



*Follow-up Workshop on Science Advice to Policy Coherence for  
Sustainable Food Systems*

# ***The (im)possible coherence? – Science-Policy, Blockages and Transformation***

Monday, November 27th

Maison Irène et Frédéric Joliot Curie

Rue du Trône 100, 1050 Ixelles, Belgium

## **Summary Report**

Cristobal Marin Rojas, FACCE-JPI Secretariat

## Introduction

FACCE-JPI and HDHL organized a thematic workshop titled "**The (im)possible coherence? – Science-Policy, Blockages, and Transformation**" in Brussels on November 27th, 2023. The workshop spanning a full day, targeted an audience comprising policymakers, HDHL and FACCE-JPI's MB (Management Board) and GB (Governing Board) members, respectively, along with researchers focusing on policies in food production, processing, nutrition, health, and climate change.

The workshop aimed to explore the challenge of policy coherence in the transition towards a more sustainable and healthy food system in Europe, from science through to implementation. Food systems, inherently complex and interwoven, present diverse blockages. Despite advancements across scientific disciplines, the puzzle of achieving policy coherence in the transition of food systems persists. This workshop posed a fundamental question: ***What prerequisites are needed for better coherence between science and policies to transform the food system?*** Participants were prompted to reflect on factors contributing to incoherence within the science-policy interface allowing for a transformation of the European food system.

Distinct environmental, economic, and social disciplines employ unique frameworks and metrics, often disconnected from one another. Blockages also extend beyond knowledge generation and the science-policy nexus, affecting stakeholders such as farmers during the implementation phase. In the midst of polarisation, this workshop aimed to define a common language, consider intrinsic trade-offs in food systems transformation, and explore ways to measure coherence, for example, through integrated, trans-disciplinary approaches and the associated challenges, paving the way forward with a comprehensive understanding.

## Background

The topic of coordinating policy across different areas within healthy and sustainable food systems to ensure food and nutrition security was initially discussed by FACCE-JPI and HDHL following the workshop organised at EXPO2015. Considering the evolving landscape of food systems influenced by various European Commission strategies such as the European Green Deal (with the Farm to Fork strategy aiming to transform food systems) and the Common Agricultural Policy (CAP), as well as research strategies promoted through Horizon Europe, the FACCE-JPI SAB emphasised the need for more coherence between the European Green Deal objectives and the CAP.

In light of these considerations and with the objective of initially scoping trade-offs and contradictions emerging when policies address societal challenges in the areas of agriculture, food security, and climate change, a workshop was held in April 2022. At that time, based on the workshop's key messages, the organisers recommended FACCE-JPI's GB to:

- Support transdisciplinary research in the FACCE-JPI's remit, with a focus on science advice to policy.
- Support impact assessment of research and innovation regarding policy coherence/incoherence.
- Continue the exploratory work on policy coherence for sustainable food systems.

Furthermore, FACCE-JPI Scientific Advisory Board and Stakeholder Advisory Board members discussed the issue of science advice for policy coherence at their respective winter 2023 board meetings. They stressed that framing an issue/question is often crucial, and the right framing can be achieved through interdisciplinary and transdisciplinary science. They also suggested that more research into how to govern such science-policy interfaces effectively is needed.

Simultaneously, HDHL has continued over the past years to bridge the gap by bringing together food, nutrition, and health both in the European landscape and beyond. It is actively participating in various CSAs (such as CLEVERFOOD and FOODPathS), providing valuable input to upcoming Horizon Europe (HE) partnerships such as ERA4Health and SFS to ensure that all elements of its interdisciplinary approach are brought to the table. However, many challenges remain regarding fragmentation in the landscape, as well as in the translation of science to policy. Particularly concerning for HDHL's Management Board, consisting of international ministries and research funding agencies, is the observed fragmentation. While the HE partnerships represent progress, they were designed to avoid overlap, inadvertently maintaining a gap between research and policy actors responsible for food systems and those responsible for human health. For instance, the SFS partnership involves food-oriented funders and ministries, while the ERA4Health partnership involves health-oriented counterparts. This, in turn, adds unintended hurdles to the existing challenge of efficiently translating research outcomes to effective, cross-silo policy.

Considering the initial work in 2015 and the matching remit and continuing interest of the HDHL, the follow-up workshop is organised jointly by both JPIs. The follow-up workshop will build on previous outcomes and aims to further explore how scientists can alleviate policy incoherence by presenting evidence and engaging in productive science-policy dialogue.

## *Objectives*

The expected outcome of this workshop was to further contribute to understanding the changing role of science advice to policy, as well as the role of science-policy and science-society interfaces in organising science advice. It also aimed to understand the role of interdisciplinary and transdisciplinary research in science advice and how it can contribute to the governance of science-policy interfaces. Based on these goals, it sought to identify actions with the potential to improve the capacity of both FACCE-JPI and HDHL to contribute to policy coherence. A better identification of issues within this policy landscape would allow both JPIs to collaborate and create synergy through funding research projects that would more efficiently contribute to Horizon Europe objectives in the areas of food production, nutrition security, health, and environmental protection. More specifically, it aimed to:

- Further increase awareness of policy incoherence and trade-offs in the areas of food production, processing, nutrition, health, and climate change.
- Continue scoping the trade-offs, contradictions, conflicts, and knowledge gaps that emerge when policies address societal challenges in the mentioned areas.
- Discuss how to ensure that interdisciplinary and transdisciplinary science is used when framing research questions required for policy input.
- Discuss the principles, criteria, and actions that have the potential to improve the contribution of research to policy coherence.

## Acknowledgements

FACCE-JPI and HDHL express gratitude to all individuals who contributed to making this workshop a reality. Special appreciation goes to the steering committee, whose unique expertise in the fields of agriculture, food, environment, health, and policy played a crucial role in framing the scope of this workshop. Their efforts in mobilising contacts ensured a high-level discussion and the inclusion of the best possible speakers. The steering committee comprised **Gianluca Brunori, Amrit Nanda, Daniel Zimmer, John Mathers, Alba Gil, and Janas Harrington**

The organising committee for this workshop consisted of **Jessie Doppler (HDHL Secretariat Coordinator), Heather Mckhann (FACCE-JPI Secretariat Coordinator), Bernadette Conrads (HDHL Secretariat), Cristobal Marin Rojas (FACCE-JPI Secretariat), Temiloluwa Daike (FACCE-JPI), and Heather Alford (FACCE-JPI Secretariat).**

The core content of this workshop and the reason for its success lies in our speakers, who generously provided key insights from their areas of expertise. We extend our sincere thanks to them, as without their contributions, this event would not have been possible:

**Giuseppina Luvarà, DG RTD**

**Jose Valls, FAO**

**Rebeca Fernández, FoodDrinkEurope**

**Florian Kern, IÖW**

**Jacqueline Broerse, FIT4FOOD2030**

**Louis-Georges Soler, INRAE**

## Workshop

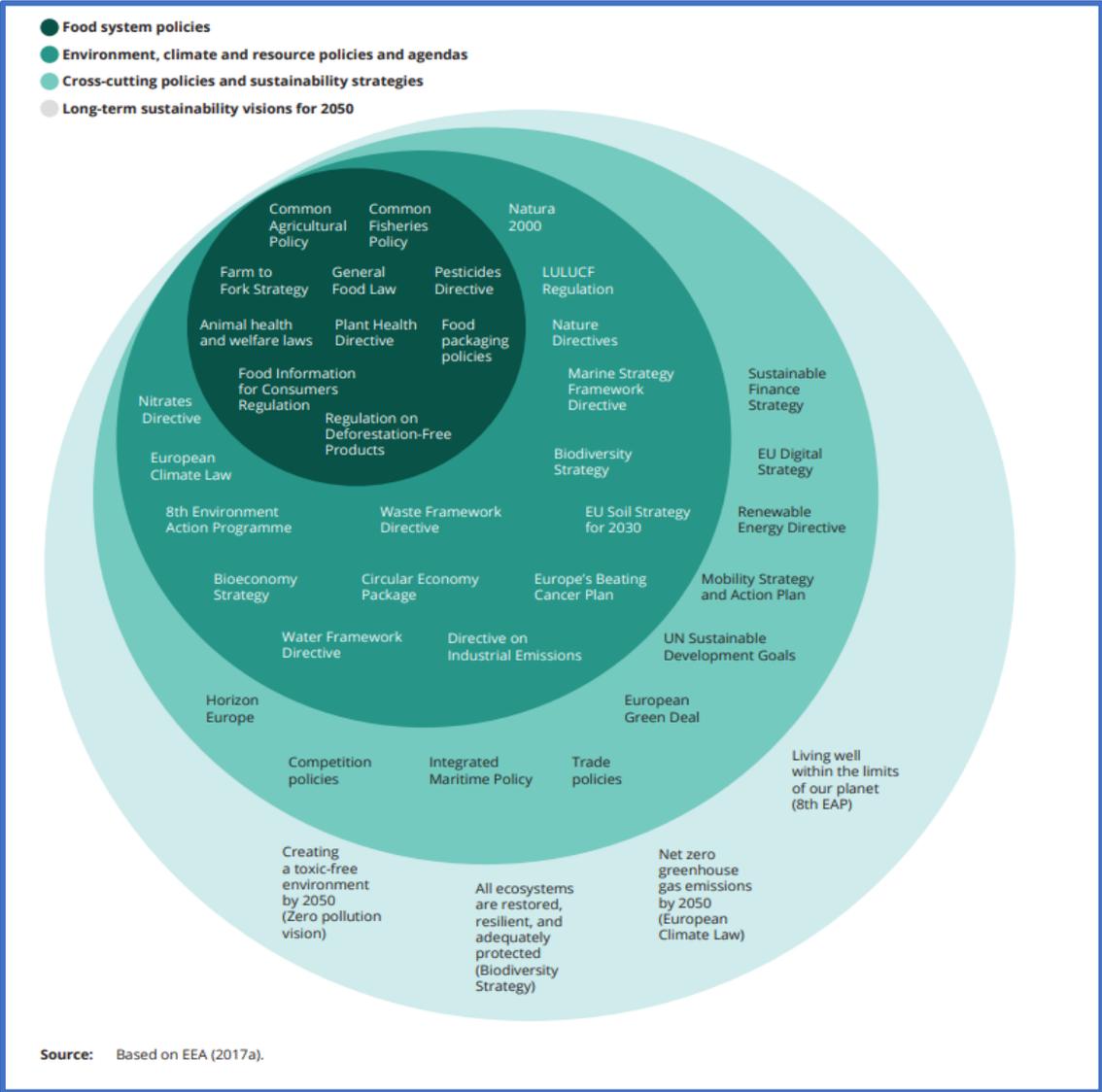
### *Opening Speech: FOOD 2030: Policy Coherence in the EU Context*

*Giuseppina Luvarà, Policy Officer, Unit B2 – Bioeconomy and Food Systems, Directorate-General for Research and Innovation, DG RTD*

In the opening speech for this workshop, Giuseppina Luvarà set the scene by highlighting the relevance of policy coherence in the European context. She presented *FOOD2030*, a EU's Research and Innovation (R&I) policy framework that has funded over 100 projects with a total investment exceeding 760 million EUR. *FOOD2030* is conceived to position R&I as a guiding force for policy related to food systems transformation and the attainment of the objectives outlined in the European Green Deal, particularly the Farm to Fork strategies. *FOOD2030* operates within the framework of Horizon Europe, emphasising priorities such as nutrition for sustainable and healthy diets, climate-smart and environmentally sustainable food systems, circularity and resource efficiency in food systems, and

innovation and empowerment of communities. It adopts a systemic approach, not limited to research alone, but also addressing the scaling-up of innovation and research results.

To contextualise the day's discussions, Luvarà emphasised that a sustainable food system cannot rely solely on individual consumer choices; a robust evidence base is necessary to strengthen policy coherence, and presented a map illustrating the key EU policies, strategies, and visions influencing Europe's food system, depicting the intricate network of laws at the European level governing food policy.

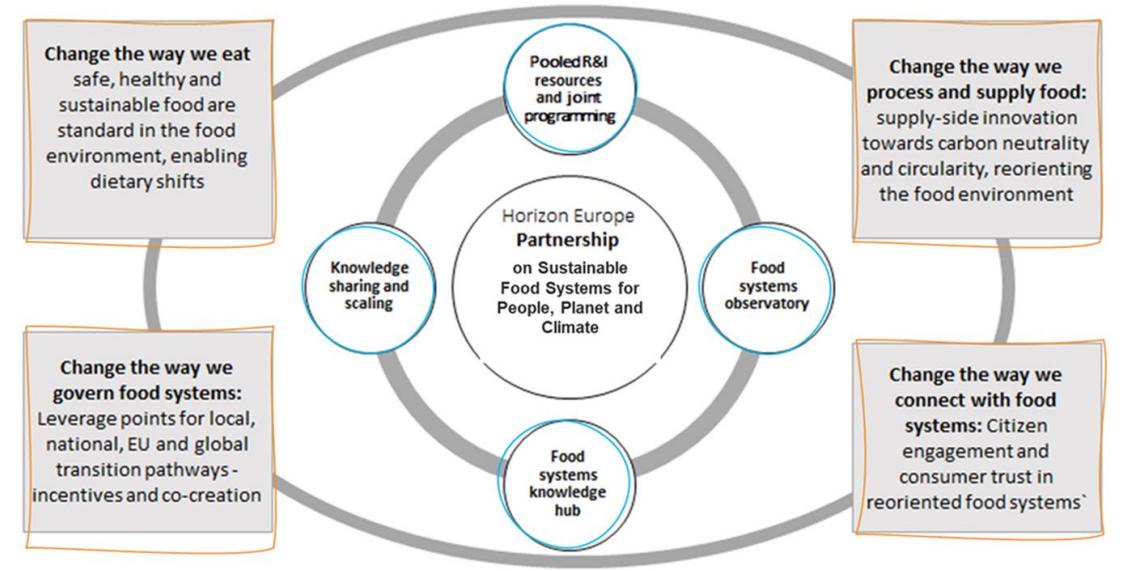


Enumerating challenges to European food system transformation, she identified geopolitical stability, climate change, biodiversity loss, environmental pollution, population growth, disparities in the supply chain, social inequalities, cultural attitudes between member states, and malnutrition and health. Addressing these challenges requires the active involvement of various stakeholders, including actors in the supply chain, EU institutions, stakeholders, and citizens. In this context, R&I serves as a convener and "glue," facilitating and synthesizing dialogue among all stakeholders.

As a case study, Luvarà presented one of the European Partnerships exemplifying an effort to design a research agenda that is conscious of the challenge of policy coherence: *the Sustainable Food Systems*

(SFS) Partnership. This partnership advocates a systemic approach, involving co-creation with various actors, frameworks and evidence supporting policy options capable of researching and understanding what sustainable food systems entail. The SFS partnership serves as a noteworthy example efforts to seeking solutions to complex challenges by examining the interconnectedness between health and nutrition, food system governance, processing and supplying, and citizen engagement and consumer trust. The presentation underlined the systemic approach of FOOD2030, not only focusing on research but also addressing the scaling-up of innovation and research results.

### Enable R&I to drive food systems transformation processes



Overall, the conclusion of the opening presentation is that achieving a sustainable and healthy food system requires coordinated efforts, interdisciplinary approaches, and strong policy coherence, with R&I playing a central role in moving forward.

### Keynote Speech 1: Enabling Policy Coherence for Agrifood Systems Transformation

*José Valls Bedeau, Policy officer, Food Systems and Food Safety Division, FAO*

As the first keynote speaker, José Valls Bedeau brought his expertise in the policy realm to the forefront. He began by reminding the audience of the definition of an *Agrifood System*, encompassing the entire journey of food from farm to table. This includes the various stages such as growth, harvest, processing, packaging, transportation, distribution, trade, purchase, preparation, consumption, and disposal. This definition also extends to non-food products produced by agriculture, livelihoods, and the numerous activities, investments, and choices involved in getting agricultural products to end-users. A *Sustainable Agrifood System*, therefore, aims to achieve coherent co-benefits across all

sustainability dimensions, ensuring food security, healthy diets, and maintaining the economic, social, and environmental bases for future generations.

Valls Bedeau highlighted the significance of *Food Systems* as one of the six transformative entry points identified in the *Global Sustainable Development Report* (Sachs et al., 2023), with the potential for catalytic and multiplier effects across the Sustainable Development Goals. He emphasised that Agrifood Systems transformation, with both its negative and positive effects, involves a systemic change that requires innovation in thinking, acting, and working. Achieving such transformation demands considering all relevant actors and stakeholders, each with diverse interests and leverage power, requiring collective action.

The importance of systems approaches was featured during the UN Food Systems Summit in 2021, explicitly recognising the interconnectedness between various spheres and giving an emphasis to multistakeholder dialogues at the country level. However, he pointed out that while entry points for transforming Agrifood Systems are evident, pathways and strategies to achieving this remain unclear. Under this assumption, the concept of *Policy Coherence* becomes fundamental. Defined as *the alignment of policies affecting the food system to achieve health, environmental, social, and economic goals*, Policy Coherence ensures that policies designed to improve one aspect do not undermine others.

To achieve coherence in Agrifood Systems, Valls Bedeau highlighted the following **elements that must be considered based in the lessons learnt of local, national, and supra-national experiences up to this day**:

- The institutionalisation of political commitment is crucial for achieving coherence in Agrifood Systems.
- Long-term considerations in decision-making, especially concerning the impact of long-term shocks like pandemics and wars, are vital.
- Inter-ministerial and cross-sectoral coordination, known as horizontal coherence, is often lacking. Examples of enabling mechanisms include the coordination mechanism for Agrifood Systems in Ireland and the high-level committee for food systems transformation in Uganda. Clear mandates and resources are necessary for their effectiveness.
- Participatory processes at the local level, such as cities establishing food policy councils, bring together stakeholders from the community, both from the demand and supply sides.
- Evidence-based policy linkages are essential for integrating the different dimensions of Agrifood Systems and setting up the right incentives and disincentives.
- Alignment across government levels, referred to as vertical policy coherence, requires specific mechanisms for consultation. While emerging in some countries, the link from the city level to national policies through a consultation mechanism is still missing.
- Monitoring, reporting, and learning with clear indicators, targets, and milestones are crucial for accountability and transparency for all involved stakeholders.
- Financial resources must be allocated in a way that reflects an intention for coherence and systems thinking. Establishing a link between sectoral allocations and higher outcomes remains a challenge.
- Human capacities, particularly in fostering a mindset of systems thinking, are vital. Raising awareness and creating a mutual learning environment are essential components.

Emphasising the complex nature of sustainable Agrifood Systems, Valls Bedeau underscored the importance of policies designed at balancing co-benefits across various dimensions, where Policy Coherence emerges as a guiding principle.

### *Case Study A: The (Im)Possible Policy Coherence? Views from the Food and Drink Industry*

*Rebecca Fernandez, Director, Food Safety, Research & Innovation at FoodDrinkEurope, chair at FACCE-JPI's Stakeholder Advisory Board and HDHL's Stakeholder Advisory Board*

Rebecca Fernandez was invited to this workshop as a case study speaker, sharing insights into the challenge of policy coherence for an industry at the centre of agri-food systems: the Food and Drink Industry. Her speech opened by reminding the audience that the EU is the number one exporter of food and drink products worldwide. Priority topics for her organisation include the development of the EU legislative framework on Sustainable Food Systems, packaging and packaging waste, food safety, regenerative agriculture, and sustainable food processing.

From the industry's perspective, policy coherence and consistency are essential. Based on their experience, they increasingly find that issues are addressed with isolated policies, neglecting the interconnections between them. These inconsistencies create uncertainties for industries and provide confusing information to consumers. Therefore, objectives, targets, and timelines need harmonisation across different initiatives. Fernandez then proceeded to provide a non-exhaustive list of examples of incoherence affecting the food and drink industry. This aimed to underscore that, despite the European Commission's efforts to align objectives between different DGs, conflicts often arise.

#### **Examples of horizontal incoherence include:**

- Reduction of packaging vs. mitigating food waste.
- Reduction of packaging vs. the request for more information to be provided on the pack.
- Request for more information on the pack vs. the lack of a regulatory framework for digital labelling.
- Reduction of packaging vs. portion control (e.g., nudging consumers with mono-portions individually packed).
- Criticism about processing vs. push for reformulation.
- Discussion around "sustainable and healthy diets" without a common vision and definition(s) of sustainability.
- Asynchronies of initiatives related to packaging sustainability and food contact materials.
- An ambitious EU trade policy vs. other EU policies impacting the sector's competitiveness.

She then provided insights into opportunities to overcome the challenge of policy incoherence. She mentioned that during the last FACCE-JPI Stakeholder Advisory Board discussion, there was a consensus on the need to engage stakeholders and society in science and policymaking. This engagement ensures uptake, avoids a disconnect from challenges on the ground, and clarifies and

aligns trade-offs and conundrums to identify win-win solutions. FoodDrinkEurope also proposes a potential solution to improve coherence, governance, and coordination: the establishment of a Food and Drink Commissioner or an EVP in Food and Drink in the next European Commission, capable of overseeing all initiatives related to this industry from a holistic perspective.

Fernandez’s case study emphasised the pressing need for addressing policy incoherence in the Food and Drink Industry and proposes concrete steps, including stakeholder engagement and a dedicated governance position, to enhance coherence, clarity, and effectiveness in policymaking.

*Keynote Speech 2: Transforming Europe’s Food System – Assessing the EU Policy Mix*

*Dr. Florian Kern, Institute of Ecological Economy Research, Berlin (IÖW)*

The second keynote speaker, Florian Kern, was invited for his expertise in the European environmental landscape. He provided a brief introduction, highlighting the ambitious yet challenging goals of the Farm-to-Fork strategy for transitioning to a sustainable food system. Echoing points made by earlier speakers, he emphasised that achieving transformation necessitates a systemic change. For instance, it is not sufficient to regulate food packaging or encourage consumers to reduce meat consumption. Instead, a comprehensive shift in the entire food system is needed. This transformation involves changes in knowledge, industry, user practices, infrastructure, technologies, policies, markets, values, and norms. He also emphasised the time-intensive nature of transitions, often spanning 30-50 years and involving both technical and non-technical changes.

He argued that to move towards a more sustainable food system, coherent policy mixes are essential for guiding transitions, involving contributions from diverse policy areas (horizontal) and levels of governance (vertical). However, he pointed out that in practice, policy mixes often show gaps and incoherence, potentially impeding transition processes.

Dr. Kern is one of the authors of *"Transforming Europe’s Food System: Assessing the EU Policy Mix"* (Asquith et al., 2023), a report that provides a detailed and empirical assessment of EU policy mixes driving sustainability transitions, with a specific focus on the food system. He provided insights into the report, examining whether the current EU policy mix aligns with the transformative agenda of the European Green Deal. The core finding highlighted in the analysis is that the EU policy mix displays incoherence and inconsistency, particularly in the misalignment between the CAP and Farm to Fork Strategy. The main point of tension is the CAP’s primary focus on incomes and food supply, given that financial support enables status quo of high-input agriculture/fisheries, as shown in the summary chart below:

Theme	Synergies	Incoherencies
Food security	CAP and F2F both promote affordable food for everyone	CAP focus on farmers contrasts with F2F’s focus on consumers

<b>Nutritious, sustainable &amp; safe food</b>	CAP and F2F both promote nutritious, safe, sustainable food	CAP provides continued support for practices with high environmental impacts
<b>Economic profitability</b>	CAP and F2F both aim to ensure farmers can make a reasonable living and fairer economic returns in the supply chain	CAP aims to increase agricultural productivity and supports conventional practices while F2F supports sustainable practices, often with lower productivity.
<b>Support rural economies</b>	CAP aims to maintain rural areas across the EU and sustain the rural economy. CFP aims to increase decentralisation and regionalisation	
<b>Climate change adaption and mitigation</b>	CAP and F2F address climate change through mitigation and adaptation	
<b>Sustainable resource management</b>	CAP, F2F, CFP promote sustainable management of fish stocks (several goals) and foster sustainable development and efficient management of natural resources.	F2F more ambitious, aiming to 'foster sustainable development and efficient management of resources' and 'neutral or positive environmental effects'.
<b>Biodiversity conservation</b>	F2F and CAP commit to biodiversity conservation	F2F more ambitious in aim to 'reverse the loss of diversity'

His presentation stressed on the ambivalence in the direction of change in food systems, noting the lack of a clear roadmap and strategies within the Farm to Fork initiative. Furthermore, he highlighted the ambiguity surrounding proposed alternatives to current food systems, such as *organic farming, agroecology, vertical farming, smart agriculture, regenerative farming, alternative proteins, or cultivated meat*, arguing that all of these concepts represent contested pathways and goals. The remainder of his presentation reflected on the challenges posed by policy incoherence, as outlined in the report. He argued that fully coherent and consistent policy mixes are likely unattainable, considering the inherent complexity of policymaking and path dependencies. Incoherence is not just a technical challenge that can be addressed in workshops but necessitates political transformations. For instance, there are many good reasons why the CAP originally came into being, which is why making a food transformation towards sustainability remains a challenging endeavour.

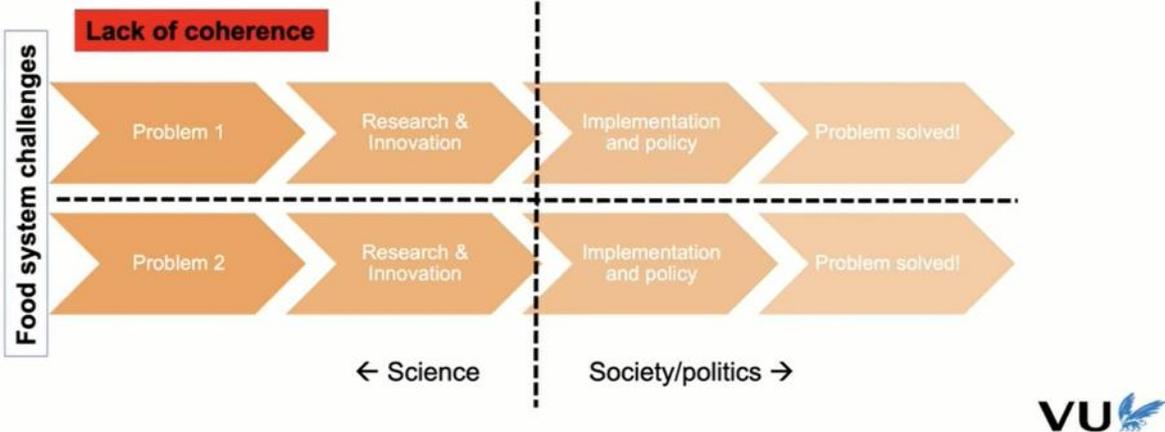
In concluding his presentation, he proposed questioning the idea of "*policy packaging*," suggesting an alternative approach of "*policy patching*." Rather than assuming that policy design processes starts from a 'clean slate' where all previous related policies are discarded, he advocated for understanding opportunities for improving policy coherence on a case-by-case basis, addressing specific incoherences and inconsistencies.

*Keynote Speech 3: Policy Coherence through Living Labs: Example of FIT4FOOD2030*

*Dr. Jacqueline Broerse, Athena Insistute, Virje Universiteit Amsterdam and Project Coordinator of FIT4FOOD2030*

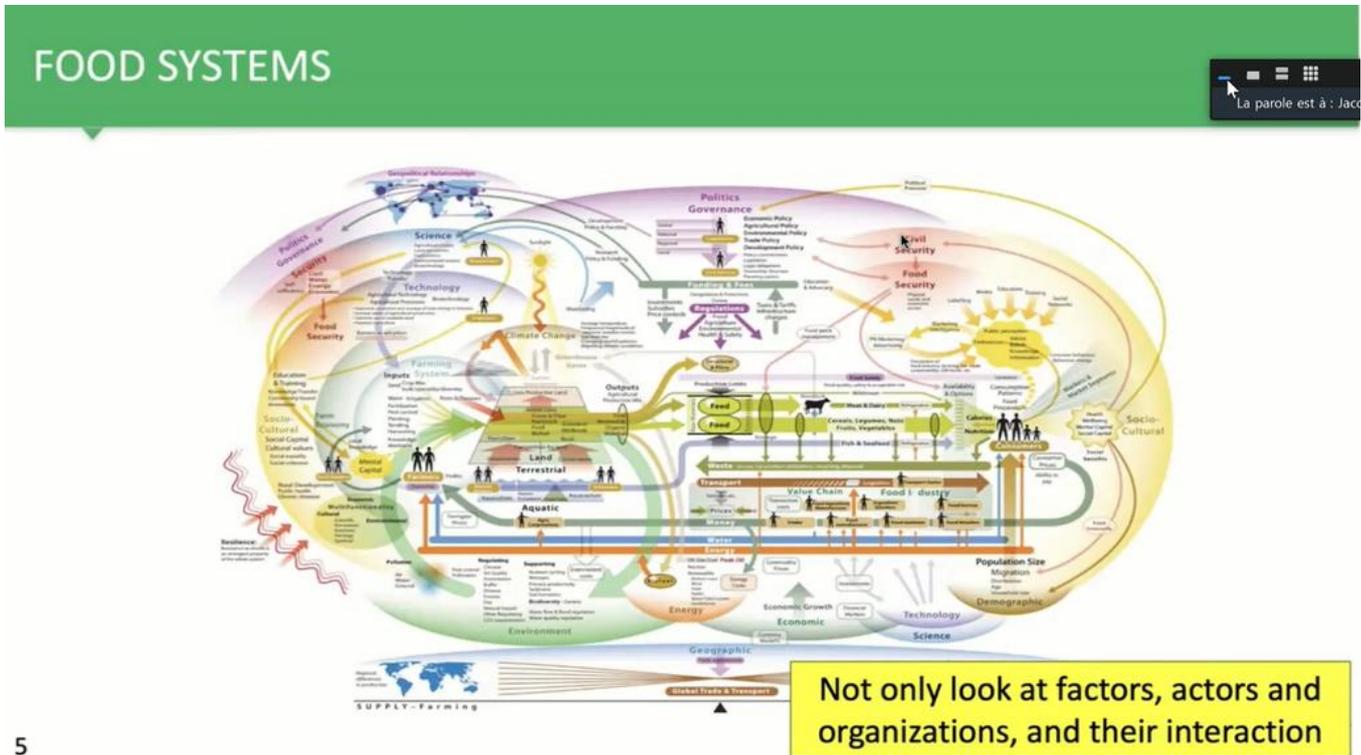
Dr. Broerse was invited to this workshop for her expertise in the realm of Food and to share insights into an approach to research that strives to adopt a systemic perspective in the search for greater coherence—the Living Lab approach. She began her speech by asserting that while we often focus on the challenges related to the crisis in our food systems, it is equally important to remind ourselves of what the current status quo does very well. After the Second World War, the current food regime provided us with high quantities at a low cost, accompanied by a vision of feeding the world and ending world hunger. Substantial R&I investments from supranational organisations, governments, and businesses, united by this vision, resulted in intensive, large-scale agriculture with high-yielding varieties and chemical inputs, as well as specialisation that increased efficiency.

R&I is frequently cited as a catalyst for the transformation of food systems. However, while there are instances where innovations smoothly integrate into society, there are often problems, including a low rate and level of adoption, slow or no scaling-up, and unforeseen side effects. Dr. Broerse argued that there is often an overestimation of the benefits to be gained from these investments. R&I is traditionally thought of as belonging to a linear approach, where problems are solved by breaking the system down into 'solvable' sub-problems in sequence. Another limitation of this linear approach is that R&I is left exclusively to scientists, whereas implementation and policy are left to the societal and political sphere. These divides lead to incoherence and an implementation gap.



This presentation proposed that, instead of approaching the challenges related to the food system with a linear supply-chain approach, it should be viewed as a complex system with interconnected factors, actors, and organisations, and their interaction with many feedback loops that are not easily predictable, with many trade-offs. A complex systems approach, therefore, focuses on recognising

interconnections between parts of a system and synthesising them into a unified view of the whole. This requires a radical change in the way we conduct R&I, which, in her view, can yield significant benefits, especially in helping us anticipate behaviours and influence dynamics to achieve interventions. She proposed a holistic approach to R&I, where science and practice join hands.



This approach was the starting point of FIT4FOOD2030. The project aimed to address the fragmented R&I landscape across disciplines and sectors, the low involvement of citizens in this transformation, relatively low private sector involvement, and little support for transdisciplinary research. The FIT4FOOD Project's experience was that of a theory of change that believed systems transformation is complex due to the resistance of systems, including solidified cultures, structures, and practices. It established spaces for transformation that brought together a wide variety of stakeholders interested in R&I and food system transformation, creating multiple, multilevel situated living labs for experimentation. This systems approach strengthened R&I policy coherence and alignment; built competences, and linked local, national, and EU levels. One of the most interesting parts of this project was the creation of Policy Labs, participatory and experimental structures designed to bring actors together, align and innovate policies, and mutually reinforce across departments and agencies at different levels to promote horizontal and vertical policy coherence.

She concluded the presentation with a reflection on the challenges the FIT4FOOD2030 project, using a living lab approach, encountered. She underscored the challenge of dealing with power dynamics and the dangers of sidelining inputs from less powerful groups, emphasising the importance of inclusiveness in decision-making. She also highlighted the challenge of measuring impact and navigating the demand for quantifiable outcomes in such a complex structure.

## Case Study B: Towards More Sustainable Food Systems - Anticipating the European 'Farm-to-Fork Strategy'

Louis-Georges Soler, INRAE, France

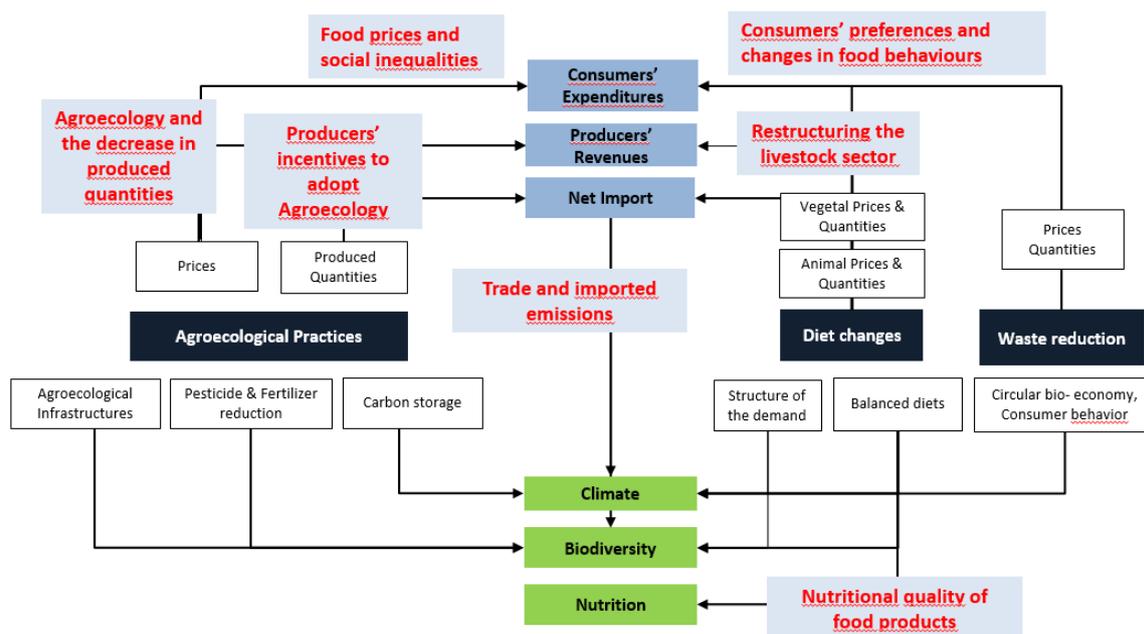
Louis-Georges Soler, an economics researcher who recently published the paper "*The European Green Deal Improves the Sustainability of Food Systems but Has Uneven Economic Impacts on Consumers and Farmers*" (Guyomard et al., 2023), was invited to provide an economist's perspective on policy coherence for the sustainable food systems transition in Europe. His presentation also aimed to demonstrate the efficacy of models as tools to understand the interconnectedness of various policies, objectives, and strategies, illustrating how they influence each other. This methodology supports a systems approach, recognising that policies may have spillover effects that can hinder policy coherence.

By building a model, Soler addressed the fundamental question: *Is it possible to achieve sustainable and healthy food systems, and what action levers can be employed?* Analysing the Green Deal, he posed questions such as the market and non-market impacts, critical issues, blocking points, and the necessary public policies to overcome these obstacles. The Green Deal sets quantitative objectives with supply-side and demand-side action levers. The first lever involves changes in agricultural practices (agroecology), the second pertains to reducing waste and losses in food chains and at the consumer level, and the third focuses on changes in consumers' diets.

Soler presented a summary of the model's results, outlining the potential impacts of the Farm-to-Fork Strategy:

- **Lever 1: Agroecological Practices:** The model estimates a decrease in produced quantities due to reduced yields and farm sizes. This may lead to increased prices at the farm level, with a lesser impact on consumers. Importantly, it could result in a rise in imports for feed. Non-market effects include a positive climate impact due to agroecological practices and a negative impact due to increased imported emissions.
- **Lever 2: Circular Bioeconomy and Consumer Behaviour:** The model estimates a decrease in prices and produced/purchased quantities, leading to reduced consumer expenditures, producers' revenues, and net imports. Positive impacts on climate and biodiversity arise from reducing domestic production and imported emissions.
- **Lever 3: Dietary Changes:** Changes in consumer behaviour towards plant-based products and reduced animal-based products are modelled to decrease livestock sector prices and quantities. This leads to lower crop prices, but the demand for plant products may counteract this effect. Positive impacts on climate, biodiversity, and nutritional quality are anticipated.

Combining all three Green Deal action levers, as summarised in the figure below, considering synergies between one another, the projected consequences differ that when looking at these levers individuals. Increased food expenditure induced by the agricultural lever is offset by losses and diet levers. This results in positive nutritional impacts on consumers, gains for plant producers, losses for livestock farmers, and reduced imports with increased exports for greater environmental benefits.



This modelling perspective is a tool for informing policymakers, facilitating informed and coherent decisions through a systemic lens. It emphasises the importance of considering synergies between policies and objectives to grasp a comprehensive market and non-market balance. This presentation highlighted that defining "winners" and "losers" in this transition depends on the analysed action lever and policy field, leading to conflicts and contradictions. This modelling exercise also concluded that no single action lever is sufficient for ambitious sustainability goals; they must be combined. Achieving an agroecological transition is contingent on implementing the other two levers simultaneously. Another important conclusion of this presentation is that the modeling approach represents a potential path for greater policy coherence considerations in decision-making —one that acknowledges the balances and complementarities between different policies.

## Discussion

After the engaging presentations by the six speakers, the workshop participants were invited to split into breakout groups to reflect on challenges and opportunities associated with policy coherence. Various prompts were given, including exploring synergies and trade-offs and questioning the achievability and desirability of coherence. Participants were encouraged to consider what attracts or repels policymakers, identify incentives and barriers they face, draw lessons from case studies, determine metrics for measuring success, and think about how can FACCE-JPI and HDHL facilitate achieving coherence in the intersection between science and research. A summary of the main taking points and clues towards moving forward is listed below.

The division of groups into those focusing on vertical and horizontal coherence was a practical arrangement, although participants emphasised the need to address barriers and opportunities comprehensively. Separating these dimensions risked, precisely, of falling into the trap of incoherence.

Beyond vertical and horizontal incoherence, a third kind of incoherence was identified by the workshop participants, concerning timeframes among different policies, objectives, and projects. Some projects and policies span over 50 years, while others only last 4 to 5 years, highlighting the need for long-term thinking. Moreover, differences in timing between research project results and policy questions pose additional challenges.

### *Vertical Coherence*

- Vertical coherence focuses less on trade-offs between silos and more on power imbalances and the desire to retain control and independence in specific areas of responsibility. This is particularly evident for research funders who have limited control over allocated funds from central government departments.
- Power dynamics and the assumption of responsibility by policymakers contribute to vertical incoherence, leading to a lack of coordination. National governments may lack incentives to engage with lower governance levels.
- To enhance vertical coherence, there is a need to incentivize national governments to communicate with European counterparts and establish platforms for communication between different levels, with facilitators acting as intermediaries. FACCE or HDHL have the potential of working as that missing link.
- Policy labs and dialogues serve as examples of actors working at different levels, addressing issues of incoherence between transnational programming and national interests.

### *Horizontal Coherence*

- Researchers should be rewarded for inter and transdisciplinary research, both in individual projects and throughout their careers.
- Trained facilitators are essential to bring together researchers from different disciplines, and organizations like FACCE and HDHL can play a pivotal role in fostering policy relevance and systems thinking.
- While interdisciplinary/transdisciplinary research is gaining recognition, career opportunities need to align with the benefits provided to disciplinary research.
- Research funders are increasingly supporting transdisciplinary research, seen as a positive incentive for producing policy-relevant outputs with fewer unintended consequences during implementation.
- Co-creation approaches, such as living labs, offer an interesting method to tackle horizontal incoherence by involving diverse stakeholders in the policymaking process.

### *Metrics and Definitions of Success in Achieving Policy Coherence*

Metrics and definitions of success in achieving policy coherence should go beyond individual policy and project reporting. Instead, there should be a focus on building narratives and storytelling to showcase processes involving different actors horizontally and vertically. This has the potential to provide a more holistic view, demonstrating how various aspects of policy coherence contribute to overall success and implementation.

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