



This is a peer-reviewed, final published version of the following in press document, © 2024 The Author(s). Published by Elsevier Ltd. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>). and is licensed under Creative Commons: Attribution 4.0 license:

Tsouvalis, Judith, Little, Ruth, Fajardo-Escoffie, José, Hartley, Susan E, Rose, David Christian ORCID logoORCID: <https://orcid.org/0000-0002-5249-9021>, Ambrose-Oji, Bianca, de Boon, Auvikki ORCID logoORCID: <https://orcid.org/0000-0003-0067-8877>, Maderson, Siobhan and Urquhart, Julie ORCID logoORCID: <https://orcid.org/0000-0001-5000-4630> (2025) Co-design in policy development: Leveraging opportunities, addressing challenges, and proposing solutions for inclusive governance - Lessons from England. Land Use Policy, 150. art: 107440. doi:10.1016/j.landusepol.2024.107440 (In Press)

Official URL: <https://doi.org/10.1016/j.landusepol.2024.107440>

DOI: <http://dx.doi.org/10.1016/j.landusepol.2024.107440>

EPrint URI: <https://eprints.glos.ac.uk/id/eprint/14643>

Disclaimer

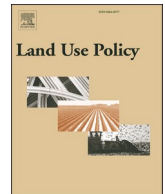
The University of Gloucestershire has obtained warranties from all depositors as to their title in the material deposited and as to their right to deposit such material.

The University of Gloucestershire makes no representation or warranties of commercial utility, title, or fitness for a particular purpose or any other warranty, express or implied in respect of any material deposited.

The University of Gloucestershire makes no representation that the use of the materials will not infringe any patent, copyright, trademark or other property or proprietary rights.

The University of Gloucestershire accepts no liability for any infringement of intellectual property rights in any material deposited but will remove such material from public view pending investigation in the event of an allegation of any such infringement.

PLEASE SCROLL DOWN FOR TEXT.



Co-design in policy development: Leveraging opportunities, addressing challenges, and proposing solutions for inclusive governance - Lessons from England

Judith Tsouvalis^{a,2}, Ruth Little^{b,1,2}, José Fajardo-Escoffie^{c,2}, Susan E. Hartley^{d,2}, David Christian Rose^{e,*}, Bianca Ambrose-Oji^f, Auvikki de Boon^g, Siobhan Maderson^h, Julie Urquhartⁱ

^a School of Computing and Communications, Lancaster University, UK

^b Department of Politics and International Relations, University of Sheffield, UK

^c Department of Geography, University of Sheffield, UK

^d School of Biosciences, University of Sheffield, Sheffield, UK

^e Agriculture and Environment, Harper Adams University, Edgmond, Newport TF10 8NB, UK

^f Forest Research, Coldharbour Lane, Bristol BS16 1EJ, UK

^g Department of Political Science, Umeå University, Sweden

^h School of Geography and Planning, Cardiff University, UK

ⁱ Countryside and Community Research Institute, University of Gloucestershire, UK

ARTICLE INFO

Keywords:

Co-design
Co-production
Participation
Policy

1. Introduction to the Special Issue

This Special Issue of five empirical papers delves into the realm of co-design, a participatory approach to policy development similar to co-production that aims to engage diverse stakeholders in decision-making processes inspired by design thinking. The papers examine the inherent opportunities, challenges, and potential solutions associated with adopting co-design in policy formulation. Drawing upon literature and real-world experiences, the authors explore the potential benefits of inclusive policy development, such as improved policy quality, enhanced acceptance, and innovative solutions. They also confront the complexities of time constraints, power imbalances, conflict resolution, and the translation of diverse inputs into actionable policies. In response

to these challenges, the articles put forth practical strategies, including early engagement, clear communication, skilled facilitation, and the utilisation of technology, to foster effective co-design processes and encourage more inclusive governance.

The papers in this SI – although focused on UK case studies – will appeal to a broad, international audience, including academics, policymakers, practitioners and students interested in theories and practices of public engagement and their role in policymaking, agri-environmental governance, and environmental problem-solving. Co-design and co-production are used by governments around the world today, valued for the positive policy outcomes they can lead to. For example, in the United States, co-production gained momentum as early as the 1960s, while in Europe, it shifted into the spotlight in 2007,

* Corresponding author.

E-mail addresses: Judith.Tsouvalis@lancaster.ac.uk (J. Tsouvalis), ruth.little@sheffield.ac.uk (R. Little), s.hartley@sheffield.ac.uk (S.E. Hartley), drose@harper-adams.ac.uk (D.C. Rose), Bianca.ambrose-oji@ForestResearch.gov.uk (B. Ambrose-Oji), auvikki.de.boon@umu.se (A. de Boon), madersons@cardiff.ac.uk (S. Maderson), jurquhart1@glos.ac.uk (J. Urquhart).

¹ Since starting the preparation of the special issue, Dr Ruth Little has moved to a position with the Department for Environment, Food and Rural Affairs, but retains an Advanced Visiting Research Fellowship at the University of Sheffield.

² SI Guest Editors

<https://doi.org/10.1016/j.landusepol.2024.107440>

Received 23 August 2024; Received in revised form 30 September 2024; Accepted 2 December 2024

Available online 7 December 2024

0264-8377/© 2024 The Author(s). Published by Elsevier Ltd. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>).

constituting a central theme of the EU Ministries of Public Administration's 4th European Quality Conference for Public Agencies. In 2008, the approach was embraced by the Organisation for Economic Co-operation and Development (OECD), who saw it as the key approach to innovative public services provision. Since then, co-design has gained momentum, being applied to environmental policy making in Ireland and public services development in Australia and New Zealand. This SI is of high international relevance as it contains studies of the UK's first attempt to use the approach for large-scale, national policy development connected to the development of its new, post-Brexit agri-environmental policy regime. This includes England's new Environmental Land Management (ELM) approach, which is ambitious in terms of its scale and complexity, encompassing a whole nation and a policy area under-going a once-in-a-generation transformation.

1.1. Background and objectives

This Special Issue contains a selection of papers originally submitted to a session organized by three of the guest editors (Tsouvalis, Little and Rose) for the Annual Conference of the UK's Royal Geographic Society with the Institute of British Geographers in 2021 with a themed issue for the journal *Land Use Policy* in mind. The session was themed 'Co-producing Britain's Post-Brexit Agri-Environment Policy – Overcoming Borders, Boundaries and Other Obstacles'. It took place online due to COVID-19 restrictions. These not only curtailed our session, but also impacted on the co-design of England's new, post-Brexit agri-environmental policy regime led by the Department of Environment, Food and Rural Affairs (Defra), which the Government had promised to co-design with a broad range of stakeholders, including farmers (Defra, 2018; Hurley et al., 2022; see also de Boon et al., this issue; Little et al., this issue). Our aim was to better understand what borders, boundaries and other obstacles co-design would encounter, and how solutions could be best implemented.

1.2. The importance of involving stakeholders in (agri-)environmental policy development

It is widely acknowledged that tackling the negative environmental impacts of industrial farming will require a large-scale transition of the agricultural sector towards sustainability, not just in the United Kingdom (Melchior and Newig, 2021; de Boon et al., 2022). Bringing about an agricultural transition will involve systemic changes in all the industries and activities connected to farming, including consumer behaviour. To achieve this in England³ after the UK left the European Union, policy-makers set out to develop a new Environmental Land Management (ELM) policy that would financially reward farmers for taking care of the environment and cultural heritage by delivering what came to be called 'public goods' (Bateman and Balmford, 2018). These goods - sometimes referred to as "ecosystem services" or "natural capital" - are closely aligned to Government policy objectives and commitments enshrined in policies like the Government's 25-year environment plan, the 2050 Net Zero carbon emissions commitment, and Nature Recovery. They include, among others, clean air and water, preserving cultural heritage, thriving plants and wildlife, reducing the risks of harm from environmental hazards, and using resources from nature more sustainably and efficiently (Defra, 2020, 27–28).

Achieving such a dramatic re-orientation in farming will require interventions that go far beyond legislative- and regulatory baselines. 'Transitions' involve far-reaching social, cultural, behavioural, institutional and organisational change (Ryan, 2013; de Boon et al., 2022). For

the Government to meet its environmental commitments, it was argued that 70 % of all farmers in England would need to participate in the new ELM schemes, which at the time of publication of this SI, were still under development. Knowing that its chances of success of achieving this may increase if farmers and agri-environment stakeholders were involved in developing the new schemes was one of the main reasons why the government decided in 2018 to co-design the new ELM policy with stakeholders (Defra, 2018).

1.3. ELM co-design in the context of 'open policy making' in the UK

The broader shift towards 'open', more inclusive, policy making in the UK, as typified by Defra's desire to co-design ELM schemes, was preceded by a crisis of trust of the public in science and expertise, identified in the 'Science and Society' report of the House of Lords Select Committee on Science and Technology in 2000 (House of Lords, 2000). This crisis had, among other things, been exacerbated by the government's handling of the Bovine Spongiform Encephalopathy (BSE) disease outbreak in 1996 (Frewer and Salter, 2002). Since then, public engagement has become a cornerstone of Responsible Research and Innovation (RRI). In 2004, the government launched the *Sciencewise* public engagement programme which to date has sponsored over fifty public dialogues on issues where science and technology stand at the forefront. Their purpose is to elicit public views and incorporate them into policymaking at an early stage so as to avoid potential conflict or policy failure later. Extending this approach to other policymaking areas, the government endorsed 'open policy making' in its Civil Service Reform Plan of 2012. This committed policymakers not only to engage with experts and organisations commonly left out of policy discussions but also with the public so that future policies would reflect the experience of citizens. The Plan acknowledged that Whitehall dominated policy development and relied on too narrow a range of inputs and put an onus on policy makers to work in more 'innovative and creative ways' (HM Government, 2012). The time was ripe to harness the potential of public engagement methods to create more inclusive, legitimate, and workable policy solutions (Blomkamp, 2018). The most popular among these were 'co-design' and "co-production". Co-design was developed by the Swedish design discipline during the 1960s to involve workers in the improvement of work environments- and processes. Co-production, on the other hand, was developed by a team of academics led by Elinor Ostrom, a political scientist and economist, at Indiana University in the United States in the 1970s in response to the lack of recognition of the importance of involving service users in the development of services' delivery. Despite their very different historical trajectories, both approaches are commonly used today to give stakeholders and citizens a voice in addressing issues that concern them.

Interpretations of these terms, alongside similar ones such as 'collaborative governance', vary, though there is often considerable overlap in how they are used (Chambers et al., 2021). Described by Goulart and Falanga (2022), (1736) as the 'gold standard in policy-making', co-production of policy is defined as 'actors with different types of knowledge working together to contributing to a collaborative decision-making process'. Promises are described as 'compelling' (Chambers et al., 2021, 1) with improved policies resulting from the incorporation of different knowledge types, shared power, and improved legitimacy. Another similar term, 'collaborative governance', also stresses the value of engaging across public, private, and civic spheres. Emerson et al. (2012, 2) define this concept as 'the processes and structures of public policy decision making and management that engage people constructively across the boundaries of public agencies, levels of government, and/or the public, private and civic spheres in order to carry out a public purpose that could not otherwise be accomplished.' 'Co-design' of policy, the focus of the special issue, is characterised by participatory design (Blomkamp, 2018; Barkley et al., 2024). For Blomkamp (2018), co-designing policy refers to a process where people affected by a policy issue are engaged with so that their

³ Agriculture in the UK is a devolved policy issue, which means that although the UK as a whole left the European Union (colloquially known as 'Brexit'), each constituent nation of the UK (England, Scotland, Wales, Northern Ireland) set out to develop their own new policy frameworks.

experiences can shape or design policies that relate to those shared views. A key principle of co-design is democratisation, which involves a reduction of the lead designer's power exercise during the co-design process and the participants' increased 'influence and transformative ability as to the process' (Del Gaudio et al., 2020, 2). Again, policy co-design promises much; similarly to the above, if those societal actors who are affected by a policy issue are substantively included then resulting policies may be more relevant, acceptable, and underpinned by a range of different knowledge types.

Yet, for all the promises of policy 'co-design', there are 'perils' (Lemos et al., 2017) or potential 'dark sides' (Steen et al., 2018). These include the potential for so-called participatory co-design processes to reinforce power asymmetries (Chambers et al., 2021; Chilvers and Kearnes, 2016; Goulart and Falanga, 2022), to take a long time to complete and cost more money (Lemos et al., 2017), and create stakeholder fatigue (*ibid*). From a policy-maker perspective, co-design can also clash with structures of power and control, create additional complexity, and challenge cultures of evidence use within policy departments (Blomkamp, 2018). Blomkamp (2018), therefore, wonders whether government cultures are compatible with the ability to co-design since she argues that policy-makers are used to holding, not giving away, decision-making power. Additionally, bureaucracy can constrain responsiveness and flexibility. If, therefore, co-design is truly 'at odds with prevailing organisational cultures and practices' (Kimbell and Bailey, 2017, 219), it is reasonable to question whether 'co-design can feasibly leap from designing programmes and services to developing and implementing public policies' (Blomkamp, 2018, 737).

Using the case of the post-Brexit English agri-environmental policy transition, an ambitious scale of intended policy co-design beyond the scope of many cases used in previous research, this SI seeks to highlight the potential opportunities that co-design presents for policymakers, emphasizing its potential for inclusive policy formulation. Leveraging a comprehensive review of relevant literature and real-world case studies, the SI aims to underscore the significance of harnessing multiple perspectives to enhance policy quality and foster innovative solutions that address complex societal challenges. To achieve this, however, the challenges faced by co-design in the context of government-led public engagement first need to be understood and ways found to overcome the obstacles encountered. This is the shared objective of the papers included in the SI.

1.4. SI Contributions and relevance

This SI contains articles concerned with specific instances of participatory practice while critically engaging with theories and practices of co-design and co-production. They contribute new, original knowledge about how the participatory approaches of co-design and co-production vary and engage with current academic debates by considering, among other issues:

- the utility of approaches like co-design and co-production for creating policies like ELM;
- if and how the principles and ideals associated with participatory approaches can be better integrated into evidence-based policy making;
- how these approaches can be scaled-up beyond smaller-scale community collaborations or product and services design to higher-level policy structures and objectives;
- how the benefits of participatory approaches like co-design and co-production for participants and outcomes can be evaluated; and
- how academic insight into co-production and co-design can be made practically actionable in active policy settings.

The contribution by Little et al. (this issue), whose paper presents the first empirical evaluation of Defra's ELM co-design process focusing on the period 2018–2020 based on the views and experiences of

stakeholders and civil servants, identifies key challenges faced by government-led co-design. As noted previously, ELM co-design is concerned with national policy development and encompasses the creation - with farmers and agri-environment stakeholders - of three new Agri-Environment Schemes (AES) of varying degrees of complexity. It is essential to analyse and understand what worked and what did not here, and why Defra struggled with implementing the co-design and staying true to its principles and ideals (EFRA Committee, 2021; NAO, 2019; 2021). The lessons learned here will be of broad, international, relevance and contribute to discussions on how participatory democracy and open policy making might be achieved. The findings discussed are based on in-depth, qualitative, interviews with stakeholders (of whom the majority were members of Defra's ELM Stakeholder Engagement Group, a key mechanism of Defra's ELM co-design process) and Defra civil servants and policy makers involved in ELM co-design. Key challenges to the co-design process identified here were (1) mismatched temporalities with co-design processes struggling to keep pace with decision-making timescales, (2) political uncertainty restricting openness and continuity, (3) staff turnover leading to lack of continuity of co-design knowledge in the civil service, (4) silo thinking with different teams in Defra working separately, (5) institutional cultures meaning that co-design was a new and difficult process for Defra to undertake, (6) government hierarchies meaning that the Minister would often have the final say, (7) challenges in communicating back to stakeholders who had shared their views, and (8) concerns over inclusivity and whether some stakeholders were engaged with more than others. The paper provides recommendations on how these issues could be addressed but notes that within the political system in place in the UK (a representative democracy), co-design may always struggle to reach its full potential.

The early engagement of stakeholders from the inception of policy development can foster trust and commitment, paving the way for a more robust and responsive policy framework. This point is highlighted in the contribution by Urquhart et al. (2023), which assesses recent examples of policy co-design across three UK case studies focussed on tree/woodland management and fisheries. The studies involve co-designing criteria for "low impact" fishing, new policy options for tree health management, and a survey to collect social data on commercial fishing. Despite diverse contexts, all projects aimed to engage stakeholders early in policy development. The comparative assessment identified challenges, such as building trust, overcoming traditional evidence-based policymaking, accessing hard-to-reach groups and the time-intensive nature of co-design, but also provides recommendations for successfully applying co-design principles through stakeholder-researcher-policy maker partnerships. The paper proposes a new co-design framework with five stages for incorporating the principles of co-design in natural resource policy making: scoping, co-design, testing, implementing, and evaluation.

The importance of participants' perceptions of a co-design process is the topic of the contribution by de Boon et al. (this issue), which analyses stakeholders' legitimacy perceptions of England's post-Brexit agricultural transition. The authors combine normative and sociological approaches to legitimacy, incorporating both input, output, and throughput legitimacy in their analysis. The authors argue that legitimacy perceptions can be positively influenced by identifying all underlying causes of the problems that the transition aims to address from the outset and developing a wide problem formulation; providing specific, measurable goals that are linked to a set timescale; making use of a diverse mix of policy instruments to bring about the transition; and ensuring meaningful stakeholder involvement in co-design processes. The latter requires clear communication and transparency on what stakeholders can expect from their involvement in co-design processes, how their input is used, and how decisions are made. Actions also need to be taken to mitigate power imbalances in these activities.

The challenge of incorporating diverse viewpoints, a strength of co-design that can lead to improved policy quality and more informed decision-making, is brought to the fore by the contribution of Maderson

(this issue) and her investigation of the role of beekeepers in co-creating agricultural policy to ensure the ‘public good’ of pollinator wellbeing. Maderson argues that current calls for co-created environmental land management schemes overlook historical epistemological tensions between scientific and hybrid, or tacit environmental knowledge. Using archival and interview data, the author documents a long history of beekeepers’ engagement with policy makers. Beekeepers’ earlier contributions related to singular environmental risks, such as particular agrochemicals. These were more readily incorporated into policy which maintains a long-standing prioritization of positivist environmental knowledge. In contrast, the policy arena struggles to incorporate this distinctive community’s systemic knowledge, which combines long-term experiential knowledge of local environmental conditions and the socioeconomic factors driving changes, with a resultant value system reflecting notions of stewardship and care that support transformative land management systems. Maderson concludes that successfully co-producing policy requires challenging epistemological priorities and power relations amongst policy actors.

The contribution by Ambrose-Oji et al. (this issue) echoes this. This paper examines a recent process of tree health policy co-design within a government department in some detail. This challenging policy arena has to take into consideration a diverse range of pests and diseases, varied land use contexts across the rural-urban continuum, and very different kinds of impacted land managers. The authors show that meaningful and active co-productive processes rely on relationships of trust built between the epistemic communities involved. They demonstrate how important it was that individuals from the policy community came to the process with a ‘participatory mindset’ which enabled open social learning. The challenges particular to policy centred on risk perception associated with sharing and deliberating the detail of policy options, and limitations to innovation imposed by other parts of government. The attention and willingness of land managers to contribute to the co-design process rested on using a variety of research and design methods, as well as working closely with policy colleagues. Land managers came to better understand the challenges involved in policy design, prompting them to consider more realistically potential co-design features that would serve the sector rather than just their own individual situations. The benefits of including researchers in the co-design process included their mediating impact that helped create legitimacy around the process, as well as the tacit knowledge of participants and the evidence being presented as part of the design process.

1.5. Concluding remarks

Several strategies have been proposed in this SI to overcome the challenges identified in using the participatory approaches of co-design and co-production in government for the purpose of developing policy. Early engagement emerges as a key element, as policymakers must recognise the importance of involving stakeholders from the outset to cultivate a sense of ownership and legitimacy. Transparent and clear communication channels are vital to ensure that all stakeholders understand the process and can participate in it effectively. Trained facilitators play a crucial role in managing conflicts and guiding fruitful discussions, fostering an environment conducive to open dialogue and consensus-building. Moreover, the integration of technology and online platforms offers an opportunity to facilitate virtual engagement, accommodating the participation of geographically dispersed stakeholders.

Co-design holds great potential for more open policy development, offering opportunities for inclusive governance and innovative solutions. While challenges such as time constraints, power imbalances, conflict resolution, and policy translation are evident, the adoption of practical strategies can address these hurdles effectively. Embracing co-design with a commitment to inclusivity, transparency, and adaptability, policymakers can elevate the legitimacy and efficacy of policy outcomes, promoting a more engaged and responsive democratic

process. Throughout the co-design process, government departments involved have learned from and adapted their approach, incorporating insights from several projects represented in these special issue papers into their co-design practices. In effect, adopting a test, learn and adapt approach to their own co-design activities

Government-orchestrated participation will always be contingent upon the terms of those in power, which can impact on how legitimate a participatory process is perceived to be and the direction it can take. However, there is scope to overcome some of the borders, boundaries and obstacles in the way of successful co-design here, and the ‘how’ of doing so has been a key topic of this SI.

CRedit authorship contribution statement

Siobhan Maderson: Writing – review & editing, Writing – original draft. **Julie Urquhart:** Writing – review & editing, Writing – original draft. **Bianca Ambrose-Oji:** Writing – review & editing, Writing – original draft. **Auvikki de Boon:** Writing – review & editing, Writing – original draft. **Judith Tsouvalis:** Writing – review & editing, Writing – original draft. **Susan Hartley:** Writing – review & editing. **David Rose:** Writing – review & editing, Writing – original draft. **Ruth Little:** Writing – review & editing, Writing – original draft, Funding acquisition. **Jose Fajardo-Escoffie:** Writing – review & editing.

Declaration of Competing Interest

Dr Ruth Little moved to the Department for Environment, Food and Rural Affairs before preparation of this introduction. No other conflict of interests.

Acknowledgements

This project was funded by the ESRC - ‘Agri-Environmental Governance Post-Brexit: Coproduction of policy frameworks’ (ES/S007830/1).

Data Availability

No data was used for the research described in the article.

References

- Ambrose-Oji, B., Urquhart, J., Hemery, G., Petrokofsky, G., O’Brien, L., Jones, G.D., Karlsdóttir, B. this issue. The opportunities and challenges to co-designing policy options for tree health with policy makers, researchers and land managers. *Land Use Policy*, 136, 106974.
- Barkley, L., Chivers, C.-A., Short, C., Bloxham, H., 2024. Principles for delivering transformative co-design methodologies with multiple stakeholders for achieving nature recovery in England. Area. <https://doi.org/10.1111/area.12963>.
- Bateman, I.J., Balmford, B., 2018. Public funding for public goods: a post-Brexit perspective on principles for agricultural policy. *Land Use Policy* 79, 293–300.
- Blomkamp, E., 2018. The promise of co-design for public policy. *Aust. J. Public Adm.* 77 (4), 729–743.
- de Boon, A., Sandström, C., Rose, D.C., and this issue. Perceived legitimacy of agricultural transitions and implications for governance. Lessons learned from England’s post-Brexit agricultural transition. *Land Use Policy*, 116, 106067..
- de Boon, A., Sandström, C., Rose, D.C., 2022. Governing agricultural innovation: a comprehensive framework to underpin sustainable transitions. *J. Rural Stud.* 89, 407–422.
- Chambers, J.M., Wyborn, C., Ryan, M.E., et al., 2021. Six modes of co-production for sustainability. *Nat. Sustain.* 4, 983–996.
- Remaking participation: science. In: Chilvers, J., Kearnes, M., Chilvers, J., Kearnes, M. (Eds.), 2016. *Environment and Emergent Publics*. Routledge, Abingdon, UK.
- Del Gaudio, C., Franzato, C., de Oliveria, A.J., 2020. Co-design for democratising and its risk for democracy. *CoDesign* 16 (3), 202–219.
- Department for Environment, Food & Rural Affairs (Defra). 2020. Environmental Land Management Policy Discussion Document. February 2020.
- Department for Environment, Food and Rural Affairs (Defra). 2018. Health and Harmony: the future for food, farming and the environment in a Green Brexit. Consultation. February 2018. CM9577. Crown Copyright.
- EFRA Committee. 2021. Environmental Land Management and the agricultural transition. Second Report of Session 2021–22. Parliamentary Copyright House of Commons.

- Emerson, K., Nabatchi, T., Balogh, S., 2012. An integrative framework for collaborative governance. *J. Public Adm. Res. Theory* 22 (1), 1–29.
- Frewer, L.J., Salter, B., 2002. Public attitudes, scientific advice and the politics of regulatory policy: the case of BSE. *Sci. Public Policy* 29, 137–145.
- Goulart, P., Falanga, R., 2022. Co-production and voice in policymaking: participatory processes in the European Periphery. *Eur. J. Dev. Res.* 34, 1735–1744.
- HM Government, 2012. The Civil Service Reform Plan. Crown Copyright.
- House of Lords. 2000. Science and Technology – Third Report. (<https://publications.parliament.uk/pa/ld199900/ldselect/ldscitech/38/3801.htm>).
- Hurley, P., Lyon, J., Hall, J., Little, R., Tsouvalis, J., White, V., Rose, D.C., 2022. Co-designing the environmental land management scheme in England: the why, who and how of engaging ‘harder to reach’ stakeholders. *People Nat.* 4 (3), 744–757.
- Kimbell, L., Bailey, J., 2017. Prototyping and the new spirit of policy-making. *CoDesign* 13 (3), 214–226.
- Lemos, M.C., Arnott, J.C., Ardoin, N.M., et al., 2017. To co-produce or not to co-produce. *Nat. Sustain.* 1, 722–724.
- Little, R., Tsouvalis, D., Rose, D.C., Fajardo Escoffie, J.L., Hartley, S. E. this issue (forthcoming). Ideals and practicalities of policy co-design – developing England’s post-Brexit Environmental Land Management (ELM) schemes. *Land Use Policy*.
- Maderson, S. this issue. Co-producing agricultural policy with beekeepers: Obstacles and opportunities. *Land Use Policy*, 128, 106603.
- Melchior, I.C., Newig, J., 2021. Governing transitions towards sustainable agriculture—taking stock of an emerging field of research. *Sustainability* 2021 13 (528), 3–27.
- NAO [National Audit Office]. 2021. The environmental land management scheme department for environment, Food & Rural Affairs. Session 2021-22, HC664.
- NAO [National Audit Office]. 2019. Early Review of the New Farming Programme. HC 2221. Session 2017–June 5.
- Ryan, C., 2013a. Critical agendas: Designing for sustainability from products and systems. In: Walker, S., Giard, J. (Eds.), *The Handbook of Design for Sustainability*. Bloomsbury, London, New York.
- Steen, T., Brandsen, T., Verschuere, B., 2018. The dark side of co-creation and co-production: seven evils. In: Brandsen, T., Verschuere, B., Steen, T. (Eds.), *Co-Production and Co-Creation: Engaging Citizens in Public Services*. Routledge, New York.
- Urquhart, J., Ambrose-Oji, B., Chiswell, H., Courtney, P., Lewis, N., Powell, J., Reed, M., Williams, C., 2023. A co-design framework for natural resource policy making: Insights from tree health and fisheries in the United Kingdom. *Land Use Policy* 134, 106901.