

Photograph by Philippe Baret

The issues

Consumption-related issues

Health impacts



Corona heart disease

+18% *Processed*

+9% *Red & unprocessed*

Type-2 diabetes

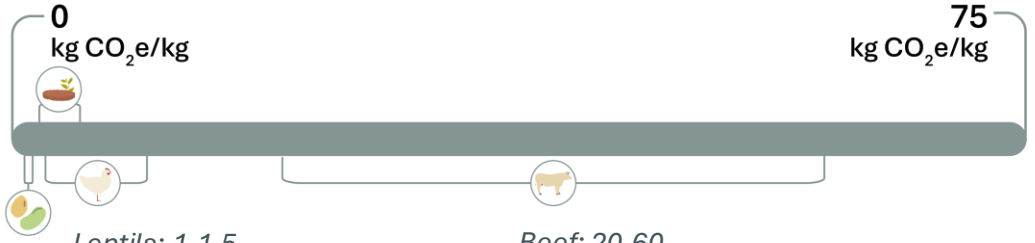
+45% *Processed*

+24% *Red & unprocessed*

Production-related issues

Environmental impacts







Animal welfare impacts



The proposal







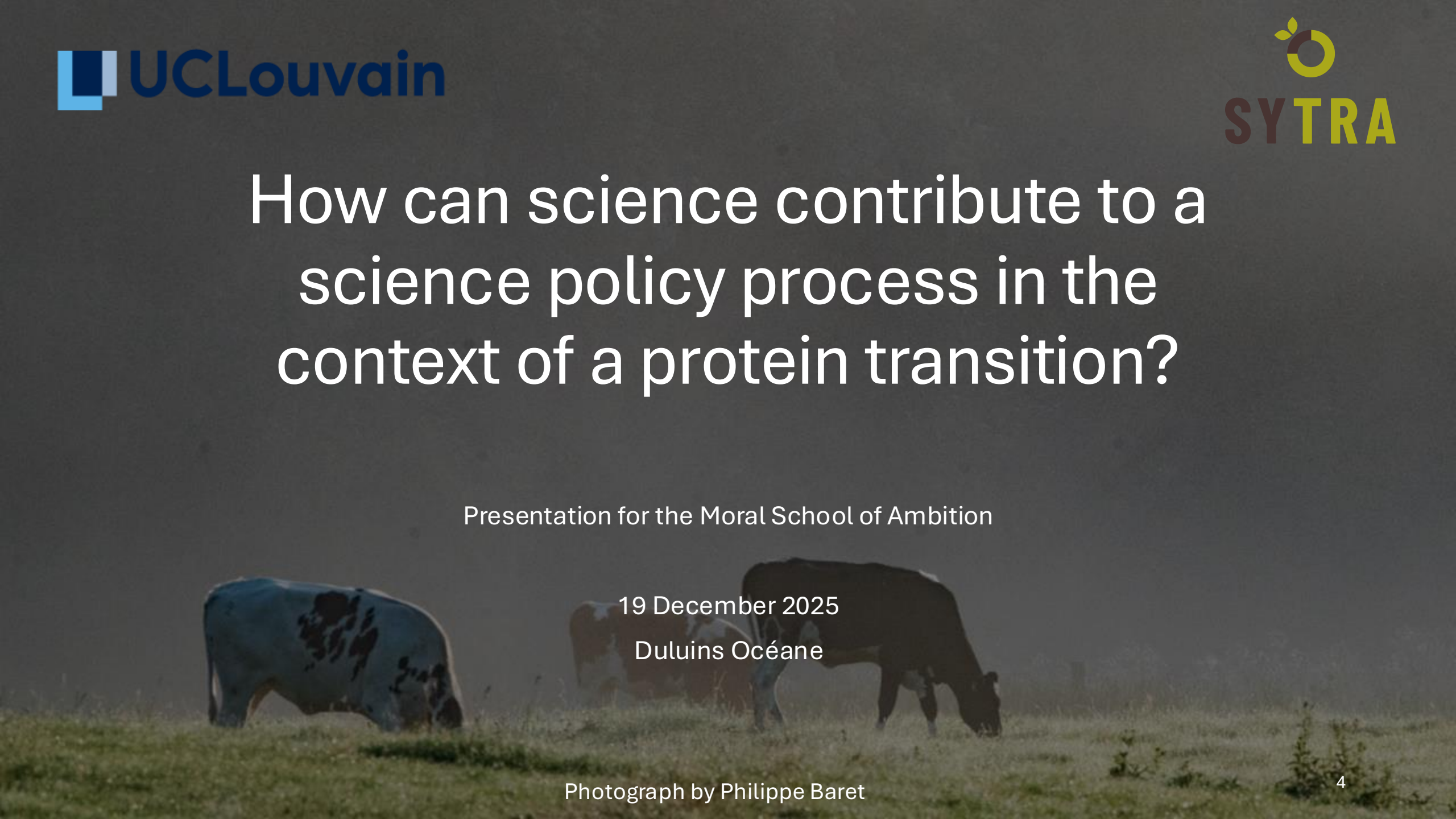
Are these solutions effective in addressing the underlying issues of overconsumption and overproduction of animal proteins?

How can science contribute to a science policy process in the context of a protein transition?

Presentation for the Moral School of Ambition

19 December 2025

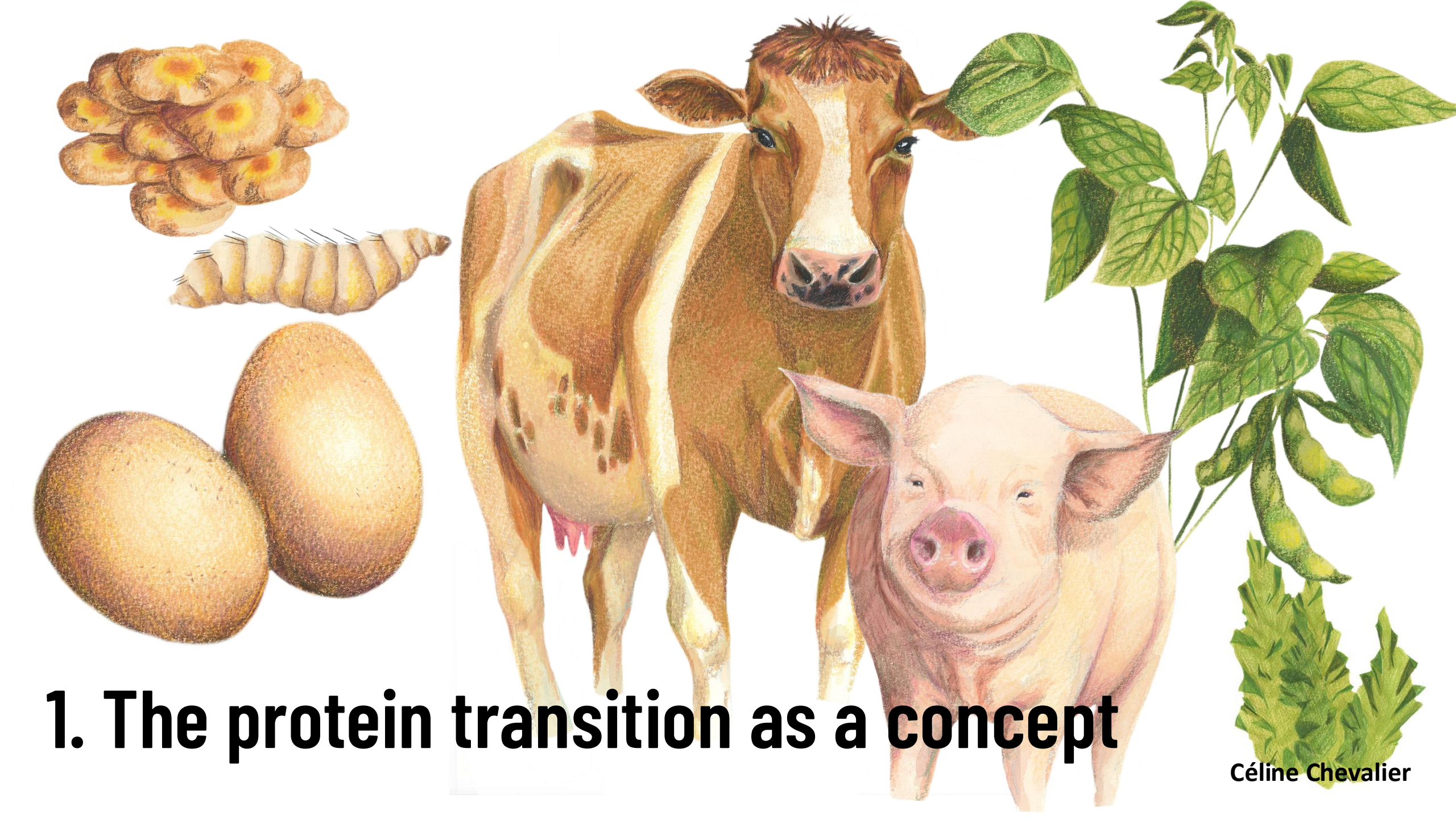
Duluins Océane



Photograph by Philippe Baret

Today’s menu

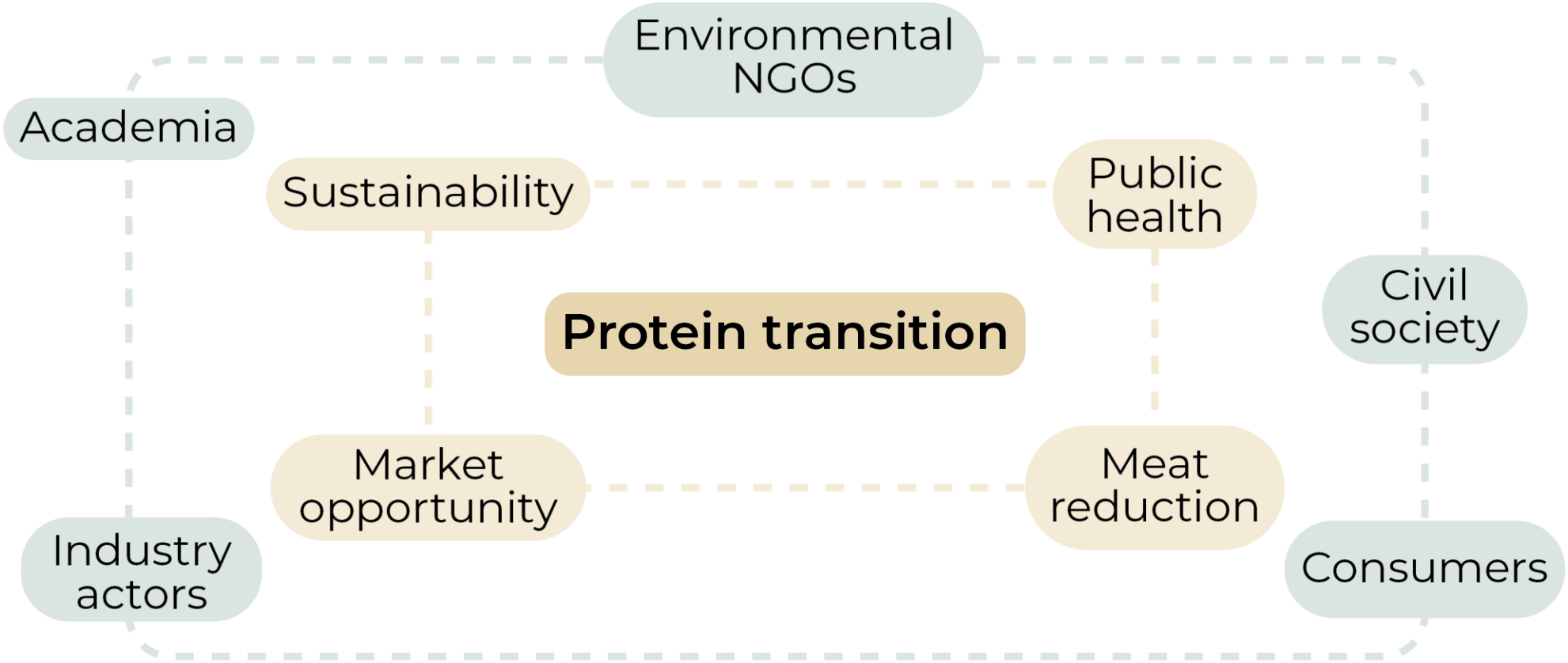
1. The protein transition as a concept
2. Science for policy: How can science contribute to a science policy interface?
3. Challenging the unchallenged: The paradoxes of the protein transition
4. Understanding how scientific outputs can contribute to policy
5. Contribution of science through networks



1. The protein transition as a concept

Céline Chevalier

The emergence of the protein transition as a concept



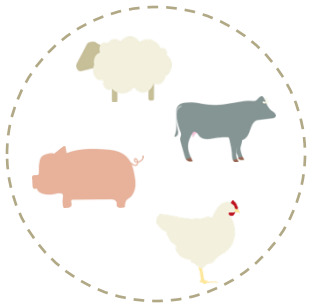
The protein transition is a powerful but contested concept

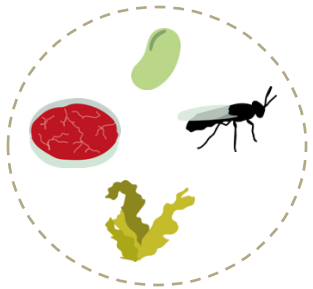
SYTRA

The protein transition is defined as a shift in consumption

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

'Traditional' animal protein sources → Alternative proteins







The Narrative Paper

The debate tend to emphasize what people eat, rather than how food (especially animal protein) is produced

SYTRA

Coming back to the issues

?

Consumption-related issues

Production-related issues

Health impacts



Environmental impacts



Animal welfare impacts



SYTRA

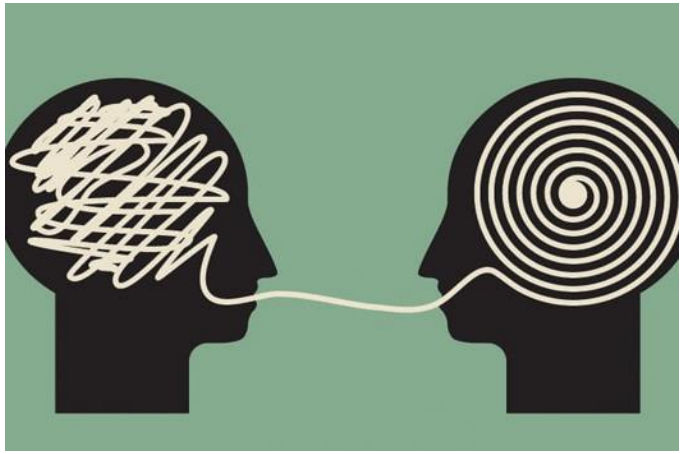
What is a narrative?

A socially shared story through which individuals and groups make sense of a complex phenomenon.



Why are narratives important

Narratives shape how people **understand reality**, **assign value**, and **decide what actions are desirable or possible**.



Make sense

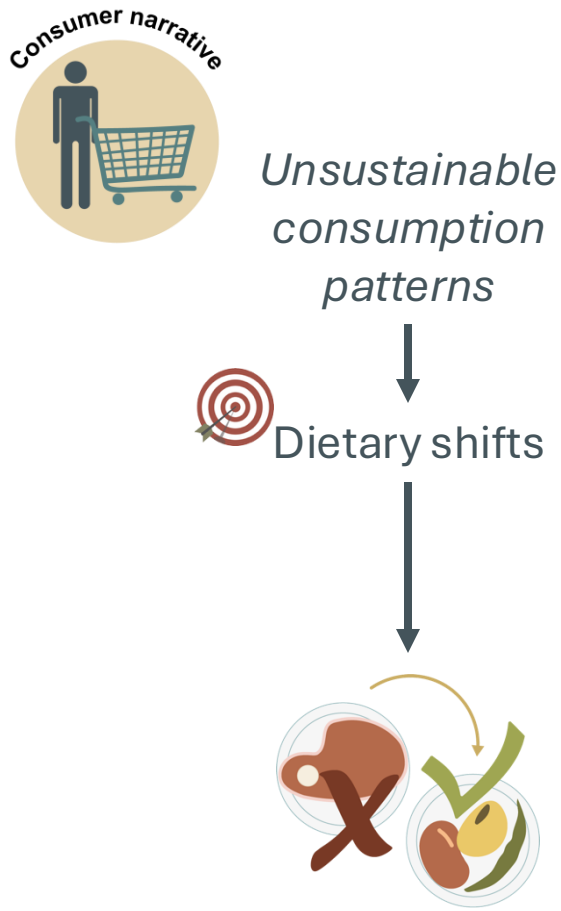


Guide collective action



Persuade & mobilize

The scientific narratives of the protein transition

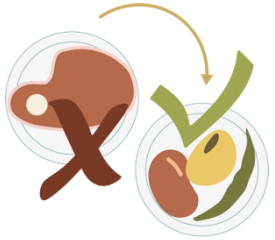


The scientific narratives of the protein transition



Unsustainable consumption patterns

Dietary shifts





Inefficient protein production systems

Develop new, more resource-efficient protein production systems



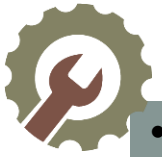
Different narratives correspond to different political priorities and public money spending

Consumer narrative



- Education & awareness campaigns
- Fiscal incentives
- Public procurement policies

Techno-centred narrative



- Research and development in alternative proteins
- Infrastructure support
- Innovation-friendly regulations

The different narratives are normative in their vision of change and are intertwined with the political and economic interests of private and public actors.

Key message

1. Narratives play an essential role in shaping what is seen as a desirable future and what actions are needed to get there.



2. Science for policy

Markus Spiske

Prerequisites

The science–policy interface refers to the set of processes, relationships, and practices through which scientific and policy worlds interact.

1. Mutual accessibility and opportunities for engagement
2. Trust, credibility, and openness
3. Institutional support and incentives

How can science contribute?

1. Challenging the unchallenged

2. Understanding how scientific outputs can contribute to the policy process

3. Contributing through networks



3. Challenging the unchallenged: The paradoxes of the protein transition

The current consumption situation

Recommended protein intake

0.83 g/kg of body weight/day

European consumption

1.25g/kg

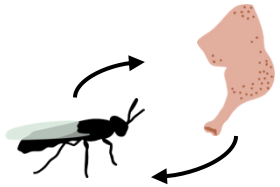


We overconsume proteins

We overconsume **animal** proteins

Three paradoxes

The Paradox Paper
(Duluins & Baret, 2024)

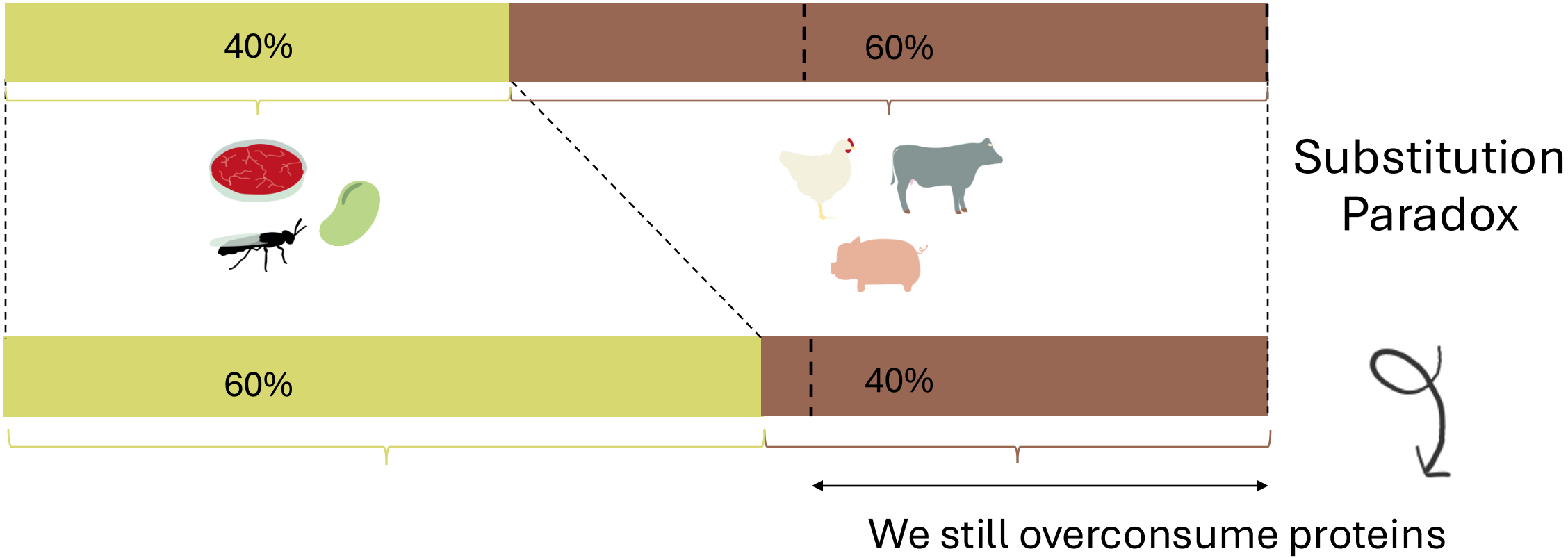


The substitution paradox and the consumer narrative





The substitution paradox and the consumer narrative



The substitution paradox

The **substitution paradox** highlights the inconsistency of focusing efforts on substituting animal proteins with other sources, when the real issue is overconsumption.

Coming back to the issues

Consumption-related issues

Health impacts



Amount of protein consumed ✗

Type of protein consumed ✓

Production-related issues

Environmental impacts



Per kg of protein ✓

Total ?

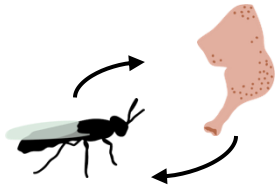
Animal welfare impacts



Total ?

Three paradoxes

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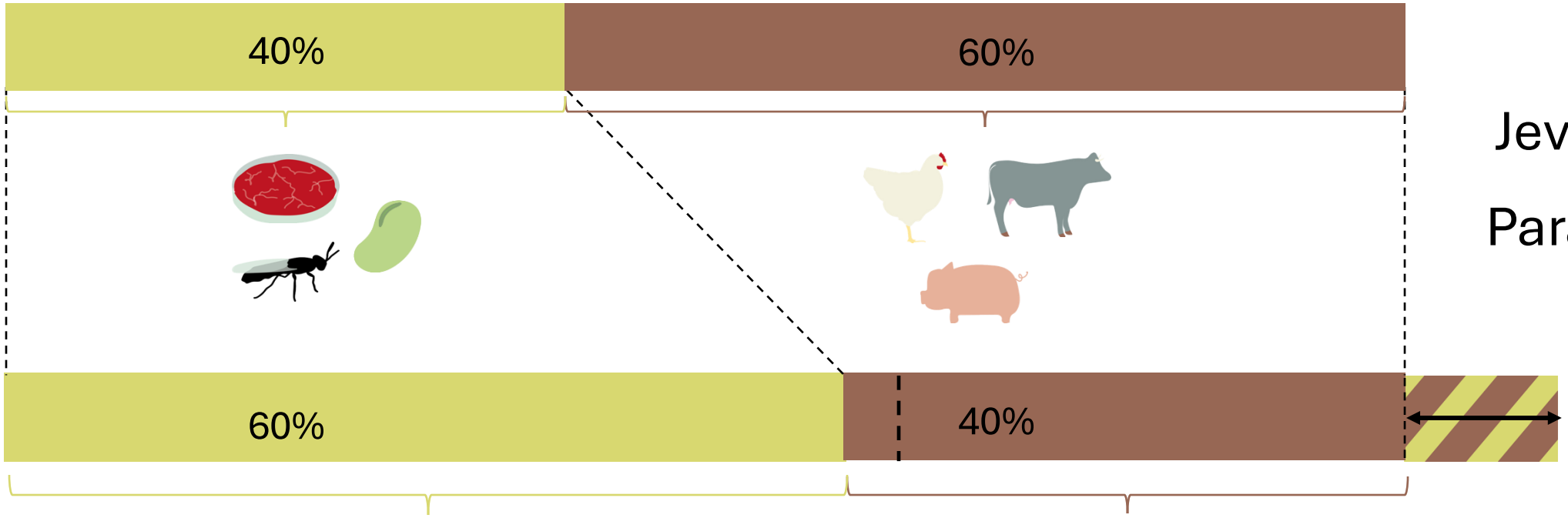
The substitution paradox and the consumer narrative



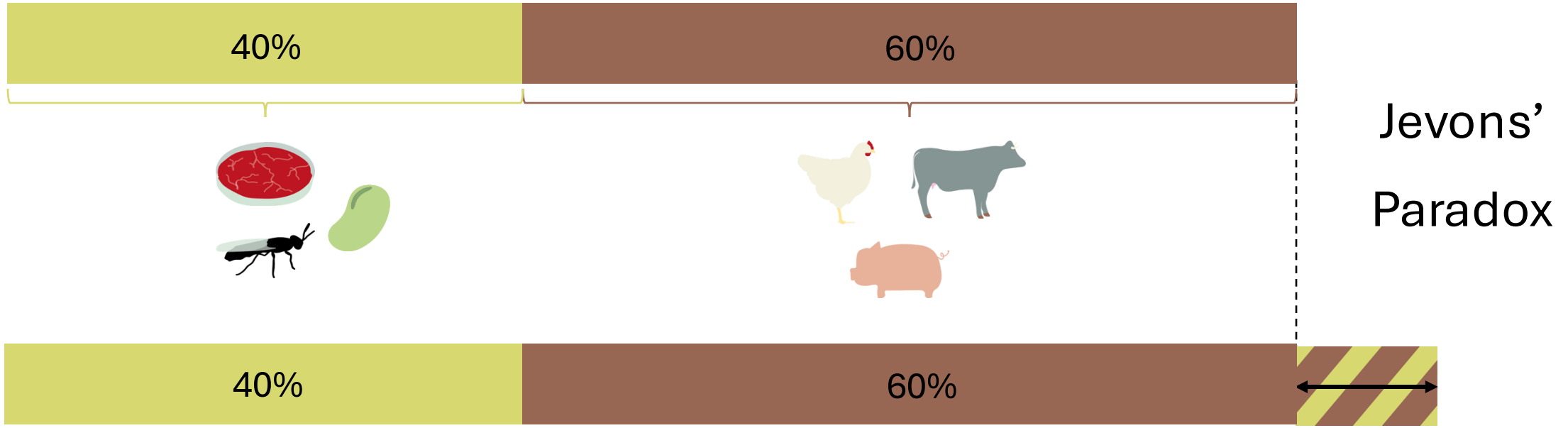
The Jevons' paradox and the techno-centred narrative



The Jevon's paradox and the techno narrative



The Jevon's paradox and the techno narrative



Increase in overall consumption (and production)

The Jevons' paradox

The **Jevons paradox** highlights the risk that developing protein sources perceived as more efficient could lead to a net increase in consumption and production, thereby reducing or negating efficiency gains per unit.

Coming back to the issues

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Health impacts



Amount of protein consumed ✗

Type of protein consumed ✓

Production-related issues

Environmental impacts



Per kg of protein ✓

Total ✗

Animal welfare impacts



Total ?

The proposal



@Unsplash



@Thailand unique

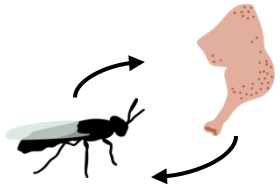


@Burger King

Focusing on changing diets and developing alternative proteins will be too short to address the issues at stake.

Three paradoxes

The Paradox Paper
(Duluins & Baret, 2024)



The substitution paradox and the consumer narrative



The Jevons' paradox and the techno-centred narrative

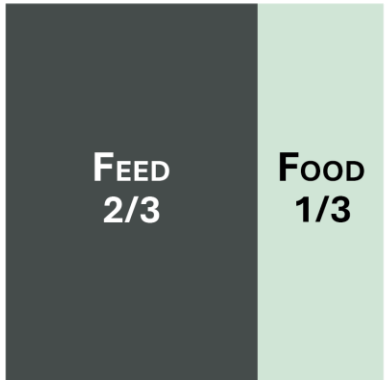


The productivism paradox

The productivism paradox

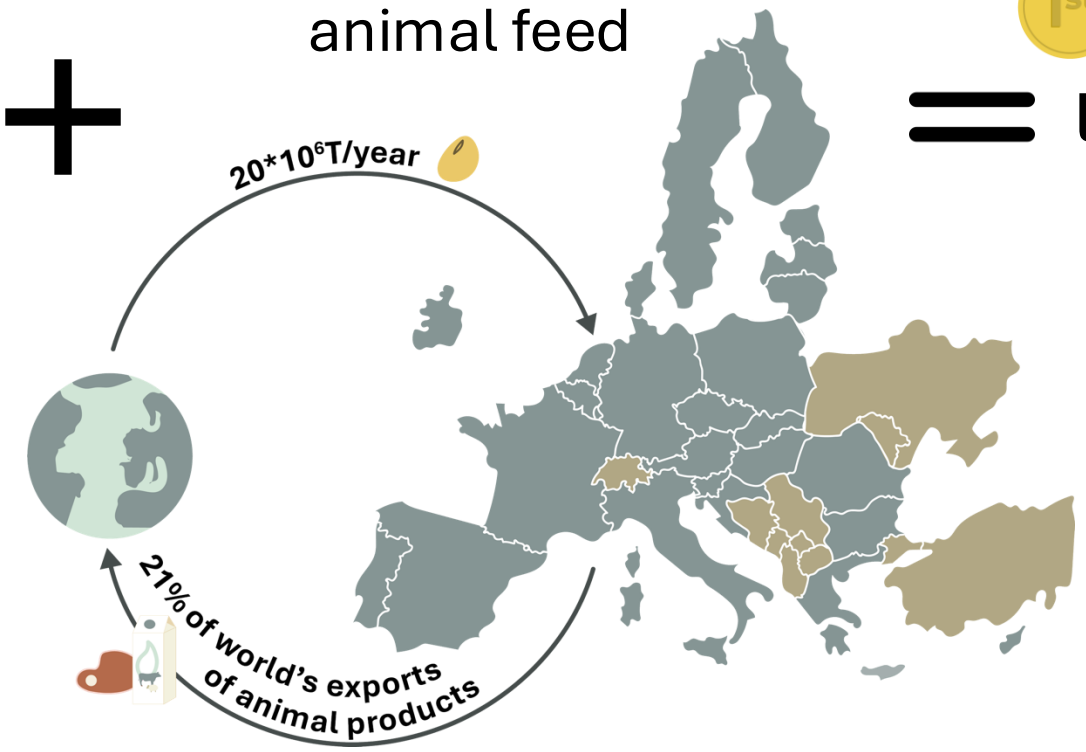
2/3 of EU agricultural land is dedicated to animal feed

European agricultural area



+

Soybean imports for animal feed

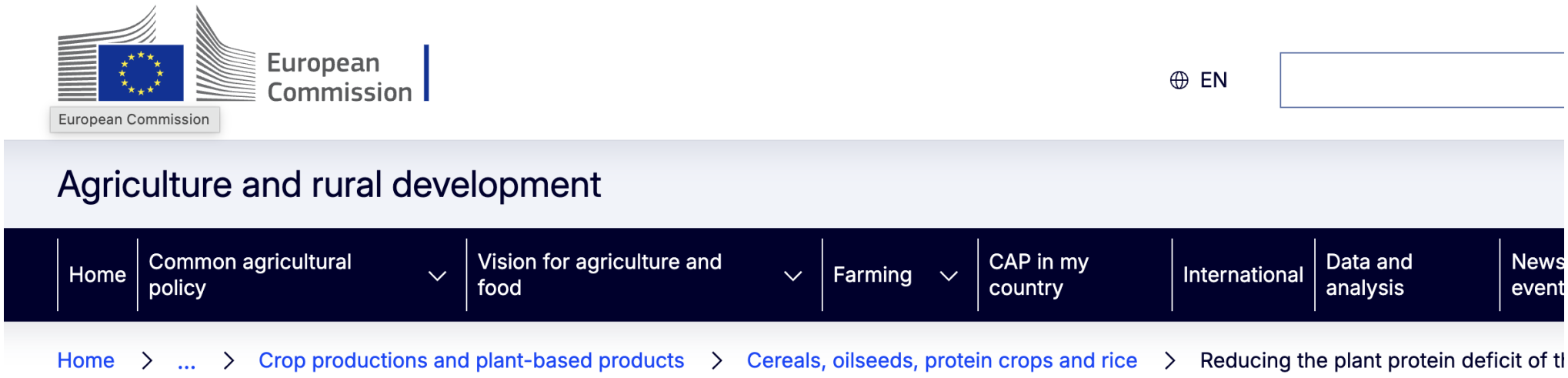


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Europe is the leading exporter of animal products.

The so-called protein-deficit



The so-called protein-deficit

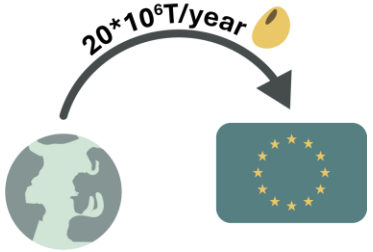
Current European livestock production



Feed demand to sustain European livestock production

Current European feed production





Agriculture and rural development

Home | Common agricultural policy | Vision for agriculture and food | Farming | CAP in my country | International | Data and analysis | News event

Home > ... > Crop productions and plant-based products > Cereals, oilseeds, protein crops and rice > Reducing the plant protein deficit of tl

Reducing the plant protein deficit of the European Union

The so-called protein-deficit

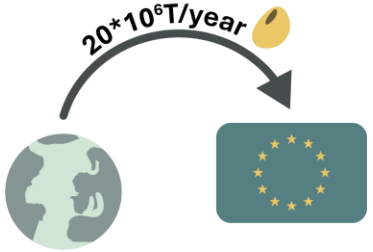
Feed demand to sustain European livestock production

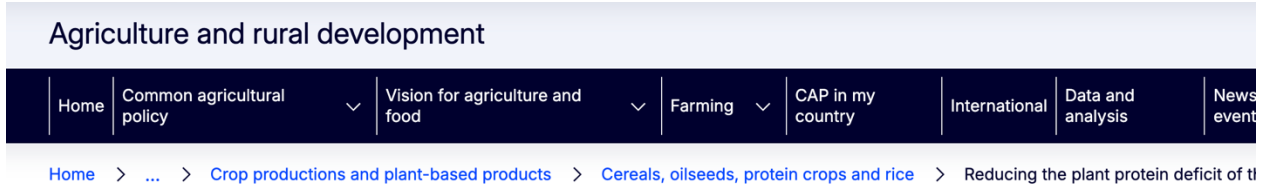
Current European livestock production



Current European feed production







Reducing the plant protein deficit of the European Union

The so-called protein-deficit

Current European livestock production



Feed demand to sustain European livestock production

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Reducing the plant protein deficit of the European Union

The productivism paradox

The **productivism paradox** shows that, despite protein overconsumption and surplus of animal production for export, Europe remains focused on achieving self-sufficiency in animal protein feed, without questioning its current production levels.

Coming back to the issues

Consumption-related issues

Health impacts



Amount of protein consumed ✗

Type of protein consumed ✗

Production-related issues

Environmental impacts



Per kg of protein ✗

Total ✗

Animal welfare impacts



Total ?

Key messages

1. Narratives play an essential role in shaping what is seen as a desirable future and what actions are needed to get there.

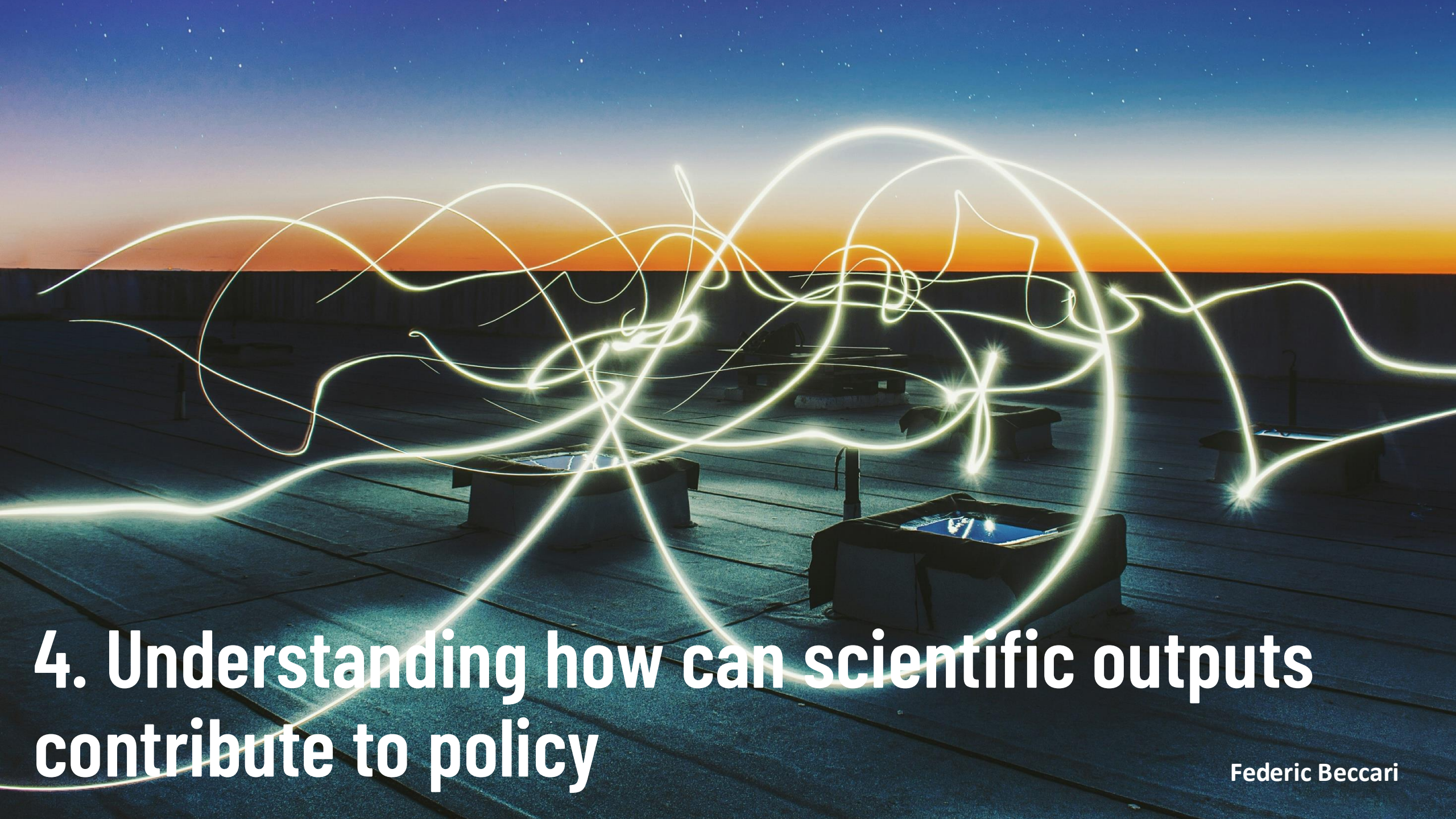
2. Focusing on changing diets and developing alternative protein is not enough

How we can contribute

1. Challenging the unchallenged

2. Understanding how scientific outputs can contribute to the policy process

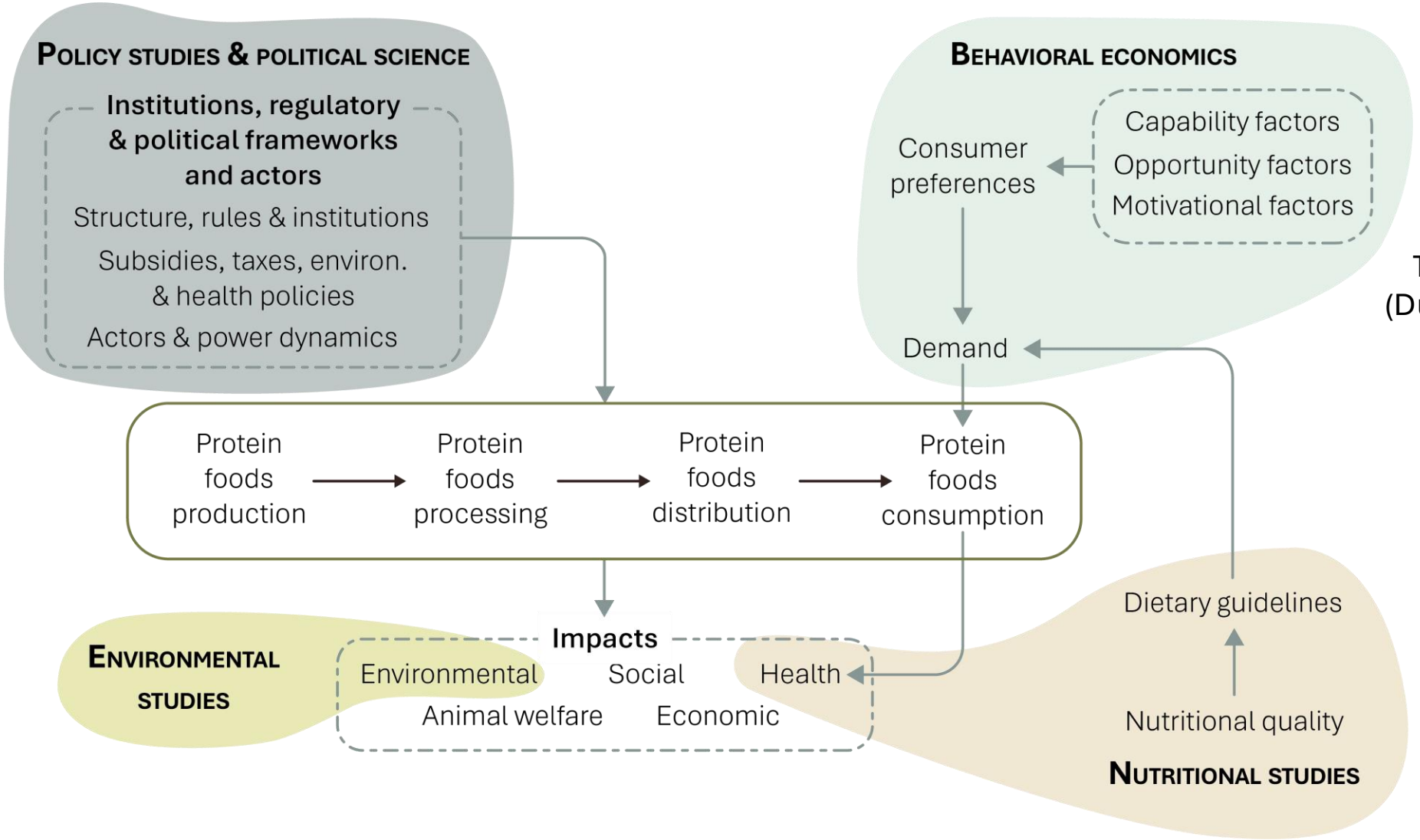
3. Contributing through networks



4. Understanding how can scientific outputs contribute to policy

Federic Beccari

Different disciplines focus on different components





The Discipline Paper (Duluins & Baret, to be published)

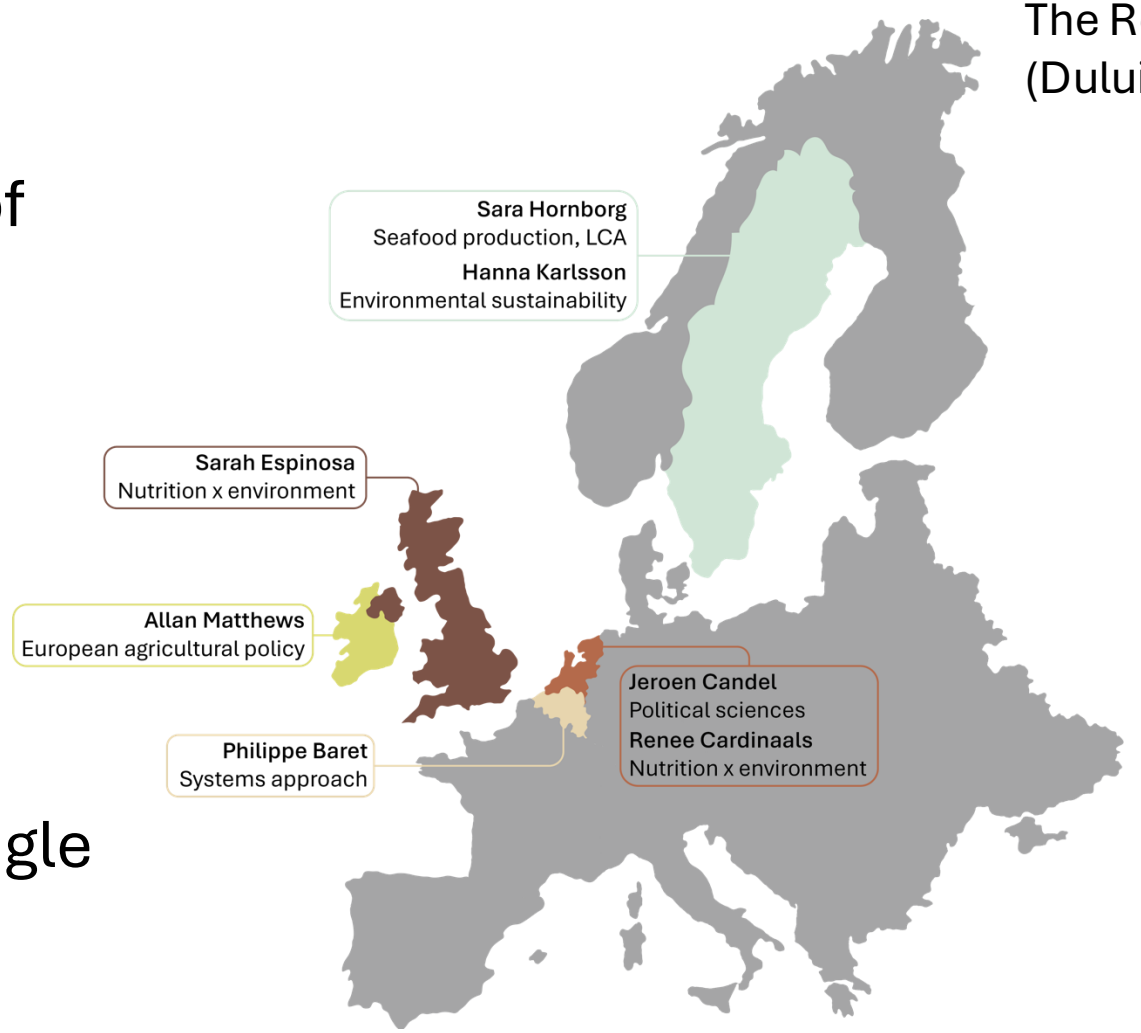
The Restatement : An interdisciplinary attempt

The Restatement Paper (Duluins et al. 2025)

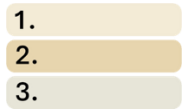
Build an integrated, interdisciplinary inventory of knowledge on the protein transition

8 co-authors from diverse disciplines

Key conclusions of each disciplines gathered in a single document



What is the Restatement



8 sections



68 main statements



> 700 references

Example of questions answered:

What is the current status of protein consumption in Europe relative to nutritional recommendations?

How coherent are EU policies and objectives in guiding the protein transition?

How can the Restatement be turned into something actionable ?

Give a clearer view of the whole system, beyond disciplinary focuses.

Key message

1. Narratives play an essential role in shaping what is seen as a desirable future and what actions are needed to get there.

2. Focusing on changing diets and developing alternative protein is not enough

3. Science should do more than produce outputs and understand how these can serve broader debates

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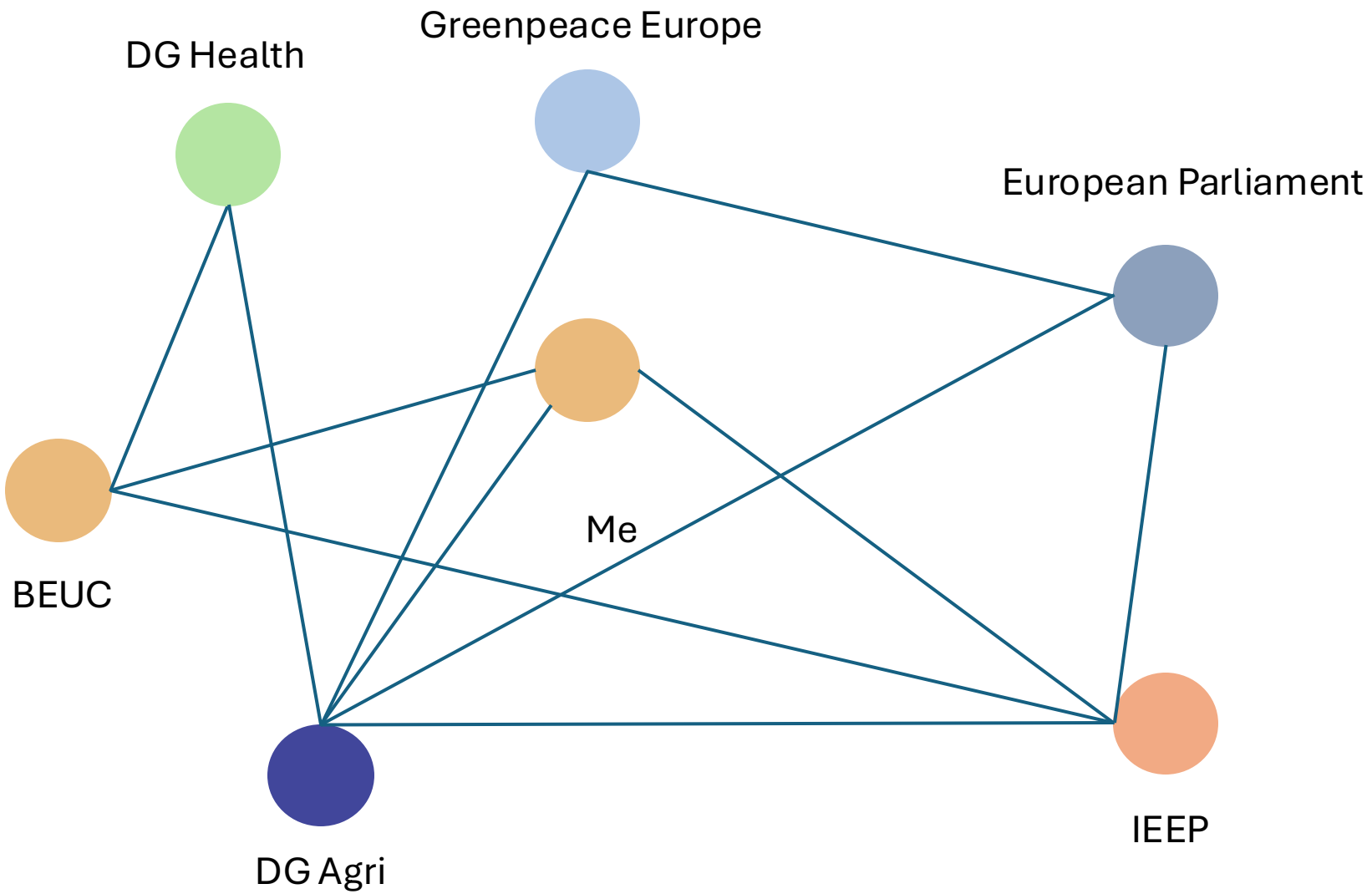
3. Contributing through networks



5. Contribution through networks

Hristo Sahatchiev

Policy as networks: how researchers are already part of the policy space



Key messages

1. Narratives play an essential role in shaping what is seen as a desirable future and what actions are needed to get there.

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3. Science should do more than produce outputs and understand how these can serve broader debates

4. Researchers are part of the policy space through networks



Céline Chevalier

SYTRA

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EARTH & LIFE INSTITUTE

Thank you for listening

Sytra - UCLouvain

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