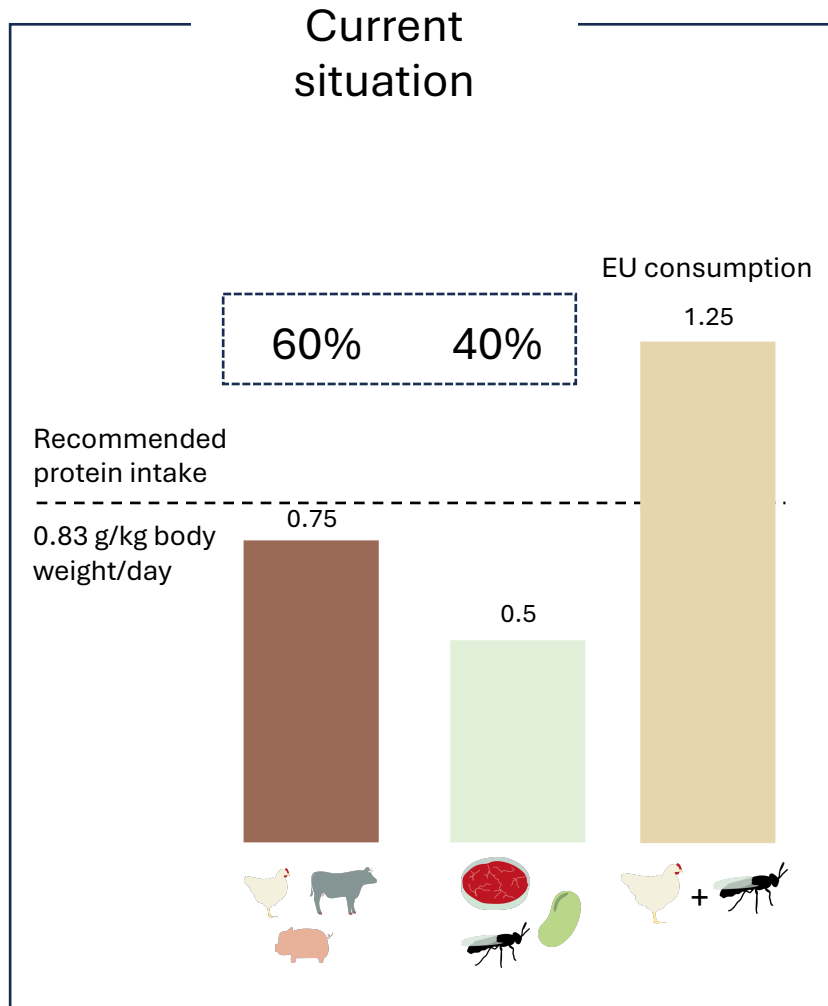
The paper's context & methodology



The identification of three main paradoxes

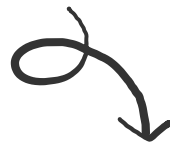
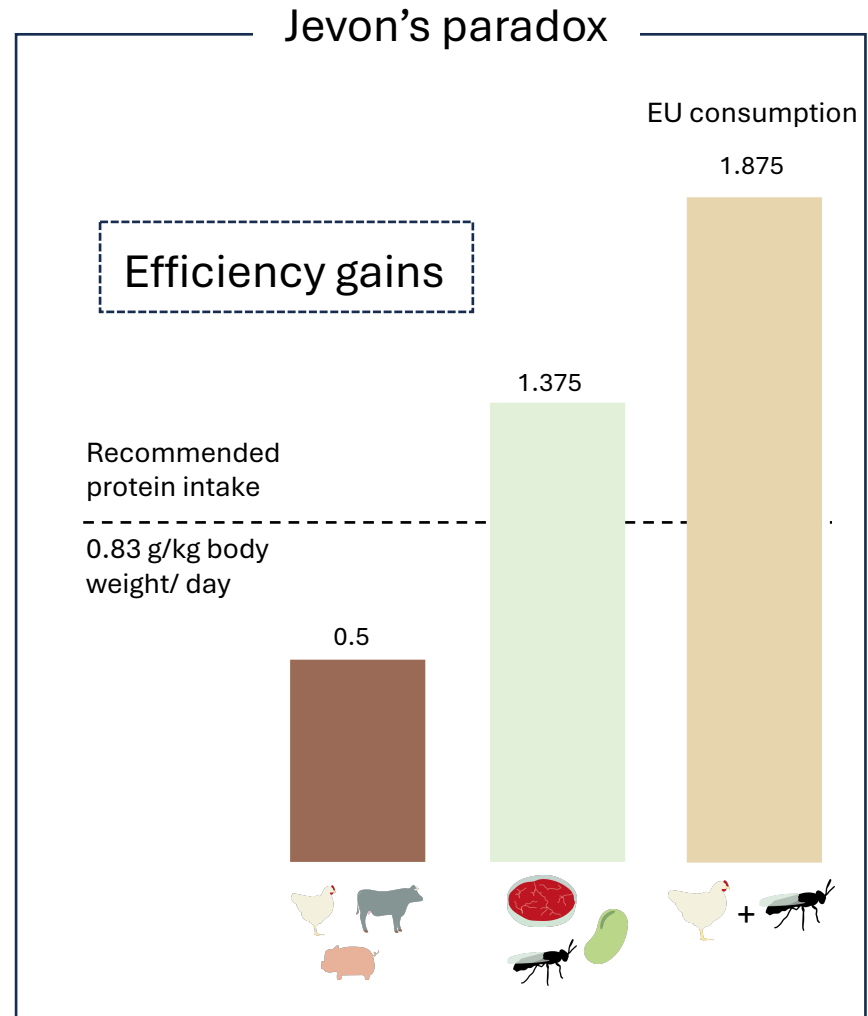
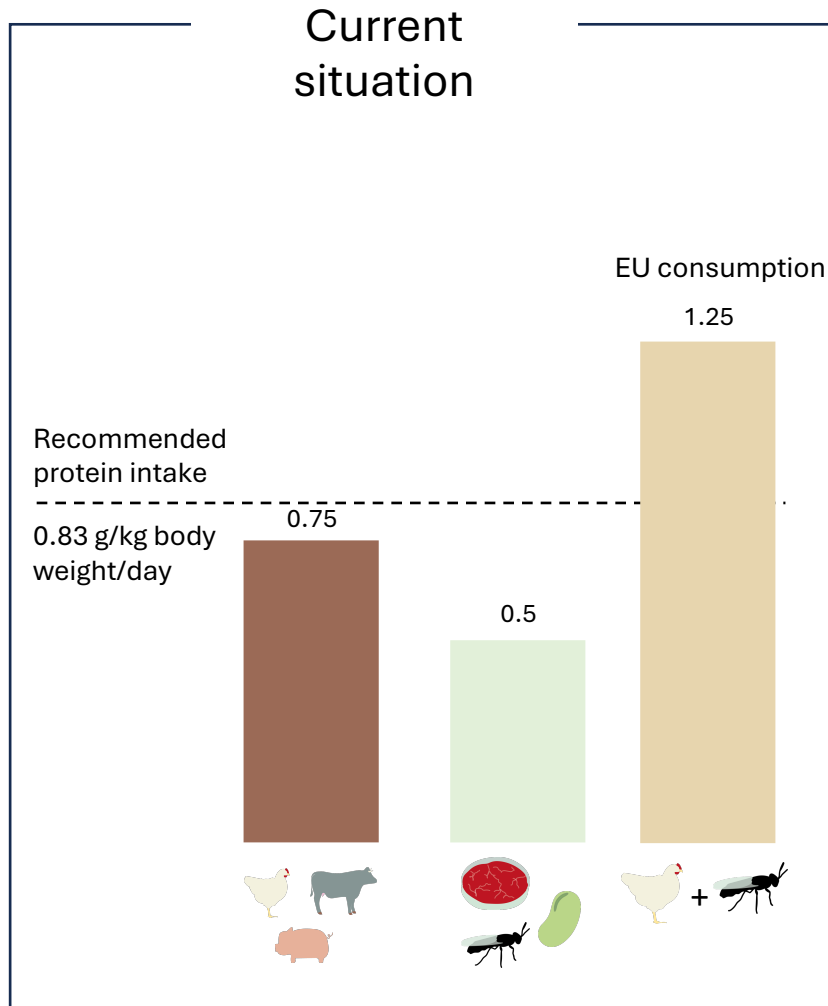
1. The Substitution Paradox
2. The Jevons' Paradox
3. The Productivism Paradox

1 | The Substitution Paradox



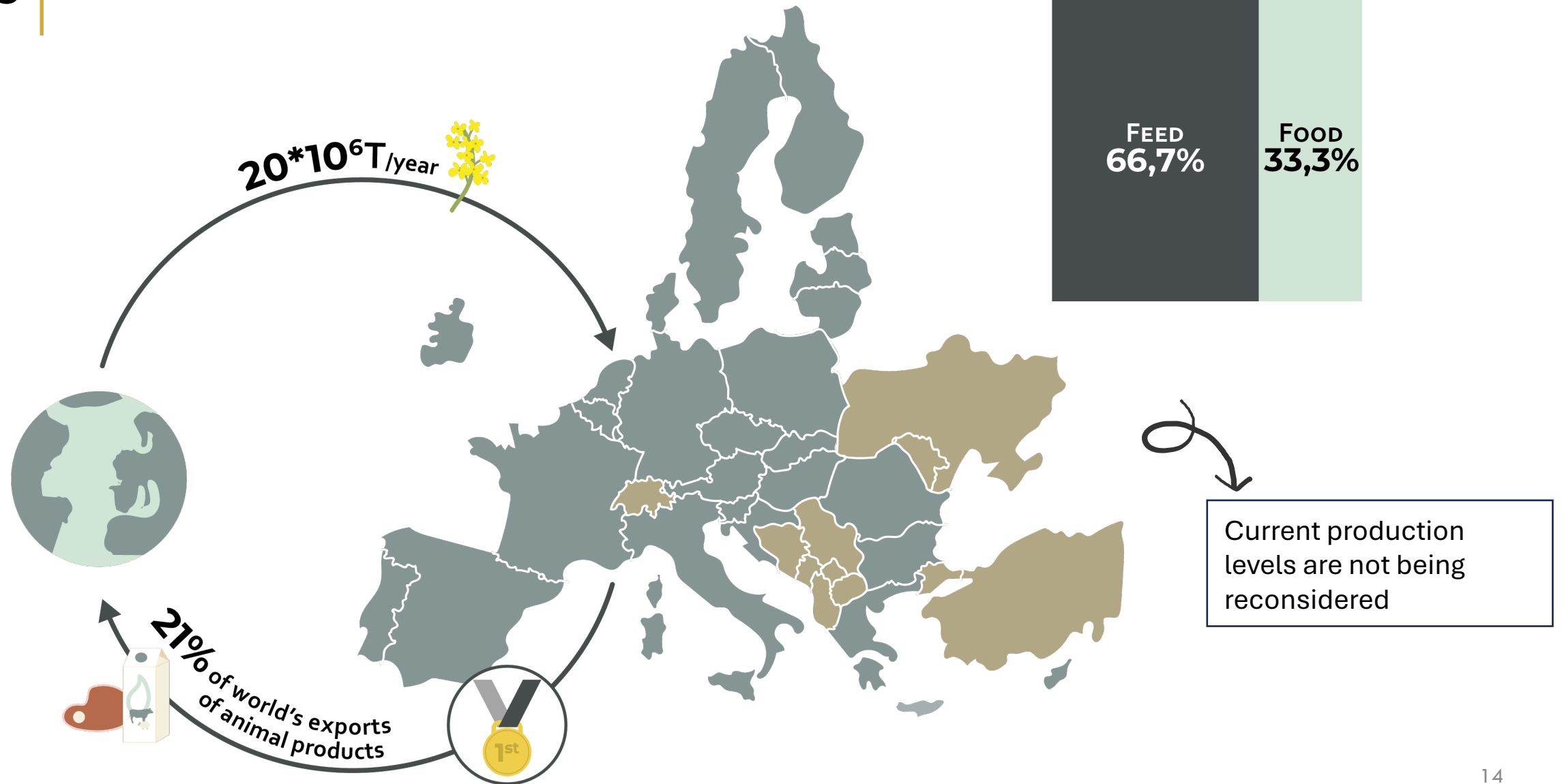
We are still overconsuming proteins

2 | The Jevons' Paradox

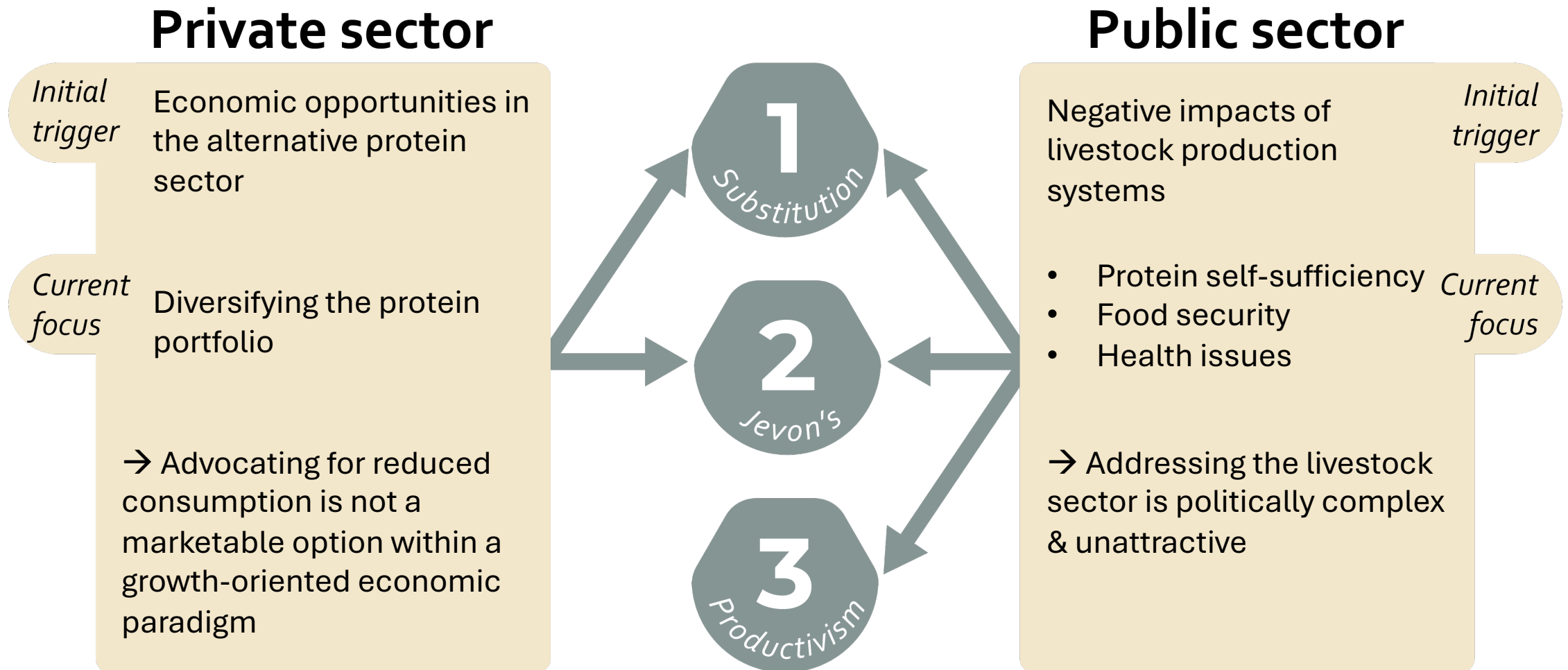


This might lead to overall increase in protein production and consumption



3 | The Productivism Paradox



Stakeholder dynamics and contribution to paradoxes are driven by economic and political opportunities



Five narratives maintaining the status quo and pushing towards marginal adaptation

	Efficiency narrative	Comparative advantage narrative	Food security narrative
	Europe does it best, and there is a growing demand	Europe has a comparative advantage to continue producing animal	Europe's exports contribute to enhancing food security
	<ul style="list-style-type: none">• Overall increase in production and associated environmental impacts• Local environmental issues	<ul style="list-style-type: none">• Unrealistic assumptions• Past trade agreements influence• Externalities	<ul style="list-style-type: none">• Food availability vs food accessibility and utilization• Structural issues of food security (disruption of local markets)

Narratives maintaining the status quo

Food sovereignty narrative



Europe needs to maintain its strategic autonomy in food production



A term used today as a synonym for food self-sufficiency
Competitiveness vs the right of people to define their own agricultural and food systems.

Leakage effect narrative

Reducing Europe's production could lead to leakage effects through increased imports from outside the EU

Coordinated action is needed
Consumption and production together

Conclusions

Current system: Socio-technical lock-in of European protein production systems toward intensive and productive animal production systems with a high reliance on protein-rich crop imports.

Different forces pushing the system towards a new configuration resulting in 3 main paradoxes:

- 1) The Substitution Paradox;
- 2) The Jevons' Paradox;
- 3) The Productivism Paradox

Different narratives sustain the paradoxes.

Circular food system approaches can support current European protein intake levels while reducing land use and greenhouse gas emissions

[Wolfram J. Simon](#) , [Renske Hijbeek](#), [Anita Frehner](#), [Renee Cardinaals](#), [Elise F. Talsma](#) & [Hannah H. E. van Zanten](#)

[Nature Food](#) 5, 402–412 (2024) | [Cite this article](#)

Our perspectives

Two of the three paradoxes focus on production issues and are linked to the livestock sector.

→ We need to strategically reassess the livestock sector's future explicitly.

Narratives are driving the protein transition.

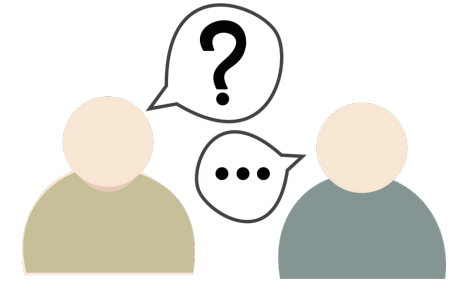
→ Science embodies narratives and is political

→ For policymakers, particularly in Europe, there is a critical need to clearly articulate future goals regarding protein production and consumption systems, working on coherence

Protein transition vs trade agreements facilitating meat imports



Acknowledgements and collective work



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The Super Sytra Team

Thank you for listening

Feel free to reach out on Research Gate & LinkedIn:
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