February 2026

Science Advice in Challenging Settings

A scoping review for INGSA-Europe

By Nayim Patel

ORCiD: https://orcid.org/0000-0001-9379-6500

INGSA EUROPE

INGSA-Europe Final Report

Table of Contents

1. Introduction

Across Europe, the past decade has seen a marked shift in the political environment in which science advice is produced, contested, and used. A growing body of scholarship points to a combination of rising populism, democratic backsliding, institutional volatility, and renewed political polarisation that has reshaped how evidence enters policymaking arenas (Krizsan et al., 2025; Schlaufer et al., 2025; Peresman et al., 2025). Comparative research suggests that these developments are associated with a gradual erosion of democratic norms and accountability mechanisms, as well as changing constraints on executive power and public administration (Krizsán et al., 2025). Together, these trends have contributed to a more adversarial and uncertain context for evidence-informed policymaking.

Within this environment, scientific expertise and policy-relevant knowledge have increasingly become objects of political contestation. Rather than functioning as relatively neutral inputs to decision-making, evidence and expert advice are often politicised, strategically selected, or dismissed outright. This does not necessarily imply a wholesale rejection of science, instead, it reflects intensified struggles over authority, legitimacy, and the relationship between expertise and political judgement.[1] Research on populism and technocracy, for example, highlights how anti-elite and anti-expert rhetoric can coexist with selective reliance on technical expertise and trust in science itself, depending on political incentives and narratives (Schlaufer et al., 2025; Peresman et al., 2025).

Parallel to these broader political shifts, a second trend has become increasingly visible: the politicisation of science advice itself. Work in public administration and policy studies documents growing pressures on advisory systems to demonstrate political responsiveness, alignment, or loyalty to governing agendas (Connaughton, 2025). This work also emphasises that politicised advisory environments can increase reliance on informal authority, interpersonal trust, and role negotiation, reshaping how advisory influence is secured even when formal structures remain in place (Diamond, 2025; Connaughton, 2025). In such contexts, advisory arrangements that historically relied on assumptions of neutrality, stable institutional access, and mutual trust are increasingly subject to scrutiny, contestation, and political management.

This politicisation of science advice reflects a well-documented tension in science advice: advisors are often expected to be both politically usable and politically impartial, even when the conditions of policymaking push advice towards interpretive judgement and contested boundary work (Pamuk, 2022). This tension impacts the demand-side and supply-side of science advisory systems. On the one hand, ministers selectively commission and filter evidence (Diamond, 2019; Connaughton, 2025) and expect science advice to be responsive to political concerns (Connaughton, 2025). On the other, there is an ongoing and uneven reconfiguration of advisory roles and intermediaries (Christiansen et al., 2016; Diamond, 2019)

---

[1] For example, research from the British Academy (2024) and Cologna et al. (2025) suggests that trust in science and scientists in general remains relatively high globally. However, this abstract trust does not necessarily equate to trust in science when it is deployed to inform policy. Further they note that publics declining trust in politics can spill over into scepticism about scientific findings used to justify policy. (British Academy, 2024)

and contestations over advisory boundaries, especially as some advisers act as advocates (SAPEA, 2019; Jezierska, 2022).

These dynamics raise important questions about the resilience of science advice systems. While public trust in science has been shown to remain relatively stable in aggregate, it is also highly contingent on political context, issue framing, and identity-based reasoning (Mair et al., 2019). Moreover, challenges to science advice are not limited to public attitudes; they also emerge from within governance systems themselves, through changes in advisory structures, resource allocation, and norms governing the use of evidence (Krizsán et al., 2025; Connaughton, 2025).

It is within this context that the Science Advice in Challenging Settings (SACS) project seeks to support government science advisors, policy professionals, and knowledge brokers. Rather than focusing solely on acute crises or well-established challenges to research integrity, the project centres on the political demand-side conditions under which science advice is requested, received, and acted upon. Its aim is to explore how advisory systems are strained, adapted, or reconfigured under conditions of political uncertainty, institutional change, and democratic stress.

The scoping review undertaken for this project contributes to this aim by mapping and synthesising academic and grey literature on how science advice systems operate and evolve in politically challenging settings. As a scoping review (a form of evidence mapping), it does not assess the quality of evidence or seek exhaustive coverage. Instead, by identifying dominant themes, recurring political-contextual clusters, and tensions in the evidence base, the review provides a foundation for subsequent expert discussion and further empirical work in the next phase of the project.

2. Research Questions

Consistent with the exploratory purpose of a scoping review, this review is guided by three research questions designed to map the contours of the existing literature rather than to test hypotheses or evaluate effectiveness:

RQ1. What trends in government and policymaking are associated with increasing challenges to evidence-informed policymaking in Europe?

RQ2. Which norms, roles, and institutional arrangements underpinning science advice appear to be under strain in these contexts, and how are these pressures manifested?

RQ3. How is the provision, mediation, and use of science advice evolving in response to these challenges, and why?

Together, these questions enable an evidence synthesis of both the political environments shaping demand for science advice and the adaptive responses emerging within advisory systems themselves.

3. Methods

3.1. Overall approach

This scoping review follows the methodological guidance set out in the PRISMA extension for scoping reviews (PRISMA-ScR) (Tricco et al., 2018). The review aims to map the extent, nature, and characteristics of relevant academic and grey literature, rather than to provide an exhaustive synthesis or formal quality appraisal. The review took place between November 2025 - February 2026 and proceeded through five stages: (1) defining research questions; (2) identifying relevant literature; (3) staged screening; (4) charting included sources; and (5) descriptive and thematic synthesis.

3.2. Search strategy

Academic searches were conducted in **Scopus** and **Web of Science Core Collection**, complemented by targeted searches of **Overton** and **Europa** to capture policy-facing and institutional grey literature. Searches were restricted to European contexts, with selective inclusion of comparative cases where analytically relevant.

Search strings combined terms relating to science advice and evidence-informed policymaking (e.g. "science advice", "policy advice", "expert advice", "evidence-informed policy", "knowledge brokers") with terms capturing challenging political environments (e.g. politicisation, populism, polarisation, democratic backsliding, authoritarianism). Initial pilots revealed that some terms, such as "resilience", generated a high volume of irrelevant results and were excluded.

As a scoping review, this study was necessarily constrained to forms of "challenging settings" that could be reasonably anticipated and operationalised in advance through search terms. The review therefore foregrounds political-contextual challenges, such as politicisation and populism, that are conceptually established in the literature and could be translated into systematic search strings. This approach inevitably privileges challenges that are already named, theorised, and indexed within academic and policy databases, while making it more difficult to capture emergent or less stabilised dynamics.

During initial piloting, the search strategy included terms relating to artificial intelligence (AI) and digitalisation and their potential impacts on science advice. However, these terms generated a very large volume of results focused on science advice about AI policy, rather than on how AI may be reshaping advisory systems themselves. As this fell outside the scope of the review, these terms were excluded at this stage. A further scoping review could explore alternative strategies to disentangle this issue, such as more targeted databases or iterative screening approaches, to assess whether a distinct body of literature on AI's impact on science advice systems exists and how it might be systematically identified.

3.3. Inclusion and exclusion criteria

Included sources:

- Examined science advice, advisory systems, or evidence-informed policymaking
- Engaged explicitly with politicised, contested, or unstable political environments
- Focused on Europe or offered transferable conceptual frameworks
- Were peer-reviewed articles, policy reports, or major organisational publications
- Were available in English

Excluded sources:

- Focused primarily on science communication rather than policy advice
- Lacked engagement with political contestation
- Focused exclusively on non-European contexts
- Were duplicates or insufficiently detailed

3.4. Screening and charting

A total of **1,569 records** were screened at title and abstract level, resulting in **26 documents** for full-text review. Following full-text screening, **17 documents** were included and charted using a structured Excel template capturing metadata, methodological approach, and relevance to each research question.

4. Results of the Scoping Review

The relatively small number of included documents reflects both the specificity of the research questions and limitations of existing databases. In particular, Europa produced a high volume of policy documents with limited relevance to science advice. More substantively, it suggests that the study of science advice in explicitly politicised or democratically strained settings remains an emerging and fragmented field.

Despite these constraints, the included literature clusters around three main types of challenging political settings:

1. **Politicisation within relatively stable democratic systems**, often analysed through Policy Advisory Systems frameworks.

2. **Politicisation combined with democratic backsliding or de-democratisation**, where advisory institutions face structural marginalisation.

3. **Populism and political polarisation**, focusing on trust, legitimacy, and public contestation of expertise.

These clusters provide an organising framework for the thematic discussion below.

Section 8, Appendices A, B and C include tables outlining the documents reviewed for each cluster. A full table covering all 17 charted documents can be found in Appendix D.

5. Findings and Discussion

5.1. Revisiting the Research Questions and Analytical Clusters

This scoping review set out to explore how systems of science advice operate under politically challenging settings, with a particular focus on the environment of the political demand-side rather than on scientific practice or research integrity per se. Three research questions guided the review (see Section 2).

Before turning to the substantive findings, it is important to note that, like all scoping reviews, the search strategy operationalised "challenging settings" through a defined set of keywords (including politicisation, populism, polarisation, and democratic backsliding). As discussed in the Methods section, this approach was necessary for analytical tractability, but it also makes the review more likely to capture contexts in which contestation is visible and named in the literature, rather than contexts where challenges are subtle or normalised.

As mentioned, three analytically distinct yet empirically overlapping clusters emerged. The first two clusters are analytically distinct, while the third intersects with both. For example, Schlaufer et al. (2025) examine politicisation and populism during crises in Switzerland. Although most of the reviewed literature does not explicitly analyse these intersections, distinguishing the clusters allows for a more fine-grained discussion of how and why science advice is challenged, and what forms of resilience may be appropriate under different political conditions.

The remainder of this chapter is structured around these three clusters. Each section provides a descriptive account of the relevant literature, outlines mechanisms of contestation, and reflects on implications for the resilience of advisory systems. Throughout, the discussion remains intentionally descriptive rather than normative, in line with the purpose of a scoping review, while highlighting points of convergence, tension, and uncertainty.

An overview of documents reviewed in this cluster can be found in Appendix A.

5.2. Cluster 1: Politicisation of Science Advice in Democratic Systems

5.2.1. Overview and scope of the cluster

The first and largest cluster examines politicisation of science advice within systems that remain broadly democratic, where constitutional arrangements, electoral competition, and pluralistic public spheres are largely intact. This literature does not describe the collapse of advisory systems, but rather their reconfiguration under increased ministerial pressure.

Sources in this cluster include work on the externalisation of policy advice, the growing role of partisan advisers, changing relationships between ministers and civil servants, and the strategic use or sidelining of expert input. Politicisation is not treated as an anomaly but as a

structural feature of contemporary governance, intensified by media dynamics, electoral incentives, and crisis conditions.

This literature (e.g. Diamond, 2019; Christiansen et al., 2016; Schlaufer et al., 2025) emphasises that politicisation should not be understood as a simple displacement of neutral expertise by politics. Rather, it involves shifts in who provides advice, how advice is framed, and which forms of knowledge are considered legitimate or useful.

5.2.2. Mechanisms of politicisation

Across this cluster, the literature does not describe politicisation as a single process, but rather as a set of partially overlapping mechanisms through which political actors reshape how science advice is accessed, authorised, and used. While these mechanisms are often discussed in isolation within national case studies, a comparative reading of the literature highlights three recurrent pathways: externalisation and fragmentation of advice, reconfiguration of advisory roles and trust relations, and contestation of institutional legitimacy.

Externalisation and fragmentation of advisory systems: One prominent mechanism concerns the externalisation of policy advice away from permanent civil servants towards consultants, think tanks, special advisers, and ad hoc expert bodies. Diamond (2019) shows how externalisation in the UK contributed to a more fragmented advisory landscape, in which policy development and implementation diverged and civil servants increasingly acted as managers of advice rather than primary advisors. Connaughton and Devane's (2023) analysis of Ireland and Esposto and Nupieri's (2025) analysis of policymaking similarly identify pressures towards contestable and externalised advisory arrangements.

Across cases, externalisation is associated with two political effects. First, it enables ministers to exercise greater discretion over which forms of expertise are mobilised, including commissioning advice that aligns with political priorities (Connaughton, 2025; Esposto and Nupieri, 2025). Second, it diffuses accountability by multiplying advisory actors and blurring responsibility for outcomes. However, the literature does not frame externalisation as inherently corrosive: it can also increase flexibility and pluralism (Connaughton, 2025; Esposto and Nupieri, 2025). This implies that politicisation and externalisation may involve trade-offs between accountability and value diversity.

Reconfiguration of advisory roles, authority, and trust: A second mechanism of politicisation operates through changes in the organisation of advisory roles within government. Comparative work by Christiansen et al. (2016) on Denmark and Sweden shows that the presence of political advisers in ministerial offices reshapes how ministers interact with the permanent civil service, with knock-on effects for how openly civil servants can contest ministerial preferences and how strongly they are expected to anticipate and meet political demands. The presence of political advisers in ministerial offices results in a civil service that is more openly critical of ministers, while their absence results in a civil service that is more politically responsive to ministers' demands.

Diamond (2025) and Connaughton (2025) emphasise that these organisational changes elevate the importance of interpersonal trust and informal compatibility between advisors and decision-makers. In politicised environments, advisory authority becomes less anchored in

formal mandate alone and more dependent on relational dynamics. When trust erodes, advisory influence can diminish rapidly, regardless of epistemic quality. Politicisation here operates not through overt exclusion, but through shifts in whose judgement is trusted and whose advice is deemed usable.

Institutional legitimacy as a site of contestation: A third mechanism, highlighted most clearly in Schlaufer et al.'s (2025) study of Swiss crises, concerns the politicisation of science advice through challenges to institutional legitimacy rather than to scientific knowledge itself. In their analysis, criticism of science advice focused on perceived lack of independence, role conflicts, and procedural opacity, even as demand for expert input increased. This form of politicisation does not involve rejecting expertise outright, but questioning whether advisory institutions are appropriately constituted, positioned, and governed.

This finding is significant for two reasons. First, it suggests that politicisation in democratic systems often targets the institutional embedding of advice rather than its epistemic content. Second, it points to a feedback relationship between visibility, scrutiny, and politicisation pressures. In Schlaufer et al.'s (2025) Swiss crisis cases, the demand for expert input increased and advisory arrangements became more publicly salient, at the same time, criticism increasingly focused on perceived independence, role conflicts, and procedural opacity. This illustrates how heightened reliance on science advice can coincide with intensified public and political scrutiny, which can then create pressures to reconfigure advisory arrangements and justify them in more explicitly political terms.

5.2.3. Strategies for resilience

Across cluster 1 (Politicisation of Science Advice in Democratic Systems) two sets of strategies for resilience can be identified: modulating a politicised advisory system and resisting it. This subsection discusses how the literature frames these strategies for resilience.

The first set of resilience strategies for cluster 1 concerns modulating the politicised advisory system so that it can function more effectively and increase its accountability and transparency. Connaughton (2025) argues that interpersonal compatibility, such as trust, informal interaction, and shared capacities, may be more important for effectiveness than agreement over policy goals. Other authors call for stronger regulation of externalised advisory arrangements and lobbying to ensure accountability and transparency, alongside renewed leadership within the civil service to defend advisory roles (Connaughton & Devane, 2023). These two orientations could be mutually reinforcing: clearer roles and more transparent rules may make it easier to sustain trust-based working relationships. At the same time, they could sit in tension, since informal compatibility and behind-the-scenes negotiation may reduce the visibility of how advice is produced, accessed, and used. However, the empirical basis for these recommendations remains limited.

The second strategy involves resistance through alternative advisory networks. Esposto and Nupieri (2025) document how participants exited and publicly criticised the EU green taxonomy advisory process when it was constrained to align with political objectives. Marres and Barragan (2025) examine how Indie SAGE emerged during COVID-19 as an alternative advisory space, emphasising transparency, public engagement, and the explicit role of values

in policy interpretation. While empirically richer, evidence on the effectiveness of these strategies remains sparse.

5.3. Cluster 2: Politicisation and Democratic Backsliding

5.3.1. Overview and defining features of the cluster

The second analytical cluster captures literature situated at the intersection of politicisation of science advice and processes of democratic backsliding. Unlike the first cluster, where politicisation occurs within relatively stable democratic institutions, this literature examines contexts in which the institutional environment itself is being reconfigured through executive aggrandisement, shrinking pluralism, and the erosion of checks and balances.

Across the reviewed studies, democratic backsliding in the advisory system is framed as an incremental and cumulative process. Science advice systems are implicated in this process through shifts in norms around expertise, loyalty, and dissent. These broader societal shifts lead to reconfigurations in access, funding, and institutional design.

The literature in this cluster (e.g. Krizsan et al., 2025; Axyonova, 2024) draws heavily on case-based qualitative research, particularly focusing on think tanks, advisory bodies, and academic experts operating under increasingly constrained political conditions. While many studies focus on specific national contexts, their analytical contribution lies in identifying recurring patterns of advisory system transformation under backsliding conditions.

An overview of documents analysed in cluster 2 can be found in Appendix B.

5.3.2. Reconfiguration of advisory ecosystems

A central finding across this cluster is that democratic backsliding entails a **reconfiguration rather than elimination of advisory systems**. Advisory capacity does not disappear; instead, it is reshaped to align more closely with executive priorities. This reconfiguration appears to entail a bifurcation of the policy advisory system, resulting in a privileged system of government-aligned organisations and a marginalised system of non-aligned or critical actors.

The literature highlights how think tanks or expert bodies with ideological or personal proximity to ruling elites gain prominence, access, and resources (Krizsan et al., 2025; Jezierska, 2022). De-democrating nation states systematically transfer resources from critical civil society groups to those that are ideologically aligned, including through the construction of new NGOs through state budgets (Krizsan et al., 2025). As a result, aligned think tanks have blossomed in these countries, drastically reconfiguring the forms of expertise and values that exist in the externalised policy advisory system (Jezierska, 2022). These aligned think tanks are then utilised to legitimise pre-existing policies, though this appears to be occurring in more democratic politicised environments too (Krizsan et al., 2025).

In contrast, non-aligned think tanks experience marginalisation through loss of funding, exclusion from consultation, or informal barriers to access (Krizsan et al., 2025; Jezierska, 2022). De-democratising nation states systematically attack the reputations of non-aligned

actors and, in one case, have legislated some as foreign agents (Krizsan et al., 2025). Non-aligned actors also lose informal and formal routes to engaging with policy makers as personal relationships diminish and consultation bodies are dismantled (Krizsan et al., 2025; Molnar, 2022). This reconfiguration also has knock-on effects for individual policy advisors, too, as access points are closed off for liberal and female academics (Molnar, 2022).

In this cluster, contestation extends beyond specific policy advice to encompass the legitimacy of advisory actors themselves. Unlike the first cluster, where disputes centre on roles and processes, here the very right of certain actors to participate in policymaking is questioned. Importantly, this contestation is often asymmetric. Aligned actors are rarely subjected to equivalent scrutiny, even when their analyses are openly ideological. This asymmetry reflects a broader shift from epistemic to political criteria of legitimacy.

5.3.3. Strategies for adaptation

The literature in Cluster 2 is notably more pessimistic than in the previous cluster regarding the prospects for resilience. While various adaptive strategies are documented, authors repeatedly caution that science advice systems cannot compensate for democratic erosion. Nevertheless, this subsection will examine the strategies for adaptation and their implications.

A distinctive contribution of this cluster is its attention to how knowledge producers themselves adapt to democratic backsliding. Rather than treating advisors as passive victims of political change, the literature documents strategic, and sometimes uncomfortable, forms of adaptation. Aligned think tanks are emboldened as privileged advisors within this context, but they must also prove their loyalty by discrediting external critiques of the government (Axyonova, 2024). Meanwhile, non-aligned think tanks may use strategic silence on sensitive issues, shy away from internal governance failures, and utilise technical language in their analyses (Ibid). These strategies can allow some non-aligned actors to maintain some degree of influence, but they also raise questions about the integrity and societal role of science advice when core issues are systematically avoided.

However, some non-aligned think tanks may engage in more contentious practices. Jezierska (2022) showed how a small number of critical think tanks have adopted more explicitly political or normative roles, positioning themselves as defenders of democratic values rather than neutral analysts. Since neutrality no longer guarantees access or influence for critical actors, these think tanks have engaged in petitions, protests, and public advocacy for policy positions that have become systemically marginalised (ibid). This transformation reflects not only strategic adaptation but also a deeper renegotiation of what it means to provide science advice under illiberal conditions.

5.4. Cluster 3: Populism, Polarisation, and Contestation of Expertise

5.4.1. Overview and defining characteristics of the cluster

The third analytical cluster centres on populism, political polarisation, and the active contestation of expertise. While related to both politicisation (Cluster 1) and democratic backsliding (Cluster 2), this cluster is analytically distinct in that it focuses on discursive, affective, and societal dynamics rather than primarily institutional ones.

The literature grouped here (e.g. Schlaufer et al., 2025; Peresman et al., 2025; European Commission, 2021) examines how science advice becomes entangled in broader conflicts over identity, values, and authority. In these contexts, contestation of expertise is not necessarily tied to institutional reform or executive capture, but to shifts in political communication, media ecosystems, and public reasoning. This cluster is where science advice intersects most directly with citizens, voters, and publics.

Importantly, this cluster includes both democratic and non-democratic settings, but the unifying feature is the polarisation of trust in expertise and expert institutions, rather than its wholesale erosion. Several studies challenge the assumption that populist or polarised publics simply reject expertise. Instead, they reveal more nuanced patterns of scepticism, conditional acceptance, and heightened scrutiny.

An overview of the documents analysed in this final cluster can be found in Appendix C.

5.4.2. Populism and polarisation

The scoping review's third cluster examines how populism, political polarisation, and a growing scepticism of expertise shape the conditions under which science advice operates. Contrary to simplified narratives, the reviewed literature consistently shows that populism and political polarisation do not equate to a blanket rejection of expert knowledge.

The literature highlights that science is increasingly scrutinised for biases. Peresman et al. (2025) examined populist voters' attitude to expertise across five countries and found that populist voters are more likely to consider policy advice as poorly reasoned or politically biased. However, they identify no statistically significant difference in evaluations of argument robustness, suggesting comparable expectations of evidentiary quality across the political spectrum. Meanwhile, Schlaufer et al. (2025) analyse science advice during crises in polarised settings and find that criticisms are directed primarily at institutional features, including perceived lack of independence, role conflicts between advisors and policymakers, and untransparent communication.

SAPEA (2019) argues that increased scrutiny of science advice can be democratically beneficial when it focuses on quality rather than identity. However, the reviewed findings suggest that it is often the advisors themselves, rather than the substance of the science, that become the primary objects of contestation.

Broader societal trends appear to intensify perceptions of biased or unreliable expertise. The European Commission (2021) highlights the rise of affective polarisation, defined as emotional hostility towards perceived political opponents rather than disagreement over policy positions. In such contexts, science advice is increasingly evaluated based on who is perceived to deliver it, which groups are assumed to benefit, and whether it aligns with in-group identities. Scientific claims thus become symbolic proxies for broader political struggles.

Mair et al. (2019) further note the global rise of misinformation and disinformation, where actors deliberately spread false or misleading content. Algorithmic amplification, emotionally charged narratives, and motivated reasoning increase the likelihood that individuals accept information from perceived allies while rejecting that from perceived opponents.

Finally, the literature highlights a tension: populist voters often simultaneously express distrust of elites and a preference for expert-led problem-solving (Schlaufer et al., 2025; Peresman et al., 2025). This contradiction destabilises binary framings of pro-science versus anti-science publics and suggests that science advice systems retain an important, albeit contested, role in populist and polarised settings. However, institutional reform alone may be insufficient to address the broader societal dynamics at play.

5.4.3. Strategies for resilience

In this cluster, resilience strategies shift attention from scientists themselves to intermediaries and knowledge brokers, highlighting their potential role in navigating polarised environments (Mair et al., 2019; SAPEA, 2019; European Commission, 2019). Notably, these recommendations are drawn primarily from grey literature rather than peer-reviewed academic studies.

The literature recognises that values and normative commitments have always been embedded within science advice processes, and that polarisation has rendered these dimensions more visible. As a result, many authors argue that advisory systems should clarify boundaries between science, science advice, and politics (SAPEA, 2019; European Commission, 2019). For example, Mair et al. (2019) draw on the "honest broker" framing associated with Pielke (2007) to argue that advisors can support legitimacy by communicating uncertainties, assumptions, and value judgements transparently. Their evidence review suggests that such practices can reduce distrust, particularly among audiences whose policy preferences are most challenged by the advice.

These approaches are typically presented as normative recommendations rather than empirically validated solutions. Nevertheless, they reflect growing recognition that resilience in polarised settings depends as much on communicative practice and process design as on institutional authority. However, the literature also identifies a trade-off: while honest brokerage may increase trust, it can reduce policy uptake or efficacy, such as vaccine acceptance, when compared to more directive advisory approaches (Mair et al., 2019).

6. Conclusions and Next Steps

This chapter consolidates the analytical synthesis of the review and reflects on its implications for science advice and for INGSA-Europe. The chapter is structured in two parts. First, an expanded synthesis of cross-cutting patterns in the literature and across the three clusters. Second, a discussion of what these patterns imply for science advice practice, INGSA-Europe's work, and the next empirical phase of the project.

6.1. Cross-cutting insights and patterns

6.1.1. From analytical clusters to system-level patterns

Three analytical clusters are identified in this review: (1) politicisation of science advice in democratic systems, (2) politicisation combined with democratic backsliding, and (3) populism, polarisation, and contestation of expertise. These clusters reveal a set of system-level dynamics shaping how science advice operates across contemporary European governance contexts.

These clusters should not be understood as discrete or sequential pathways. Rather, they capture overlapping and interacting pressures that operate simultaneously across multiple levels:

- **Institutional dynamics**, including rules of access to decision-makers, organisational design of advisory bodies, degrees of institutionalisation, and formal mandates for advice.

- **Political dynamics**, including executive strategies, party competition, politicisation of administrative systems, and the use of expertise within broader political narratives.

- **Societal dynamics**, including public trust in expertise, media ecosystems, affective polarisation, and identity-based reasoning.

Across the literature, these dynamics are shown to compound vulnerability rather than operate independently. For example, politicisation within executive systems (Cluster 1) often increases the visibility of science advice, particularly during crises. As Schlaufer et al.'s (2025) Swiss case demonstrates, this heightened visibility can in turn intensify public and political contestation (Cluster 3), even when scientific knowledge itself is not directly challenged. Similarly, democratic backsliding (Cluster 2) amplifies both institutional fragility and discursive challenges, as the marginalisation of independent expertise is accompanied by delegitimising narratives about who is entitled to advise.

A key implication of this synthesis is that challenges to science advice rarely stem from a single source. Understanding strain on advisory systems therefore requires attention to how institutional, political, and societal dynamics intersect, rather than attributing difficulties to isolated failures of design, communication, or individual actors.

6.1.2. Challenging settings as dynamic and co-produced contexts

A central cross-cutting insight from the review is that "challenging settings" are not static environments into which science advice systems are placed. Rather, they are co-produced through the interaction of internal institutional decisions and external political and societal dynamics and are continuously reshaped through feedback between advisory practice and political context.

Across the clusters, the literature demonstrates that politicisation is often a deliberate governance strategy rather than an unintended by-product of complexity or crisis. In so-called democratic systems, ministers have adopted politicisation and externalisation strategies to gain greater control over advisory processes. Incremental institutional changes, such as the externalisation of advice, the reshaping of consultation processes, or the privileging of trusted or aligned actors, can cumulatively alter how advice is accessed and used (Diamond, 2019; Connaughton and Devane, 2023). These dynamics bear some similarity to those under conditions of backsliding, where politicisation and externalisation are intensified rather than entirely transformed.

At the same time, these internal decisions interact with external dynamics beyond the immediate control of advisory systems. These include electoral incentives, party competition, populist mobilisation, media amplification, and broader processes of societal polarisation. Schlaufer et al.'s (2025) Swiss cases show how crisis conditions and public visibility intensified the contestation of advisory institutions, even where formal procedures and epistemic standards remained robust. Similarly, literature on democratic backsliding highlights how advisory legitimacy becomes entangled with social values and political alliances. This democratic backsliding resulted in a bifurcation of the politicised advisory system, where access points for critical advisors are systematically closed and resources redirected toward aligned organisations (Krizsán et al., 2025; Jezierska, 2022).

Importantly, these demand-side political pressures interact with supply-side vulnerabilities within advisory systems, such as fragmented advisory landscapes, weak institutionalisation, or reliance on informal channels. These interactions are mediated through broader societal processes, including polarisation and trust. For example, political communication and media amplification can intensify the visibility of contestation around expertise, even in settings where advisory institutions remain formally intact.

Nevertheless, advisory systems themselves are not passive in this process. Advisory practices, such as making advice public or adapting informally to political constraints, can reshape the very conditions under which advice is interpreted and judged. The emergence of alternative advisory spaces during COVID-19, documented by Marres and Barragán (2025), illustrates how advisory responses can simultaneously enhance transparency and generate new forms of contestation. Challenging settings are therefore dynamic and co-produced through ongoing interaction between political demand and advisory response.

6.1.3. Persistent vulnerabilities across advisory systems

Despite variation across political contexts and governance traditions, the review identifies several components of science advice systems that consistently emerge as vulnerable under pressure.

Institutional access and independence: Across clusters, studies document the marginalisation of established advisory bodies, preferential access for politically aligned experts or organisations, and increased reliance on informal or personalised advisory channels. These patterns are most pronounced under democratic backsliding, where access is systematically restructured, but they are also observable, albeit in subtler forms, in established democracies. In Ireland, for example, Connaughton and Devane (2023) describe growing pressure on advisory systems to demonstrate political responsiveness, even as formal democratic institutions remain stable. The core difference is that under relatively stable democratic conditions, ministers are simply seeking advice from those they agree with rather than defunding critical advisers.

Role clarity and boundary management: Blurred distinctions between evidence production, policy advice, and political justification repeatedly emerge as points of strain. Where advisory roles are poorly defined, advisors become vulnerable to accusations of bias or overreach, even when the quality of advice is considered high. Schlaufer et al. (2025) show that during Swiss crises, legitimacy was contested primarily at the institutional level, focusing on role conflicts and procedural opacity rather than on scientific content itself. Although science advisors may consider their roles to be clearly defined, publics may not.

Trust as a relational and fragmented resource: Trust appears not as a stable attribute of institutions, but as a relational and context-dependent resource. Rather than declining uniformly, trust shifts across actors, issues, and audiences depending on how advice is framed, communicated, and embedded institutionally. Moreover, trust operates between advisors and publics and also between advisors and ministers, thus affecting the legitimacy and efficacy of science advice (Diamond, 2025; Connaughton, 2025). This fragmentation complicates efforts to restore legitimacy through institutional reform alone, as trust in one advisory actor or process does not necessarily transfer to others.

6.1.4. Institutionalisation as protection, and its limits

Institutionalisation features prominently in the literature as both a source of resilience and a potential point of vulnerability. Well-designed advisory institutions can stabilise access to expertise, clarify roles and mandates, and provide procedural legitimacy, particularly during crises. Schlaufer et al.'s (2025) analysis suggests that institutionalisation can shield advisory systems from direct epistemic attack, even when political contestation intensifies.

However, the review also underscores the limits of institutionalisation. Even highly institutionalised systems remain vulnerable when political actors actively contest advisory independence, when advisory bodies lack visible autonomy, or when institutional processes are poorly communicated. Under democratic backsliding, institutionalisation may be selectively hollowed out or repurposed, as seen in the reconfiguration of think-tank ecosystems in Hungary and Poland (Krizsán et al., 2025). Institutional design alone cannot

neutralise politicisation, populist contestation, or democratic erosion. Its protective value depends on how formal arrangements interact with political context and advisory practice.

6.1.5. Adaptive practices and emerging forms of resilience

Despite these vulnerabilities, the literature documents a range of adaptive practices that contribute to resilience across different contexts. These practices should not be understood as normative solutions, but as empirically observed responses to constraint.

One recurring strategy involves diversification of advisory routes and roles. Advisors may produce science advice in public and outside formal institutions, combine formal science advice with political organising or social engagement, or work through transnational networks to sustain influence when domestic access is restricted (Marres and Barragán, 2025; Axyonova, 2024). These strategies can offer alternative ways of doing science advice and engaging with policy-makers and publics when formal contact points become restricted.

A second set of practices centres on reflexive communication and transparency. Explicitly acknowledging uncertainty, clarifying the limits of expertise, and distinguishing evidence from normative judgement are frequently highlighted as ways to mitigate polarisation of trust (Post and Bienzeisler, 2024; SAPEA, 2019). Evidence from polarised contexts suggests that such practices can reduce perceptions of bias among some audiences, even as they may introduce trade-offs in terms of policy uptake or efficacy.

These adaptive practices illustrate that resilience in challenging settings is not achieved through insulation from politics, but through ongoing negotiation of roles, boundaries, and expectations under conditions of contestation. However, the literature in review was relatively thin when discussing resilience strategies, which implies that there is further scope for exploring and experimenting with adaptive practices.

6.2. Implications for INGSA-Europe and science advice

Building on these cross-cutting patterns, this section reflects on what the review implies for science advice practice and for INGSA-Europe. Rather than offering prescriptive recommendations, it identifies orientations and considerations that emerge from the literature and are relevant to INGSA-Europe's convening, capacity-building, and learning activities.

6.2.1. Politicisation as a normalised but uneven condition

Across the reviewed literature, politicisation emerges not as an episodic breakdown of "good" science advice, but as a routine feature of contemporary policymaking environments. What varies is not whether politicisation is present, but how it is expressed, who bears its costs, and what forms of agency remain available to advisors.

Comparative cases illustrate that politicisation can operate through subtle mechanisms, such as selective commissioning of expertise or informal gatekeeping, without overtly undermining democratic institutions. In such contexts, advisors may retain access and influence, but at the cost of increased role ambiguity or strategic self-restraint. In contrast, under conditions of

democratic backsliding, politicisation becomes more overt and coercive, directly targeting advisory independence, institutional survival, and professional security.

For INGSA-Europe, this unevenness matters. Treating politicisation as a uniform problem risks obscuring important differences in how advisors experience and respond to political pressure across governance traditions, levels of seniority, and advisory roles. The literature suggests that understanding politicisation requires attention not only to system-level features, but to how advisors themselves recognise, interpret, and adapt to political constraints in practice, including when politicisation is experienced as manageable and when it becomes destabilising.

6.2.2. Legitimacy work as a core feature of advisory practice

The review consistently shows that legitimacy is not a stable attribute conferred by institutional design or scientific authority alone. Instead, legitimacy emerges as an ongoing accomplishment, shaped by how advisory roles are defined, enacted, and communicated under conditions of contestation.

In several cases, legitimacy challenges are directed less at scientific knowledge than at the institutional positioning and role boundaries of advisory bodies. The Swiss cases, for example, illustrate how advisory institutions were criticised for perceived role conflicts or lack of independence even as their scientific outputs remained largely uncontested. In more polarised or populist contexts, legitimacy becomes further entangled with identity, trust, and perceptions of alignment, complicating efforts to defend advice on epistemic grounds alone.

These patterns suggest that advisory work increasingly involves active legitimacy management: clarifying mandates, distinguishing evidence from normative judgement, and navigating expectations from multiple audiences simultaneously. For INGSA-Europe, this implies that institutional legitimacy should be treated as a central concern of advisory practice.

6.2.3. Rethinking resilience beyond institutional safeguards

Much of the literature reviewed here challenges narrow conceptions of resilience that equate it with institutional insulation, formal independence, or depoliticisation. While such safeguards remain important, they are insufficient on their own as challenging settings often involve overlapping institutional, societal, and political pressures.

Instead, resilience appears as a situated and adaptive capacity, emerging through how advisors navigate relationships, manage boundaries, and respond to shifting political and societal expectations. The literature documents a range of adaptive practices, including diversification of advisory routes and reflexive communication, that can help sustain advisory capacity under pressure. At the same time, these practices introduce new trade-offs, such as fragmented accountability, blurred responsibility, or reduced transparency.

For INGSA-Europe, the implication is not that resilience can be engineered through a single institutional model, but that resilience involves choices made under constraint, often involving uncomfortable compromises. Creating spaces where such trade-offs can be surfaced,

compared, and discussed may be particularly valuable for advisors operating in contested environments.

6.2.4. Limits of the current evidence base and emerging topics

The review highlights important limits in the current evidence base. Much of the literature relies on single-case studies and retrospective accounts, offering rich contextual insight but limited cross-comparative understanding of how similar pressures are navigated across different settings. Moreover, the scoping process also revealed challenges in identifying literature on certain emerging dynamics. For example, initial search strategies generated extensive material on science advice about AI policy, but far less on how AI may be reshaping advisory processes, roles, or expectations. Beyond digitalisation, the review was also limited in its ability to capture challenges arising from geopolitics, transnational science cooperation, and the growing coordination of illiberal political actors across borders. This is in part hampered by a focus on single-nation case studies within the scoping review.

For INGSA-Europe, these gaps underscore the need for caution in drawing strong conclusions from the existing literature alone and point towards the value of complementary empirical approaches to explore dynamics that are widely discussed in practice but not yet well theorised or documented.

6.3. Orienting the next phase: indicative lines of enquiry

The synthesis presented in this review clarifies several recurring patterns in how science advice systems operate under politically challenging conditions. At the same time, it also highlights important areas where existing literature remains thin, indirect, or unable to capture lived advisory practice. This section distinguishes between what the review allows us to say with some confidence, and where deeper empirical engagement is needed.

6.3.1. What the review helps us understand — and where deeper insight is needed

The review provides relatively strong insight into system-level dynamics shaping science advice in challenging settings. Across diverse contexts, the literature consistently documents patterns of politicisation, shifts in access and authority, legitimacy contestation focused on institutions rather than knowledge, and a variety of adaptive practices. We also have a growing comparative understanding of how these dynamics differ between stable democratic systems and contexts of democratic backsliding.

However, while these patterns are well described at an analytical level, the literature provides far less insight into how advisors themselves experience and navigate them in practice. For example, we know that boundaries between science and politics are frequently blurred, but less about how advisors recognise, interpret, and respond to boundary-crossing in real time. We know that legitimacy is contested institutionally, but less about how advisors attempt to defend, renegotiate, or work around such challenges in their day-to-day roles. Going deeper into these questions requires moving beyond system descriptions to practitioner perspectives.

6.3.2. What the review does not yet tell us

The review also reveals clear gaps in the existing evidence base. First, much of the literature relies on single-case studies, often focused on high-profile national contexts, limiting cross-comparative insight into how similar pressures are experienced across regions, governance traditions, or advisory roles. Second, there is limited empirical work on informal advisory practices, including how advisors operate when formal access is constrained or when advisory roles become ambiguous.

In addition, several topics proved difficult to capture systematically through scoping. As noted in the Methods section, the potential impacts of artificial intelligence and digitalisation on science advice systems have been raised informally but were challenging to isolate analytically through the review. The existing literature overwhelmingly focuses on science advice *about* AI policy rather than AI's effects on advisory processes themselves. Whether a distinct body of work addressing these issues exists remains an open question.

6.4. Next steps for INGSA-Europe

The patterns and trade-offs identified in this scoping review provide a foundation for the next phase of INGSA-Europe's work on science advice in challenging settings. In particular, the synthesis highlights the value of deeper engagement with practitioners to complement the system-level patterns identified in the literature.

Building on the findings in Section 6.2, a next step would be to explore how advisors experience and navigate politicisation, legitimacy challenges, and adaptive trade-offs in practice. This includes examining how advisors recognise political pressure, how they interpret expectations of responsiveness or alignment, and how they manage boundaries between evidence, interpretation, and advocacy in day-to-day work.

The review also points to the importance of creating opportunities for cross-comparative reflection across different institutional positions, governance traditions, and political contexts. Structured discussions and qualitative interviews could help surface how similar pressures are experienced differently by internal and external advisors, by those operating in more or less institutionalised systems, and by advisors working at different stages of policy processes.

Finally, the review underscores the need to better understand dynamics that are widely discussed in practice but remain weakly represented in the literature. These include the implications of digitalisation and artificial intelligence for science advice processes, expectations, and accountability, as well as the interaction between domestic advisory systems and broader geopolitical or transnational pressures. Addressing these issues will require approaches that go beyond literature mapping alone and draw more directly on practitioner experience.

7. Bibliography

Axyonova, V. (2024). Responding to crises in authoritarian environments: Russian think tanks between policy evaluation and state endorsement. Review of Policy Research, 41(6), 941–960. https://doi.org/10.1111/ropr.12601

Bickerton, C., & Accetti, C. I. (2017). Populism and technocracy: opposites or complements? Critical Review of International Social and Political Philosophy, 20(2), 186–206. https://doi-org.libproxy.ucl.ac.uk/10.1080/13698230.2014.995504

British Academy. (2024). Science, trust and policy: International comparative perspectives. British Academy. Retrieved 10 February 2026, from https://www.thebritishacademy.ac.uk/documents/5185/Science-Trust-and-Policy-report.pdf

Christiansen, P. M., Niklasson, B., & Öhberg, P. (2016). Does politics crowd out professional competence? The organisation of ministerial advice in Denmark and Sweden. West European Politics, 39(6), 1230–1250. https://doi.org/10.1080/01402382.2016.1176368

Cologna, V., Mede, N. G., Berger, S., Besley, J., Brick, C., Joubert, M., Maibach, E. W., Mihelj, S., Oreskes, N., Schäfer, M. S., van der Linden, S., Abdul Aziz, N. I., Abdulsalam, S., Shamsi, N. A., Aczel, B., Adinugroho, I., Alabrese, E., Aldoh, A., Alfano, M., … Zwaan, R. A. (2025). Trust in scientists and their role in society across 68 countries. Nature Human Behaviour, 9(4), 713–730. https://doi.org/10.1038/s41562-024-02090-5

Connaughton, B. (2025). Change is inevitable, quality is optional, and context matters: Dynamics influencing the development of an optimal policy advisory system. Policy and Society, 44(3), 291–304. https://doi.org/10.1093/polsoc/puaf017

Connaughton, B., & Devane, C. (2023). 'Best advice available' – Challenge and change in developing an optimal policy advisory system in Ireland. Administration, 71(3), 35–61. https://doi.org/10.2478/admin-2023-0016

Craft, J., & Halligan, J. (2020). Advising Governments in the Westminster Tradition: Policy Advisory Systems in Australia, Britain, Canada and New Zealand. Cambridge University Press. https://doi.org/10.1017/9781108377133

Diamond, P. (2020). Externalization and politicization in policy advisory systems: A case study of contestable policy-making 2010–2015. Public Money & Management, 40(1), 42–51. https://doi.org/10.1080/09540962.2019.1583890

European Commission. (2019). Scientific advice to European policy in a complex world. Publications Office of the European Union. https://data.europa.eu/doi/10.2777/80320

European Commission. (2021). Values and identities. Publications Office of the European Union. https://op.europa.eu/en/publication-detail/-/publication/d4be714d-4757-11ec-91ac-01aa75ed71a1/language-en

Esposto, E., & Nupieri, T. (2025). The divide in the EU green taxonomy: How conflict impacts the quality of policy advisory systems. Policy and Society, 44(3), 318–334. https://doi.org/10.1093/polsoc/puaf007

Hesstvedt, S., & Christensen, J. (2023). Political and administrative control of expert groups—A mixed-methods study. Governance, 36(2), 337–357. https://doi.org/10.1111/gove.12599

Jezierska, K. (2023). Coming out of the liberal closet. Think tanks and de-democratization in Poland. Democratization, 30(2), 259–277. https://doi.org/10.1080/13510347.2022.2130259

Joint Research Centre (European Commission). (2024). Trustworthy public communication— Publications Office of the EU. Retrieved 3 December 2025, from https://op.europa.eu/en/publication-detail/-/publication/ad053f72-2c51-11ef-a61b-01aa75ed71a1/language-en

Joint Research Centre (European Commission). (2025). Navigating migration narratives: Research insights and strategies for effective communication. Publications Office of the European Union. https://data.europa.eu/doi/10.2760/7999210

Krizsán, A., Jezierska, K., & Sörbom, A. (2025). Policy knowledge production in de-democratizing contexts. Policy and Society, 44(2), 242–259. https://doi.org/10.1093/polsoc/puae037

Mair, D., Smillie, L., La, P. G., Schwendinger, F., Raykovska, M., Pasztor, Z., & Van, B. R. (2019). Understanding our Political Nature: How to put knowledge and reason at the heart of political decision-making. JRC Publications Repository. https://doi.org/10.2760/374191

Marres, N., & Valderrama Barragán, M. (2025). Making expert advice public in a time of emergency: Independent SAGE and the contestation of science during the Covid pandemic in the UK. Social Studies of Science, 55(4), 512–541. https://doi.org/10.1177/03063127241309071

Molnár, G. T. (2022). Coping with a Closed and Politicized System: The Advisory Roles of Political Scientists in Hungary. In M. Brans & A. Timmermans (Eds.), The Advisory Roles of Political Scientists in Europe: Comparing Engagements in Policy Advisory Systems (pp. 181–203). Springer International Publishing. https://doi.org/10.1007/978-3-030-86005-9_9

Müller, J.-W. (2016). What Is Populism? University of Pennsylvania Press. https://doi.org/10.9783/9780812293784

Pamuk, Z. (2022). COVID-19 and the Paradox of Scientific Advice. Perspectives on Politics, 20(2), 562–576. doi:10.1017/S1537592721001201

Peresman, A., Larsen, L. T., Mazepus, H., & Petersen, M. B. (2025). Do Populists Listen to Expertise? A Five-Country Study of Authority, Arguments, and Expert Sources. Political Studies, 00323217251323402. https://doi.org/10.1177/00323217251323402

Post, S., & Bienzeisler, N. (2024). The Honest Broker versus the Epistocrat: Attenuating Distrust in Science by Disentangling Science from Politics. Political Communication, 41(5), 763–785. https://doi.org/10.1080/10584609.2024.2317274

Rountree, C., & Prentice, G. (2022). Segmentation of intentions towards COVID-19 vaccine acceptance through political and health behaviour explanatory models. Irish Journal of Medical Science, 191(5), 2369–2383. https://doi.org/10.1007/s11845-021-02852-4

SAPEA. (2019). Making sense of science for policy under conditions of complexity and uncertainty – Scientific Advice Mechanism. Publications Office of the European Union. https://scientificadvice.eu/advice/making-sense-of-science-for-policy-under-conditions-of-complexity-and-uncertainty/

Schlaufer, C., Mavrot, C., Hornung, J., & Sager, F. (n.d.). Challenges to the Legitimacy of Scientific Policy Advice in Three Swiss Crises: Can Institutionalization Shield Against Politicization? Policy Studies Journal. https://doi.org/10.1111/psj.70049

Tricco, A. C., Lillie, E., Zarin, W., O'Brien, K. K., Colquhoun, H., Levac, D., Moher, D., Peters, M. D. J., Horsley, T., Weeks, L., Hempel, S., Akl, E. A., Chang, C., McGowan, J., Stewart, L., Hartling, L., Aldcroft, A., Wilson, M. G., Garritty, C., … Straus, S. E. (2018). PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. Annals of Internal Medicine, 169(7), 467–473. https://doi.org/10.7326/M18-0850

8. Appendices

Appendix A: Cluster 1 documents

Politicisation of Science Advice in Democratic Systems

ID	Document Title	Region	Source	Methods and framework	Relevance to RQ1	Relevance to RQ2	Relevance to RQ3
1	Change is inevitable, quality is optional, and context matters: dynamics influencing the development of an optimal policy advisory system (Connaughton, 2025)	N/A	Policy and Society	Conceptual: Developing Craft and Howlett's model of Policy Advisory Systems	Starting point: increasing politicisation and externalisation in Westminster jurisdictions	Highlights: 1) trusted advisers are endowed with political authority. 2) advice rapidly breaks down when trust disintegrates 3) ministers can strategically use consultants to reduce accountability	Suggests: 1) Relational compatibility between advisor and advisees 2) Regulating consultants and lobbying
2	The divide in the EU green taxonomy: how conflict impacts the quality of policy advisory systems (Esposto and Nupieri, 2025)	EU	Policy and Society	Empirical: Applies a Policy Advisory Systems framework to an EU green taxonomy case	Starting point: increasing politicisation	N/A	Found: environmental advocacy groups and industrial lobbyists critiqued and resisted the advisory process
3	Making expert advice public in a time of emergency: Independent SAGE and the contestation	UK	Social Studies of Science	Empirical: Used STS and qualitative interviews to	Starting point: Politicisation + political crisis	N/A	Found: 1) Making science and expert advice in public 2) Calling out the

ID	Document Title	Region	Source	Methods and framework	Relevance to RQ1	Relevance to RQ2	Relevance to RQ3
	of science during the Covid pandemic in the UK\n\n(Marres and Barragan, 2025)			analyse Indie Sage			government's approach to advice listening\n\n3) Producing a translation model of science where evidence and policy recommendations are co-produced
5	Challenges to the Legitimacy of Scientific Policy Advice in Three Swiss Crises: Can Institutionalization Shield Against Politicization?\n\n(Schlaufer et al., 2025)	Switzerland	Policy Studies Journal	Empirical:\n\nPolicy Advisory Systems applied to three Swiss crises, utilising interviews and content analysis	Starting point:\n\nPolitical crisis, politicisation, and increasing populism	Found:\n\n1) Legitimacy challenged at the institutional rather than epistemic level\n\n2) Increased demand AND contestation of science advice	N/A
9	'Best advice available' - Challenge and change in developing an optimal policy advisory system in Ireland\n(Connaughton and Devane, 2023)	Ireland	Administration	Empirical: Applies a Policy Advisory Systems framework to Ireland's governance, drawing on expert interviews	Starting point:\n\nIncreasing politicisation	N/A	Suggested:\n\n1) stronger leadership culture in the civil service to defend policy advice\n\n2) more transparency on lobbying process at policy worker level
12	Externalization and politicization in policy advisory systems: a case study of contestable policymaking 2010–2015 (Diamond, 2019)	UK	Public Money and Management	Empirical:\n\nPolicy Advisory Systems applied to UK	Starting point:\n\nincreasing politicisation and externalisation in Westminster jurisdictions	Found:\n\n1) Policy has become more fragmented, with policymaking and implementation diverging\n\n2) proliferation of policy entrepreneurs that is	N/A

ID	Document Title	Region	Source	Methods and framework	Relevance to RQ1	Relevance to RQ2	Relevance to RQ3
						difficult to manage or steer 3) civil servants become managers of policy advice rather than policy advisors/makers 4) ministers have weakened their ability to achieve political objectives	
13	Does politics crowd out professional competence? The organisation of ministerial advice in Denmark and Sweden (Christiansen et al. 2016)	Denmark and Sweden	West European Politics	Empirical: A Most Similar Systems Design comparison of Denmark and Sweden	Starting point: increasing politicisation in Sweden; lower politicisation in Denmark	Found: 1) increase in politically appointees decreases functional politicisation of permanent civil servants 2) increased politicisation results in more criticism by civil servants but less political responsiveness	N/A

Appendix B: Cluster 2 documents

Politicisation combined with democratic backsliding or de-democratisation

ID	Document Title	Region	Source	Methods and framework	Relevance to RQ1	Relevance to RQ2	Relevance to RQ3
4	Policy knowledge production in de-democratizing contexts (Krizsan et al., 2025)	Hungary and Poland	Policy and Society	Empirical: 53 interviews with think tanks	Starting point: De-democratisation and politicisation	Found: 1) Transfer of resources from critical to ideologically aligned think tanks 2) Critical think tanks are attacked and undermined	N/A
7	Responding to crises in authoritarian environments: Russian think tanks between policy evaluation and state endorsement (Axyonova, 2024)	Russia	Review of Policy Research	Empirical: Content and discourse analysis of Russian think tanks	Starting point: De-democratisation and politicisation	Found: 1) Aligned think tanks discredit policy critiques of the government 2) Non-aligned think tanks geopoliticise policy problems	Found: 1) Aligned think tanks discredit policy critiques of the government 2) Non-aligned think tanks geopoliticise policy problems
10	Coming out of the liberal closet. Think tanks and de-democratization in Poland (Jezierska, 2022)	Poland	Democratization	Empirical: Interviews with think tanks	Starting point: De-democratisation and politicisation	Found: 1) non-aligned think tanks have been marginalised	Found: Some non-aligned think tanks have engaged in contentious tactics e.g. protests and petition-signing

ID	Document Title	Region	Source	Methods and framework	Relevance to RQ1	Relevance to RQ2	Relevance to RQ3
						2) aligned think tanks have blossomed	
11	Coping with a Closed and Politicized System: The Advisory Roles of Political Scientists in Hungary (Molnar, 2022)	Hungary	Springer -- book chapter	Empirical: Policy Advisory Systems applied to Hungary	Starting point: De-democratisation and politicisation	Found: 1) policy advice is increasingly externalised 2) policy advisory becomes more informal 3) closing of access points for liberal and female academics	N/A

Appendix C: Cluster 3 documents

Populism, Polarisation, and Contestation of Expertise

ID	Document Title	Region	Source	Methods and framework	Relevance to RQ1	Relevance to RQ2	Relevance to RQ3
5	Challenges to the Legitimacy of Scientific Policy Advice in Three Swiss Crises: Can Institutionalization Shield Against Politicization? (Schlaufer et al., 2025)	Switzerland	Policy Studies Journal	Empirical: Policy Advisory Systems applied to three Swiss crises, utilising interviews and content analysis	Starting point: Political crisis, politicisation, and increasing populism	Found: 1) Legitimacy challenged at the institutional rather than epistemic level 2) Increased demand AND contestation of science advice	N/A
6	Do Populists Listen to Expertise? A Five-Country Study of Authority, Arguments, and Expert Sources (Peresman et al., 2025)	United States, United Kingdom, Netherlands, Denmark, and the Czech Republic		Empirical: Statistical analysis of large surveys across 5 countries	Starting point: Increasing populism	Found: 1) populist voters are more likely to consider policy advice as poorly reasoned or politically biased 2) no statistical difference between populist and non-populist voters based on argument robustness	N/A
8	The Honest Broker versus the Epistocrat: Attenuating Distrust in Science by Disentangling Science from Politics	Germany	Political Communication	Empirical: Used STS to analyse three public policy	Starting point: Increasing political polarisation	N/A	Found: 1) honest broker communicates uncertainties and limits and can attenuate distrust

ID	Document Title	Region	Source	Methods and framework	Relevance to RQ1	Relevance to RQ2	Relevance to RQ3
	(Post and Bienzeisler, 2024)			dispute case studies			2) the impact on limiting distrust is highest with those whose policy preferences are most challenged by the policy advice Suggested: honest broker may increase trust but decrease policy efficacy (e.g. vaccine acceptance)
14	Understanding our political nature	EU	Publications Office of the European Union	Evidence reviews across multiple disciplines	Starting point: increasing populism AND rise in misinformation and politically motivated dis-information	Found: misinformation's impact is amplified by ideologically motivated reasoning	Suggested: 1) opening up evidence to public scrutiny 2) deliberative democracy as a means to counter populism / illiberalism 3) knowledge brokers to enhance trust in science institutions/government 4) policy advice needs to strike a balance between 'facts' and 'values'
15	Values and identities: a policymaker's guide	EU	Publications Office of the European Union	Evidence reviews across multiple disciplines	Starting point: 1) issue / ideological:	Found:	N/A

ID	Document Title	Region	Source	Methods and framework	Relevance to RQ1	Relevance to RQ2	Relevance to RQ3
					polarised attitudes to policy decisions 2) affective / social: increasing dislike for others	1) partisanship creates in-group biases 2) affective polarisation makes voters want to win/beat their 'other'	
16	Making Sense of Science for Policy Under Conditions of Complexity and Uncertainty	EU	SAPEA	Evidence reviews across multiple disciplines	Starting point: Increasing populism	Found: science will (and should) be scrutinised	Suggested: science advice should inform rather than prescribe
17	Scientific advice to European policy in a complex world	EU	Publications Office of the European Union	Evidence reviews across multiple disciplines	Starting point: Increasing populism	N/A	Suggested: Clarify boundaries between science, scientific advice, and politics

Appendix D: Full Charting Table

ID	Document Title	Region	Source	Methods and framework	Relevance to RQ1	Relevance to RQ2	Relevance to RQ3
1	Change is inevitable, quality is optional, and context matters: dynamics influencing the development of an optimal policy advisory system	N/A	Policy and Society	Conceptual: Developing Craft and Howlett's model of Policy Advisory Systems	Starting point: increasing politicisation and externalisation in Westminster jurisdictions	Highlights: 1) trusted advisers are endowed with political authority. 2) advice rapidly breaks down when trust disintegrates 3) ministers can strategically use consultants to reduce accountability	Suggests: 1) Relational compatibility between advisor and advisees 2) Regulating consultants and lobbying
2	The divide in the EU green taxonomy: how conflict impacts the quality of policy advisory systems	EU	Policy and Society	Empirical: Applies a Policy Advisory Systems framework to an EU green taxonomy case	Starting point: increasing politicisation	N/A	Found: environmental advocacy groups and industrial lobbyists critiqued and resisted the advisory process
3	Making expert advice public in a time of emergency: Independent SAGE and the contestation of	UK	Social Studies of Science	Empirical: Used STS and qualitative interviews to	Starting point: Political crisis	N/A	Found: 1) Making science and expert advice in public

ID	Document Title	Region	Source	Methods and framework	Relevance to RQ1	Relevance to RQ2	Relevance to RQ3
	science during the Covid pandemic in the UK			analyse Indie Sage			2) Calling out the government's approach to advice listening

3) Producing a translation model of science where evidence and policy recommendations are co-produced |
| 4 | Policy knowledge production in de-democratizing contexts | Hungary and Poland | Policy and Society | Empirical:

53 interviews with think tanks | Starting point:

De-democratisation and politicisation | Found:

1) Transfer of resources from critical to ideologically aligned think tanks

2) Critical think tanks are attacked and undermined | N/A |
| 5 | Challenges to the Legitimacy of Scientific Policy Advice in Three Swiss Crises: Can Institutionalization Shield Against Politicization? | Switzerland | Policy Studies Journal | Empirical:

Policy Advisory Systems applied to three Swiss crises, utilising interviews and content analysis | Starting point:

Political crisis and increasing populism | Found:
1) Legitimacy challenged at the institutional rather than epistemic level

2) Increased demand AND contestation of science advice | N/A |

ID	Document Title	Region	Source	Methods and framework	Relevance to RQ1	Relevance to RQ2	Relevance to RQ3
6	Do Populists Listen to Expertise? A Five-Country Study of Authority, Arguments, and Expert Sources	United States, United Kingdom, Netherlands, Denmark, and the Czech Republic		Empirical: Statistical analysis of large surveys across 5 countries	Starting point: Increasing populism	Found: 1) populist voters are more likely to consider policy advice as poorly reasoned or politically biased 2) no statistical difference between populist and non-populist voters based on argument robustness	N/A
7	Responding to crises in authoritarian environments: Russian think tanks between policy evaluation and state endorsement	Russia	Review of Policy Research	Empirical: Content and discourse analysis of Russian think tanks	Starting point: De-democratisation and politicisation	Found: 1) Aligned think tanks discredit policy critiques of the government 2) Non-aligned think tanks geopoliticise policy problems	N/A
8	The Honest Broker versus the Epistocrat: Attenuating Distrust in Science by Disentangling Science from Politics	Germany	Political Communication	Empirical: Used STS to analyse three public policy dispute case studies	Starting point: Increasing political polarisation	N/A	Found: 1) honest broker communicates uncertainties and limits and can attenuate distrust 2) the impact on limiting

ID	Document Title	Region	Source	Methods and framework	Relevance to RQ1	Relevance to RQ2	Relevance to RQ3
							distrust is highest with those whose policy preferences are most challenged by the policy advice Suggested: honest broker may increase trust but decrease policy efficacy (e.g. vaccine acceptance)
9	'Best advice available' - Challenge and change in developing an optimal policy advisory system in Ireland	Ireland	Administration	Empirical: Applies a Policy Advisory Systems framework to Ireland's governance, drawing on expert interviews	Starting point: increasing politicisation	N/A	Suggested: 1) stronger leadership culture in the civil service to defend policy advice 2) more transparency on lobbying process at policy worker level
10	Coming out of the liberal closet. Think tanks and de-democratization in Poland	Poland	Democratization	Empirical: Interviews with think tanks	Starting point: De-democratisation and politicisation	Found: 1) non-aligned think tanks have been marginalised 2) aligned think tanks have blossomed	Found: Some non-aligned think tanks have engaged in contentious tactics e.g. protests and petition-signing

ID	Document Title	Region	Source	Methods and framework	Relevance to RQ1	Relevance to RQ2	Relevance to RQ3
11	Coping with a Closed and Politicized System: The Advisory Roles of Political Scientists in Hungary	Hungary	Springer -- book chapter	Empirical: Policy Advisory Systems applied to Hungary	Starting point: De-democratisation and politicisation	Found: 1) policy advice is increasingly externalised 2) policy advisory becomes more informal 3) closing of access points for liberal and female academics	N/A
12	Externalization and politicization in policy advisory systems: a case study of contestable policy-making 2010–2015	UK	Public Money and Management	Empirical: Policy Advisory Systems applied to UK	Starting point: increasing politicisation and externalisation in Westminster jurisdictions	Found: 1) Policy has become more fragmented, with policymaking and implementation diverging 2) proliferation of policy entrepreneurs that is difficult to manage or steer 3) civil servants become managers of policy advice rather than policy advisors/makers	N/A

ID	Document Title	Region	Source	Methods and framework	Relevance to RQ1	Relevance to RQ2	Relevance to RQ3
						4) ministers have weakened their ability to achieve political objectives	
13	Does politics crowd out professional competence? The organisation of ministerial advice in Denmark and Sweden	Denmark and Sweden	West European Politics	Empirical: A Most Similar Systems Design comparison of Denmark and Sweden	Starting point: increasing politicisation in Sweden; lower politicisation in Denmark	Found: 1) increase in politically appointees decreases functional politicisation of permanent civil servants 2) increased politicisation results in more criticism by civil servants but less political responsiveness	N/A
14	Understanding our political nature	EU	Publications Office of the European Union	Evidence reviews across multiple disciplines	Starting point: increasing populism AND rise in misinformation and politically motivated dis-information	Found: misinformation's impact is amplified by ideologically motivated reasoning	Suggested: 1) opening up evidence to public scrutiny 2) deliberative democracy as a means to counter populism / illiberalism 3) knowledge brokers to enhance trust in science

ID	Document Title	Region	Source	Methods and framework	Relevance to RQ1	Relevance to RQ2	Relevance to RQ3
							institutions/government 4) policy advice needs to strike a balance between 'facts' and 'values'
15	Values and identities: a policymaker's guide	EU	Publications Office of the European Union	Evidence reviews across multiple disciplines	Starting point: 1) issue / ideological: polarised attitudes to policy decisions 2) affective / social: increasing dislike for others	Found: 1) partisanship creates in-group biases 2) affective polarisation makes voters want to win/beat their 'other'	N/A
16	Making Sense of Science for Policy Under Conditions of Complexity and Uncertainty	EU	SAPEA	Evidence reviews across multiple disciplines	Starting point: Increasing populism	Found: science will (and should) be scrutinised	Suggested: science advice should inform rather than prescribe
17	Scientific advice to European policy in a complex world	EU	Publications Office of the European Union	Evidence reviews across multiple disciplines	Starting point: Increasing populism	N/A	Suggested: Clarify boundaries between science, scientific advice, and politics