Exploratory Workshop on Science Advice to Policy Coherence for Sustainable Food Systems

25 April 2022

virtual

Summary Report

1. Introduction

The Exploratory Workshop on Science Advice to Policy Coherence for Sustainable Food Systems is one of the actions organised by the FACCE-JPI Secretariat (BBSRC-UKRI and INRAE), as described in the 2018-2020 FACCE-JPI Implementation Plan under Core Theme 1 – Sustainable Food Security under Climate Change. The topic of coordinating policy among different areas within food production systems to ensure food and nutrition security was first elaborated by FACCE-JPI and JPI HDHL (Healthy Diet for a Healthy Life) following the workshop organised at EXPO2015. The event also resulted in the agreement to launch a 'Knowledge Hub on Food and Nutrition Security (FNS)' together with JPI HDHL and JPI Oceans, and it was decided in 2018 to postpone scoping this workshop until the FNS KH had been launched.

In light of the developing landscape of food systems influenced by such European Commission strategies 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. The scope of the workshop was determined by a steering group consisting of FACCE-JPI Secretariat members, FACCE-JPI GB, SAB and StAB members, and experts in the field.

With an increased importance of a systems approach and strategic international cooperation in the area of agriculture, food security and climate change, one of the workshop aims was to identify trade-offs, contradictions, conflicts and knowledge gaps that emerge when policies are designed to address societal challenges. Another objective was to discuss the principles, criteria, and actions that have the potential to improve the contribution of research to policy coherence. The outcome of this analysis could then be used to determine if and what further actions are warranted in the area of science-policy advice for sustainable food systems.

2. Workshop

2.1. Introduction

Leon Rozanov, FACCE-JPI Secretariat member from BBSRC-UKRI, welcomed the participants and introduced Gianluca Brunori (University of Pisa, FACCE-JPI SAB Chair) as the Chair of the workshop.

Gianluca Brunori then introduced FACCE-JPI, the four Core Themes of its SRA, and how the aims of this workshop are aligned with the core remit of the initiative. He highlighted that some of the most important roles of research are the detection and the analysis of trade-offs, as well as the development and the assessment of solutions. He

explained the context of the interactions between science, policy and practice, within which policy coherence needs to be achieved.

2.2. Aims & Objectives

Gianluca Brunori introduced the main objectives of the workshop:

- to raise awareness of policy-related trade-offs
- to discuss the main barriers to policy coherence from the research perspective
- to identify possible solutions that have the potential to improve the contribution of research to policy coherence.

2.3. Setting the scene

In order to set the scene with specific examples of trade-offs and cross-domain problems in the area of science advice to policy aimed to guarantee food security, the Chair invited speakers to present case studies from their work.

The first speaker, **Hervé Guyomard (INRAE)**, presented **"Macro policy implications of the Green Deal objectives for agriculture and food"**, a case study on the policy implications of the projected outcomes of the Green Deal both in the EU and abroad.

The speaker emphasised the following main points:

I. EU agriculture is not on the right track to meet many of the Green Deal quantitative targets related to agriculture (agricultural GHG emissions, carbon sinks, sales of pesticides, nitrogen balance, organic farming, etc.)
II. The Green Deal quantitative targets for agriculture do not include the food sector or diets (except food waste and losses)
III. To help meet the Green Deal agricultural targets, more agroecological practices and systems need to be introduced, and the main instrument for this is the CAP; unfortunately, the next CAP (2023-2027) will likely not be ambitious enough to place the EU agricultural and food systems on the Green Deal track
IV. The introduction of agroecological practices and systems in Europe will likely have a negative impact on consumers (through higher food prices) and, in the absence of improvement in circular bioeconomy and food and nutrition policies (to bring changes in diets and reduce food waste and losses), will negatively impact climate, health, and biodiversity and environment outside Europe (pollution leakage) due to higher EU imports and lower exports
V. In addition, potential policy trade-offs with trade policies are foreseen if the latter are not adjusted to avoid pollution leakages

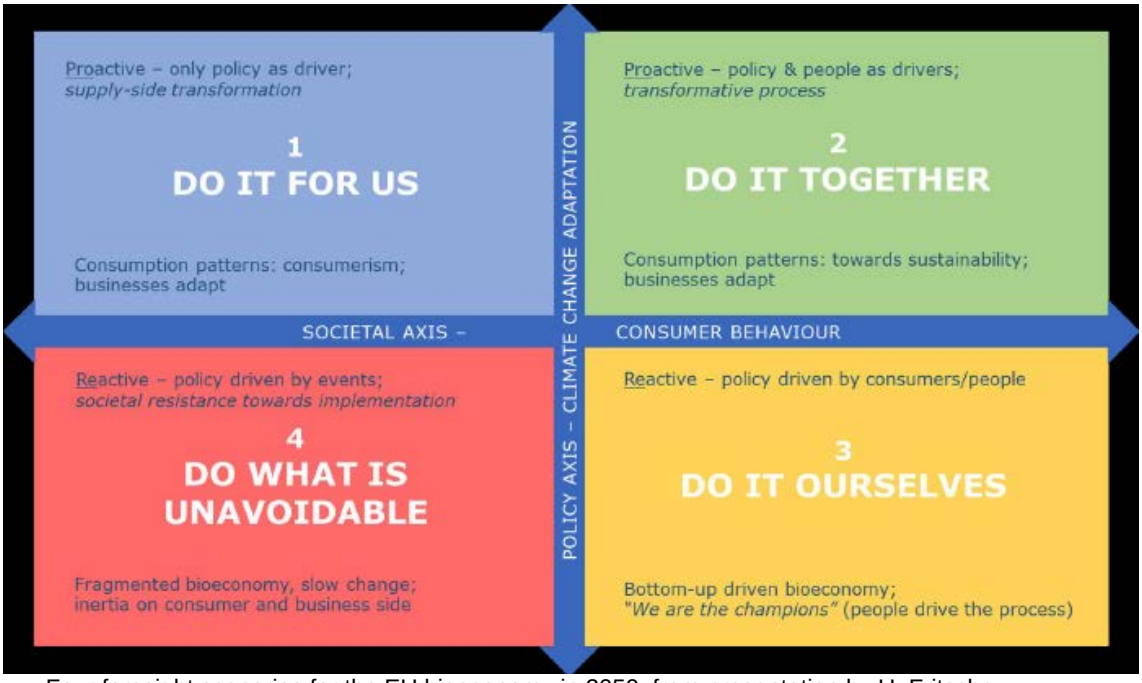
VI. Thus, there is a need for coherence between supply policies, demand policies, trade policies, and the policies that direct research, development and innovation.

The next speaker, **Niels Halberg (Danish Centre for Food and Agriculture, Aarhus University)**, presented a case study on "**Research-based policy support to promote nutritious and sustainable diets**". The speaker emphasised the following main points:

I. Policy coherence for sustainable food systems depends on coherent policy advice, which in turn hinges on the way it is organised and the sound principles ensuring transparency, quality and integrity
II. One example of such organisation is the agreement between the Danish Ministry of Food, Agriculture and Fisheries and Aarhus University to obtain science-based advice for policy (focused on demand-driven advice); to ensure quality, integrity and transparency, a certified quality management system is in place, and the workflow is organised via the Danish Centre for Food and Agriculture, DCA
III. Denmark's National Pathway for Food Systems Transformation include the following five areas: food loss and food waste; healthy and sustainable diets; prudent use of antimicrobials and prevention of resistance; deforestation-free value chains; and Denmark's international engagement / global scale
IV. Aarhus University provides science advice in relation to these knowledge areas combining dialogues between stakeholders and the Ministry regarding knowledge needs, operating at arm’s length when it comes to the choice of methods and the interpretation of results
V. Science advice is a difficult area for several reasons: there is pressure on researchers to produce "quick answers" to complex questions; requests are often politically motivated, and the results often lead to political battles of interpretation and attempts from stakeholders to discredit researchers and their results
VI. There are differences in how science advice to policy is organised between countries and across subject areas/sectors, and there is a need for trans-European collaboration towards a number of commonly accepted principles to ensure quality and trustworthiness
VII. Currently, Green Deal objectives are mainly achieved though the CAP policies on the national level, and there is a need and an opportunity to collaborate on science advice in the field of agriculture, environment, food security and climate change through the exchange of methods, additional peer review and transparency, and there are already examples of such collaboration.

The third case study was presented by **Uwe Fritsche (IINAS)** and titled **"The EU bioeconomy, competing drivers and governance challenges"**. The speaker emphasised the following main points:

I. The "Foresight for the EU bioeconomy in 2050" published in 2021 offered 4 scenarios for the future transitions of the bioeconomy towards sustainable development and a climate-neutral economy, based on how (pro)active policymakers and the rest of society choose to be



Four foresight scenarios for the EU bioeconomy in 2050; from presentation by U. Fritsche

II. The results of the foresight exercise showed that only the scenario where both consumers and policymakers actively drive change can meet the bioeconomy-related SDGs by 2030, and that it can also avoid negative trade-offs; however, policy coherence across sectors and actors (member states, business, civil society) can only be achieved through strong integration

III. Such integration requires the joint and aligned implementation of the supply-side policies and demand-side societal action (involving consumers), which is currently lacking to a large extent

IV. In order to increase societal action and involve people in this transformative process, culture and arts have to be given a more prominent role, as opposed to the mostly financial drivers common today

V. In addition to the technology and innovation in the technical areas of food production and consumption, social innovations and innovative practices are both highly needed and promising, and should be integrated into policy.

Following the three case studies, two more presentations were delivered by experts in the field of policy coherence and science-policy interface, in order to make a broader introduction to the topic.

The first keynote presentation was given by **Sébastien Treyer (IDDRI)**, on **"Evaluating policy coherence as a lever for policy change: what role for research?"** He spoke about the importance of considering the context in which science advice to policy operates, and specifically highlighted the following key messages:

I. It is very important to provide knowledge on and assessments of policy coherence; however, the most important prerequisite is political commitment, as well as whole-of-government coordination and assessment of policy and financial impacts
II. A siloed approach is sometimes preferable in order to increase efficiency, just as single-objective policies are easier to implement. When several policies interact, policy incoherence is often caused by the lack of strategic coordination between sectors, rather than the lack of knowledge exchange (e.g., multiple objectives of the CAP)
III. Therefore, alongside the improvements in methodologies and data, it is crucial to design new approaches from the perspective of their political context
IV. Besides the demonstration and assessment of policy (in)coherence, it is also important to explain policy incoherence: both during political arbitration (including the political landscape, all actors involved, with specific losers and winners of political arbitration, and the political economy), and in policy implementation (interactions between policy processes and instruments, political arbitration at lower scales of governance and administrative and technical implementation)
V. We need a culture of public policy evaluation (in parliament, media, stakeholder organisations and in research) that would make use of the following principles: comprehensive assessment of trade-offs and synergies between policy objectives; design of policy solutions with multiple benefits from the start while ensuring that they are implementable; search for win/win scenarios (just avoiding trade-offs is not good enough) and exploration of socio-political pathways to these win/win scenarios.

The second keynote presentation was given by **Jessica Duncan (WUR)**, titled **"Beyond the science-policy interface for food systems(?)"** She explained the idea of democratic directionality and how closely following expressions of conflicting interests and disagreements can help to better scrutinise the whole process of science advice to policy and make it better informed, more inclusive and fairer. She specifically highlighted the following key messages:

I. Science has a key role to play in facilitating policy coherence, but policy coherence relates to broad societal issues and contexts, and cannot be achieved by science alone
II. Various alternative sources of knowledge can enrich our understanding through co-production of problem definition and contribution of local expertise and viewpoints, but more effort is needed to identify mechanisms to manage multiple evidence bases
III. Knowledge, no matter how rigorous or equitably managed, is only one of the components of transformative change; transformations will depend on social and political systems, as well as external conditions, and require strong political will and leadership, as well as the identification and understanding of trade-offs
IV. Exploring disagreements and expressions of conflicting interests can benefit transformation, as it challenges entrenched power relations and dominant lock-ins, and governance processes need to accommodate this
V. The following four interconnected principles of democratic directionality have been identified as central to research for transformative food system policy:
    1. **Responsibility** (linking knowledge or its lack to consequences, willingness to change direction in light of new information, recognising limits of claims of objectivity)
    2. **Plurality** (multiple and competing visions, transformation will differ depending on time, territory etc., diversity and gender parity)
    3. **Collaboration** (requires institutional support, also in ensuring that principles of responsibility and plurality are adhered to), and
    4. **Openness** (freedom of access to research outputs, collaborative research opportunities between citizens, researchers and policy makers, prevention of powerful economic interests from distorting priorities in research and keeping funding away from new entrants, in order to boost transformational potential).

After the talks, a Q&A session was moderated by the Chair. Questions were raised around the readiness in the current political climate to address existing policy trade-offs, how to accommodate plurality in science in the current post-truth society, the need to

clearly explain the limits of scientific knowledge, and whether more inclusivity in research (such as in “living” or “real” labs) can help conduct scientific studies that are based on the right questions.

2.4. Tackling trade-offs and cross-domain problems

The scoping process for this workshop had defined the following overarching questions:

- How can we best organise a science-policy interface?
- How does research have to be organised to address policy trade-offs?

To discuss these questions, the participants were divided into six breakout groups, which represented a mix of scientists, stakeholders and policymakers. During the breakout sessions, they were invited to provide answers to the following specific questions first, with a request to focus on the experienced barriers and possible solutions, including higher-level solutions:

- In your research experience, what are the main **trade-offs** you have faced?
- What are the main **cross-domain problems** you have faced?

> - **Trade-offs**: conflicting policy objectives or performance criteria
> - **Cross-domain problems**: problems that affect multiple knowledge fields

The outcomes of these breakout sessions are detailed below. The higher-level and the more frequently mentioned comments are placed higher in the list in each subsection.

2.4.1. What main trade-offs have you faced in your research experience?

- Production increase vs. conservation and environmental sustainability
- Efficiency vs. collaboration: involving all stakeholders takes time
- Rigorous methodological analyses vs. more inclusive participation
- Science is complex but policymakers ask for simplified answers
- Research takes time but policymakers want results quickly
- Impact and spill-over effects of European policies on other countries; also, opposing interests between geographical areas within Europe
- Unintended effects of recommended practices such as introduction of plasticulture for the reduction of agricultural pollution and resource use leading to increased pollutants in other areas
- Policies in agriculture, water, nature, energy and climate sectors have caused contradicting impacts (e.g. peatland conservation)

- **What are the main barriers to solve them?**
  - Lack of a clear mandate and opportunities for researchers to advise policy and lack of a transparent framework for receiving and utilising science advice in policy
  - The questions policymakers ask researchers are not always the right questions to ask if a sustainable solution is to be found
  - Science-policy cycle is often too long when an answer is needed
  - Science itself is incoherent: IPCC-like scientific consensus arrangements could help achieve policy coherence
  - Barrier of involvement: some actors are excluded from the discussion
  - EU policy is often synergistic on paper but incoherent in implementation; with the disconnect between strategy & implementation, vaguely phrased targets are often co-opted for political goals
  - Excessive focus on thematic challenges thwarts the overall participatory process of long-term transformation of food systems
  - Funders are limited by the guidance from their respective governments

- **What are the solutions you are aware of?**
  - Co-creation of research questions, science-based policies and their collaborative implementation, with policymakers and scientists' mutual learning and awareness of each other's work; trust between stakeholders
  - Research infrastructures and legal frameworks for experiments at the scale of landscapes/terrains and decades: on crop rotations, landscape architecture, circular economy value chains, production systems etc.
  - Better science communication to all stakeholders (policymakers, farmers, consumers etc.)
  - Better utilisation of foresight exercises and modelling capacity to identify synergies and estimate probabilities of possible impacts of specific policies
  - Participatory processes with clearly defined and recognisable outcomes
  - Clear and adaptive policies that accommodate complexity and failure. Mission approach in funding helps include cross-cutting issues
  - Create a new type of activity e.g. in EU Framework Programmes which focuses on the structuring and organisation of (already) available knowledge

2.4.2. What cross-domain problems have you experienced?

- No consensus on cross-cutting issues between different ministries, regions and nations
- Incoherence within multi-level governance of research
- RRI is not included into projects by default, and social sciences are hard to include into funding
- The capacity of national science advice differs greatly between member states: difficulty to proactively advise on food and agricultural transformation
- Bureaucracy does not allow for long processes (like transformation)
- Research organisations often struggle to achieve balance between curiosity-driven research and demand-driven research for policy advice.

➢ **What are the main barriers to solve them?**

- Cross-domain problems are not given enough attention (perceived as additions to the main topics of discussions)
- Lack of coherence between policies and the means of implementation
- Vaguely defined high level goals (such as "sustainable food systems"), which are easy to co-opt for political ends
- Value and culture differences between stakeholders; assumptions, actors not speaking the same language
- The way sustainability is addressed is old-fashioned and needs innovation
- High turnover among policymakers, and the lack of institutional memory

➢ **What are the solutions you are aware of?**

- Direct and transparent communication between policymakers and researchers, with a clearly defined framework for taking up scientific advice
- “Innovation intermediaries” with the right training and skills can save time and improve communication between parties with conflicting interests Presenting research results in the format accessible to and actionable upon by policymakers
- Social sciences need to be included in research strategies. Continuous monitoring and evaluation, with cross-domain analyses: before, during and after a policy is implemented
- Mapping stakeholders
- Already existing successful solutions such as JRC, EIPs, ERC

Based on the participants’ answers to the specific questions, the organisers inferred some answers to the overarching questions.

- **How can we best organise a science-policy interface?**
    - The science-policy interface could be improved by being institutionalised: this means co-creation of research questions and science-based policies, and their collaborative implementation
    - Systems thinking needs to be built into this interface from the outset
    - Direct and transparent communication between all stakeholders is needed, with possible facilitation by “innovation intermediaries”
- **How does research have to be organised to address policy trade-offs?**
    - Through funding more transdisciplinary research, including social sciences, that address trade-offs; this should be demand-driven, with research calls designed with science advice to policy in mind
    - Through transdisciplinary analyses and cross-sectoral papers, science can provide the directionality for addressing societal challenges
    - Through open science: freedom of access to research outputs, and more collaborative research opportunities between citizens, scientists and policymakers

3. Conclusion and recommendations

From the discussions during the workshop, it became clear that the participants recognise the complexity of the question on the role science can and should play in providing the evidence base for the governance of food systems. They acknowledged many links between policy and science but noted that policy coherence relates to broad societal issues and cannot be achieved by science alone. In this context, there were also discussions around the image of science, as it is seen in society as both truthfully describing the world and as being influenced by powerful economic interests.

The workshop participants agreed that there is a clear role for science in policy advice to indicate potential risks and propose new ways of solving challenges to policymakers. To successfully do so, research needs to be more transdisciplinary and include RRI and social sciences, incorporating systems thinking from the outset.

In the workshop presentations, it was shown that the way a problematic issue is addressed is often determined by how it was originally framed. The way science-policy interfaces are designed often influences the way knowledge is produced (e.g., results of co-design and co-creation depend on which actors are engaged from the start), so it is important to involve all relevant stakeholders and to institutionalise the science-policy interface by allowing the co-creation of research questions and science-based policies, and by facilitating their collaborative implementation.

The process of facilitation of such an improved science-policy interface requires the right training and skills and could benefit from “innovation intermediaries” that could help save

time and improve communication. FACCE-JPI may be strategically well positioned to identify trade-offs and suggest ways of cross-domain collaboration, and as such, could play an important role in facilitating the science advice to policy in the area of food security.

A follow-up survey of the workshop participants identified a high interest in the topic of policy coherence for food security and a continuation of this work. Based on the workshop conclusions and the survey results, the organisers formulated the following recommendations for the Governing Board of FACCE-JPI:

Recommendation 1: Support transdisciplinary research in the FACCE remit, with the focus on science advice to policy

Recommendation 2: Support impact assessment of research and innovation with regard to policy coherence/incoherence

Recommendation 3: Continue the exploratory work on policy coherence for sustainable food systems.

END

FACCE-JPI Secretariat / LR

Annex 2: Agenda

Date: *25 April 2022,* ***online workshop***

09:00 – 09:10	*Welcome*
09:10 – 09:20	Introduction: policy coherence in food production and nutrition *Gianluca Brunori, FACCE-JPI SAB*
09:20 – 10:05	Case study 1: Macro policy implications of the Green Deal objectives for agriculture and food *Hervé Guyomard, INRAE* Case study 2: Research-based policy support to promote nutritious and sustainable diets *Niels Halberg, Danish Centre for Food and Agriculture, Aarhus University* Case study 3: The EU bioeconomy, competing drivers and governance challenges *Uwe Fritsche, IINAS*
10:05 – 10:55	**Keynote Speakers** Evaluating policy coherence as a lever for policy change: what role for research? ***Sébastien Treyer,*** *IDDRI* --- Food policies for sustainable food systems transformation ***Jessica Duncan,*** *WUR*
10:55 – 11:15	Questions and Plenary discussion
11:15 – 11:30	*Coffee break*
11:30 – 11:35	Introduction to break-out sessions *Leon Rozanov / Heather McKhann (FACCE-JPI secretariat)*
11:35 – 12:05	Break-out sessions tackling the following **overarching questions**: 1) How can we best organise a science policy interface? 2) How does research have to be organised to address policy trade-offs? To approach these, the following **specific questions** will be addressed first, focusing on the experienced barriers and possible solutions, including higher-level solutions: ➢ In your research experience, what are the main trade-offs you have faced? ➢ In your research experience, what are the main cross-domain problems you have faced? Final 5 minutes: adding ideas to the Miro board
12:05 – 12:20	Reporting back from break-out groups & plenary discussion
12:20 – 12:30	Wrap up & conclusions *Gianluca Brunori*