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Evidence-Based Policymaking and Spatial Planning. Factors of Evidence Utilization

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ABSTRACT

This paper investigates the role and usability of expert-generated evidence in democratic policymaking, with spatial planning as a case study. Drawing on the literature on evidence-based policymaking in political science and planning, and employing the CRELE and ACTA frameworks with a critical realist approach, the study analyses the attributes that enhance evidence consideration by decision-makers and their interplay with political rationales. The research is based on a survey of municipal policy-makers and interviews with regional legislators and stakeholders in Lombardy, Italy. The findings indicate that comprehensiveness and relevance are key determinants of evidence usability, alongside source credibility and the perceived legitimacy of the planning process. However, while timeliness proves significant in spatial policy rulemaking, its impact is less pronounced in local planning itself. Crucially, policy preferences, including electoral commitments and responsiveness to stakeholder interests, consistently influence how decision-makers evaluate evidence. Instead of viewing evidence, political reasoning, and interest-driven motivations as separate and competing forces, decision-makers integrate them in a pragmatic manner. Our analysis details the descriptive validity of the CRELE and ACTA frameworks in spatial planning, adding evidence for their strengthening. In particular, credibility and legitimacy emerge as interconnected rather than distinct dimensions, while electoral accountability appears as an independent driver influencing evidence utilization. These results confirm that frameworks gauging evidence usability should not overlook the political and contextual contingencies that shape decision-making. Future research should further investigate the balance between generalisable models and local variables that determine how evidence informs policy.

1 | Introduction: Evidence and Policy

This paper situates itself within the enduring debate on the tenets governing decision-making in democratic policymaking, which should ideally reconcile objective and reliable evidence, political values and principles, and private, sectoral, or public interests. In institutional policy documents, evidence essentially refers to available empirical information on "facts, signs or objects" that can be "used to prove whether something is true or not" (European Parliament 2021, 1).

In the study of the politics of policymaking, there are contrasting views on the functions and cogency of evidence-based policymaking (EBP). Supporters maintain that policies derived from expert-produced information are more legitimate as they are grounded in factual data and their interpretation (Juntti et al. 2009; Parkhurst 2017; Bandera et al. 2024). Besides input legitimacy, EBP is also seen to enhance institutional legitimacy by potentially yielding better results, thereby augmenting the output-oriented legitimacy of policies (Widmer 2009). Alternatively, more disenchanted approaches conceptualize evidence by foregrounding its political dimension and view EBP aimed at improving policy designs and outcomes as naïve and overly optimistic (Head 2010), or as a modern iteration of the rational model of policymaking (Cairney 2016). Theoretically, post-positivism suggests that evidence is seldom

uncontroversial and conclusive, as it is always subject to scientific debate and interpretation (Popper 1959; Majone 1989; Faludi and Waterhout 2006), while constructivism posits that science itself is shaped by social and subjective understandings (Haas 2004). Less radically, one mainstream argument in policy studies is that preferences and needs, which are at the base of public policy, are developed through public "probing" and inquiry rather than irrefutable scientific investigation and knowledge (Lindblom 1990).

Our research is grounded in a more moderate perspective, namely a critical realist approach, assuming that factual truth is not always seized by scientific inquiry while rejecting relativist stances that postulate the socially constructed character of scientific practice and, hence, of the evidence informed by it (Pawson and Tilley 1997; McEvoy and Richards 2003). This approach seems suitable for investigating the relationship between politics and policymaking since, in both fields, facts and concepts are "essentially contested," i.e., they are subject to diverse and even conflicting interpretations (Gallie 1955). In fact, policy agents are typically interested not only in expert-produced information itself but also in ideas and arguments (Majone 1989; Radaelli 1995; Rincón 2021), supported by data, that can be deployed to both address policy problems and strategically position themselves relative to other actors. Thus, the use of evidence is a political process (Cairney 2016) rather than a linear translation of science-generated knowledge into policy choices. To summarize, evidence is neither sheer data nor unquestionable findings from scientific inquiry since science "cannot always provide easily-reducible and usable answers" to apprehend or "resolve problems" (Tangney 2017, 149). Instead, it is understood as policy-relevant information functional for specific purposes (Majone 1989; Davoudi 2006; Juntti et al. 2009; Cairney 2016).

This work aims to identify factors that either support or undermine the relevance of evidence in environmental policymaking. We do not attempt to assess the validity of the EBP paradigm. Instead, we focus on only one yet crucial aspect: the usability of evidence. To this end, we examine a policy area where evidence is essential: spatial planning. Our primary concern is not on the outcomes or impacts of evidence use, but rather how decision-makers perceive its relevance, compared to other factors, in the process of policy formation.

The examination of this particular topic within spatial policy research is largely undocumented. Qualitative analysis has been suggested as a way to shed light on "the processes that characterize the 'black boxes' of local practices" (Berisha et al. 2024, 564), which ultimately shape how policymakers make choices on land use and development. The connection between the systemic drivers of land policy and the immediate reasons behind specific choices is referred to as a "black box":

> because it cannot be studied at the macro-level: these decisions are taken in a very localized context according to specific (in)formal rules of the game and interactions by a particular constellation of stakeholders (Evers et al. 2024, 123–124).

Recent contributions in domains where evidence use has been extensively studied, including environmental management and health policy, point to the challenges of applying evidence hierarchies in complex socio-spatial contexts. Scholars argue that while robust frameworks exist to classify the reliability of evidence (Littell and White 2018; Higgins et al. 2022), their implementation in planning decisions is often hindered by institutional constraints, competing priorities, and a lack of professional capacity (Kafkalas and Pitsiava 2023). Studies on urban green space accessibility further show how cultural factors, safety perceptions, and informal social norms shape the use of evidence and the formulation of spatial policies (Beunen et al. 2017; Saurman 2016; Wendel et al. 2012). These findings underscore the importance of considering evidence not as a neutral input, but as something filtered through political, relational, and institutional dynamics (Cairney and Oliver 2017; Oliver and Boaz 2019).

This work seeks to tackle the lack of theorization of spatial policy decisions by focusing on one of its fundamental dimensions, namely the rationale of decision-makers. It aims to determine which factors encourage the use of evidence in planning decisions, as opposed to political goals and interest demands. To this purpose, drawing from environmental science, the study employs the frameworks of CRELE (Cash et al. 2002; Sarkki et al. 2014)—i.e., credibility, relevance, and legitimacy—and ACTA (Dunn and Laing 2017)—i.e., applicability, comprehensiveness, timing, and accessibility—which, after gaining momentum in the 2000s and 2010s, have seen increased use in environmental research (Greenhalgh et al. 2022) and in planning studies (Decoville and Feltgen 2025). Though not directly using the scientific evidence for which these approaches were developed, we adapt them to the evidence gathered and disseminated by planning technicians and experts. Our analysis particularly considers data and information prepared by Strategic Environmental Assessment (SEA) practitioners, which is conveyed to policymakers who may use it to evaluate draft plans, as well as planning documents themselves, developed by professional planners, rather than the process of creating them, in which local assemblymen and women are seldom involved. Statutorily, they do not participate in SEA exercises.

Our research questions are both descriptive and exploratory. In spatial planning, is it possible to highlight the presence and applicability of the factors deemed relevant to the use of evidence in policymaking, as established in the existing literature? Which is the prevailing type of rationality that governs public choices in this field? What is its influence on actual choices? Consequently, are the CRELE and ACTA frameworks adequately strong to define the attributes that evidence should possess to be considered in the judgment of planning policy options by decision-makers?

The analysis is based on a survey of municipal decision-makers and interviews with regional lawmakers and stakeholders in Lombardy, Italy's largest region. Its government has competence in spatial planning, the policy area examined by this analysis. While this is a specific policy field, it nonetheless has significant importance. This is a vital domain of sub-national policymaking. In democratic states, local land-use planning is a widespread task of local authorities (Ladner et al. 2016; OECD 2017). Approving local and meso-level plans is also a

typical competence of regions with legislative powers, decentralized regional governments, and regions with other kinds of governance structures (OECD 2022). Italy is a case in point, given that planning is a municipal competence under national and regional legislation, yet the actual choices are left to regional and local policymakers, since the central government does not prepare plans or planning strategies. Hence, grasping the mechanisms of evidence use here, where the policymakers we have surveyed are the protagonists, might offer hints for investigating other policy sectors in different governance systems.

In fact, the study aims to contribute to a better understanding of the motivations and challenges surrounding the use of technical evidence in policy decisions. The work can also provide empirical insights into the importance of the dimensions emphasized by the CRELE and ACTA frameworks and, hence, into the strengths and weaknesses of these models.

The paper is structured as follows. Section 2 reviews the literature on the factors influencing the use of evidence in policymaking, focusing specifically on spatial planning. Section 3 outlines the methodological design, detailing the data sources, analytical dimensions, and limitations of the study.

Section 4 presents the findings, examining the reasoning behind decision-making, the interplay between evidence characteristics and political considerations, and the role of evidence in regional spatial policymaking. Section 5 discusses the implications of these findings, particularly in relation to existing theoretical frameworks. Finally, Section 6 concludes the paper by reflecting on the broader significance of the results and outlining potential paths for future research.

2 | Literature Review: Factors Affecting the Use of Evidence

In recent decades, a substantial body of literature has burgeoned on EBP (Cairney 2016; Parkhurst 2017) branching out into evidence-based planning (Faludi and Waterhout 2006), especially thanks to analytic techniques (such as georeferencing and spatial optimization) and the accessibility of big data and open data (Cao et al. 2020; Boeing et al. 2022). Governments have adopted EBP as a guiding framework (UK Government, Department for Business, Innovation and Skills 2010), while international organizations issued guidelines (OECD 2015; European Parliament 2021), especially in situations where financial constraints necessitated policy evaluation for value for money. Furthermore, interest in evidence-based policy surged during the Covid-19 pandemic (OECD 2020; Christensen and Lægreid 2022).

Despite its presence, EBP has faced considerable scrutiny and critique within existing literature. Numerous shortcomings have been identified on both theoretical and empirical grounds (March 1994; Clarence 2002; Davoudi 2006; Faludi and Waterhout 2006; Krizek et al. 2009; Head 2010; Cairney 2016; Parkhurst 2017; Rincón 2021; Langer and Weyrauch 2021). Politicians exhibit diverse preferences regarding information sources and varying degrees of confidence in science. Consistent with Herbert Simon's concept of "bounded rationality," policymakers often operate with limited means and unclear objectives that available evidence can hardly address. Moreover, readily accessible, conclusive, unambiguous, and uncontested evidence remains scarce on many issues. Evidence is furthermore susceptible to misinterpretation and neglect. A common misconnect exists between available knowledge and the needs of policymakers. Evidence-informed initiatives do not automatically lead to better socioeconomic outcomes. Finally, many evidence-gathering and evidence-generating endeavors demonstrate limited cost-effectiveness.

Consequently, few contemporary analysts endorse such a perspective, often characterized as excessively rationalistic (Head 2010). Critics of EBP condemn it as technocratic (Clarence 2002) or "post-political" decision-making (Wilson and Swyngedouw 2014), which elevates science above the characteristics of policy arenas, namely, the interplay of competing interests, contestation of divisive political values, and contrasting ultimate objectives. However, the politicization of spatial policy remains a debated subject (Shepherd et al. 2020). We concur with Cairney (2016) in positing that most politicians exhibit bounded rationality, given their limited expertise in planning. Furthermore, as Stringer and Dougill (2013) point out, "in relation to land management, there is often a lack of policy relevance in academic research", and scientists are reluctant to create "networks" or "opportunities for timely engagement" with policymakers, nor do they "frame evidence in terms" of the latter's objectives (Cairney 2016, 89).

While it would be pretentious to try to validate the EBP paradigm, the significance of evidence as an informative basis for policy decisions cannot be understated (Evers et al. 2024, vii, ch. 5). At times, decision-makers use technical or even scientific knowledge to make choices, implement decisions, develop standard operating procedures, learn, justify decisions, evaluate policies, find, and define problems.

Scholars explain the concept of evidence utilization in various ways (Radaelli 1995). Weiss (1979) identifies different scenarios where information produced by scientific research is requested—and received—by decision-makers following the use they have in mind: in some situations, specific actions are taken based on evidence (instrumental use); in others, there is a more diffuse and indirect form of utilization (conceptual use). Similarly, Hertin et al. (2009) summarize three main purposes. Conceptual learning occurs when science enlightens policymakers by slowly feeding new information, ideas, and perspectives into the policy system, challenging existing beliefs and opening up new opportunities for policy change. Instrumental learning takes place when scientific research directly informs concrete decisions by providing specific information on the design of policies; for instance, "by expanding alternatives" (McNie 2007, 20). Finally, the political or "symbolic" (Langer and Weyrauch 2021) use of evidence is when it is used to achieve political objectives, like justifying decisions already taken, disarming opponents, or delaying a decision.

This also highlights the importance of distinguishing between the usefulness and usability of evidence. In this study, we define usefulness as the value a knowledge system or model offers in addressing specific policy goals, whereas usability refers

to the extent to which that system can be effectively accessed, understood, and applied by decision-makers in real contexts (Serrao-Neumann et al. 2020). Even highly useful evidence may be underutilized if it is not user-friendly, timely, or aligned with institutional routines and stakeholder expectations (Cradock-Henry and Frame 2021). This conceptual distinction has been widely recognized, from early works on policy-relevant knowledge (Weiss and Bucuvalas 1980) to more recent frameworks that emphasize both dimensions as conditions for evidence uptake (Cash et al. 2002; Mukherjee et al. 2021; Tang and Dessai 2012). Moreover, political dynamics often influence both perceived usefulness and actual usability, adding further complexity to the integration of knowledge into policymaking processes (Dunn and Laing 2017; Kano and Hayashi 2021).

Whatever the purposes of the use of evidence, the overarching analytical question remains what favors it being sought and received, processed, and employed. Fruitful insights are provided by the literature on science-policy interfaces (Heink et al. 2015) with the aim to "improve the quality of the dialogue between scientists and policymakers" (Decoville and Feltgen 2025, 5). This has produced a considerable amount of research, mainly based on qualitative assessments through interviews and surveys of policymakers. Two frameworks stand out: CRELE and ACTA.

The former highlights three main enablers of evidence use in policy decisions: credibility, relevance, and legitimacy. Credibility "refers to the perception that the information is scientifically adequate and the sources are authoritative and trustworthy" (Dunn and Laing 2017, 147). In turn, the credibility of evidence-generating research is due to its "technical quality" (Dunn 2018, 393) and to the degree of trust that policymakers place in experts (McNie 2007; OECD 2020; Goldman and Pabari 2021; Greenhalgh et al. 2022; Gardiner et al. 2025). The relevance of evidence for crafting policy solutions is also regarded as a significant factor in facilitating its actual use (Fernández 2016; Goldman and Pabari 2021; Haselswerdt and Rigby 2021; Langer and Weyrauch 2021). It refers to its "usability" which implies that it matches the pending "policy and societal needs" (Sarkki et al. 2015, 507) and conforms to users' expectations and needs, "particularly in terms of geographic and scalar context and timeliness" (Dunn and Laing 2017, 147). Thus, to be perceived as salient, evidence "must be context-sensitive" (McNie 2007, 19). As underlined above, evidence is searched and mobilized by actors, especially if it addresses existing salient policy concerns (Cash et al. 2002) and it is deemed appropriate and suitable to meet, if not serve, their goals in a given policy context (Goldman and Pabari 2021; Langer and Weyrauch 2021). Therefore, to be used for policy purposes, evidence must have some degree of political suitability and "appropriateness" for the policy context in which it could be applied (Parkhurst 2017). For example, when it matches the electoral and policy program of politicians, it enables them "to achieve their desired outcomes" by providing "answers" to problems (McNie 2007, 20, 24) and solid bases for action. Finally, the legitimacy of evidence does not equate to its impartiality (McNie 2007; Haselswerdt and Rigby 2021), but to "the (perceived) fairness and balance" of the process of its production (Sarkki et al. 2015, 507). Legitimacy thereby refers "to the information development process, which should be unbiased and respectful of divergent stakeholder beliefs and values" (Dunn and Laing 2017, 147), emerging from transparent and "balanced participation, and broad and fair treatment of diverging values, concerns and beliefs of various stakeholders and knowledge holders" (Sarkki et al. 2015, 507). In other words, legitimacy requires evidence production to be "neutral," i.e., free from the influence of non-scientific and political interests (Juntti et al. 2009).

The ACTA framework sustains that "applicability, comprehensiveness, timing and accessibility" are "the most important aspects of scientific research when it comes to influencing decision-making" (Dunn and Laing 2017, 146). Accessibility concerns the actual availability of scientific sources (online resources, libraries, open data, etc.). Applicability refers to evidence usability (Krizek et al. 2009; Greenhalgh et al. 2022). Comprehensiveness and timing have to do with decision-makers' requirements for broad "interdisciplinary perspectives of issues (rather than narrow and highly-specialised)" and for timely solutions (Dunn and Laing 2017, 149).

Clearly, these models are ideal types. At the epistemological level, they have been criticized for being ambiguous about their ultimate purpose, since they conflate descriptive, as well as evaluative and prescriptive abilities (Tangney 2017). At the conceptual level, it could be argued that the attributes they emphasize show "potential trade-offs and synergies" (Sarkki et al. 2014, 195) or, more critically, overlap. This concerns credibility and legitimacy, which especially appear difficult to distinguish (Heink et al. 2015), as well as relevance and applicability. At the empirical level, these models exhibit weaknesses in operationalisation, since it is acknowledged that "threshold levels for each attribute" of evidence "vary from issue to issue" and depend "upon the perceptions of the various actors involved" (Dunn and Laing 2017, 147). Furthermore, while such variables may be significant in ordinary decision-making processes, emergency situations, which necessitate swift governmental action, preclude the commissioning of in-depth research (Fernández 2016) or the analysis of extensive evidence. Incremental and garbage-can models of decision-making have sufficiently underlined the shortcomings of a comprehensive synoptic analysis of all available options.

Nevertheless, we consider these frameworks as valuable attempts to systematize the features of evidence in decision-making contexts. At a minimum, they can be replicated for descriptive purposes, as a necessary preliminary step for their interpretive use, in highlighting the attributes of evidence that make it worth considering in decision-makers' eyes. We also acknowledge that, ultimately, the attributes of evidence must be weighed against the interests and objectives of actors (Lindblom 1959), alongside the uncertainties, constraints, and technical procedures characteristic of actual policymaking, as the above-mentioned literature itself acknowledges. In brief, knowledge attributes are not absolute and context-free. They are actor-dependent, as across stakeholders there exists "a range of different perceptions of what makes information salient, credible and legitimate" (Cash et al. 2002, 10). Indeed, scholarly work identifies numerous variables that can negatively impact the use of evidence in policy, these being related to features of the political and human (decision-makers') context, as well as the nature of evidence itself and the policy problems under consideration.

First, politics overshadows the impact of evidence (Weiss 1979; Juntti et al. 2009; Haselswerdt and Rigby 2021; Gardiner et al. 2025). Decision-makers' mindsets and influences from vested interests can induce a selective cherry-picking of data and theory to support preferred options, a search for easy solutions, or the justification of already made decisions. As stated above, evidence can be used to strategically or symbolically legitimize policy solutions shaped by politics-related purposes.

Second, poor technical literacy of decision-makers to use evidence effectively can hinder it significantly (Head 2010; Greenhalgh et al. 2022).

Third, in their quest for information and evidence, policymakers can either turn to professional expertise and scientific research, or local and personal experience (Krizek et al. 2009; Head 2010), seeking out the "deep knowledge…of place-based specificities embodied in municipal bureaucrats" (Shelton et al. 2015, 17), residents, and stakeholders, all of whom possess tacit policy-relevant knowledge (Raymond et al. 2010; Fernández 2016). Alternatively, all such kinds of sources may be equally valued, and hybrid forms of knowledge might emerge from integrating technical information with lay inquiry (Lindblom 1990) and experiential information, each characterized by distinct methods, approaches, paradigms, and sources. This consideration is prevalent in planning science (Faludi and Waterhout 2006), given that policy decisions are inherently linked to spatially defined relationships, needs, opportunities, and the expectations and demands of local communities. Krizek et al. (2009) and Lord and Hincks (2010) identify potential evidence sources for planning: anecdotes and personal experience; empirical knowledge held by stakeholders and neighboring authorities; interdepartmental governmental collaboration; professional experience; focused case studies and precedents; peer-reviewed empirical studies and theoretical analyses (formal research); systematic reviews of existing evidence from research institutions and policy agencies; and community consultation. Participatory processes involving users, stakeholders, interests, and citizens are, in fact, widespread in urban planning.

Fourth, highly complex policy problems, especially if large-scale and wicked, may necessitate a significantly greater volume of evidence, theoretical frameworks, and, consequently, time than is typically feasible (Gardiner et al. 2025).

3 | Methodology

Building upon this foundation, we aim to detect strengths and limitations of evidence-based planning, i.e., how relevant technical information is perceived to be, as compared to political interests and objectives, in spatial policy decisions. To this purpose, we will investigate the descriptive and exploratory research questions outlined in the introduction. The indicators employed are presented in Section 3.2.

We propose a study design that aligns with a critical realist research approach, recognizing the significance of human experiences and perceptions (Fryer 2022). This perspective postulates that qualitative and quantitative data analysis can enhance one another by exploring a phenomenon from different angles and mapping its varied aspects (McEvoy and Richards 2003). Therefore, we followed a pragmatic mixed methods design by integrating contextual insights gained from interviews at the regional level with bivariate analyses of data collected through a survey of municipal councilors. The quantitative and qualitative data were gathered and then examined independently, followed by an assessment of findings to control whether both sets of evidence aligned or opposed (Paulson and Büchs 2022).

3.1 | Data and Analytical Dimensions

The study employed purposive sampling to interview policy actors, selecting those with the most relevant expertise to provide insights into the regional planning and law-making processes related to spatial policy. This involved interviewing four representatives from stakeholder organizations in the building industry (the director of the regional trade association) and environmental organizations (the WWF, the federation of natural areas and parks, and the Italian National Trust), as well as eight Lombardy regional councilors serving on the planning committee of the regional assembly. Since information gathered from interviews can be subjective or politically biased, we selected lawmakers representing majority (3 interviewees) and minority parties (5) and both genders (4 interviewees each), in order to highlight as much diversity in viewpoints as possible. Interviews were conducted in May and June 2024 following a standard questionnaire, displayed in Appendix S2, with questions aimed at assessing participants' opinions on how expert-created information is collected and shared. Specifically for politicians, additional questions explored the characteristics of information to be trusted and used in spatial planning policymaking. This was compared to political considerations, for example, requests and expectations of the territories or stakeholders, along with their knowledge and expertise. Triangulation of interview data with secondary sources was not possible because of the absence of academic or non-scientific investigations on this subject in the case study.

The questionnaire relating to local councilor opinions targeted executive and assembly members of Lombardy municipalities that either adopted a new town plan or revised the existing master plan within the past 5 years. In Lombardy, the urban plan is statutorily composed of three components. First, a strategic master plan establishes demographic and land-use forecasts, the urban limit, and new development areas beyond this boundary, which may be transformed from farmland or greenfield. This plan is subject to a mandatory Strategic Environmental Assessment (SEA) and must be modified or renewed every 5 years. Second, a public service plan delineates the location and purposes of all publicly owned infrastructure and assets (such as parks, roads, schools, etc.) as well as privately owned areas and facilities designated for public use, including private schools and hospitals. Third, a zoning plan, whose provisions are mandatory, specifies the permitted uses and building parameters for all land parcels within the municipality.

TABLE 1 | Preferred decision-making rationality—Question 1: What is important for spatial planning decisions?

	Evidence-based	Politics-based	Interest-based	Problem-solving
Input-oriented	1. to be based on an objective analysis of the situation	to be consistent with the electoral programme presented to citizens	1. to be consistent with stakeholders' requests;	1. to be consistent with citizens' requests
Output-oriented	2. to be made at the right time		2. to balance advantages for private actors and for the community	
Outcome-oriented				2. to produce concrete results; 3. to solve the main problems of the municipal territory

While the survey comprised multiple sections, this paper presents only a subset of questions relevant to the research focus. Other surveyed items concerned the knowledge and opinions on land take and urban regeneration, with specific reference to the regional legislation and local plans. The survey was built and administered through Qualtrics.XM. The questionnaire was pilot-tested with four mayors and councilors to ensure clarity and comprehension of the questions. The survey was active from 14 February to 3 April 2024, spanning a period of 7 weeks. Questions that are relevant for the present study, with the respective labels used in the next section, are illustrated in Appendix S1. They were administered to respondents who gave a positive answer to the query: "In your current term, have you ever voted for a new urban plan or a general variation of the existing plan?"

The quantitative data were analyzed using descriptive statistics and bivariate analysis. To explore the relationship between respondents' decision-making rationales and their evaluation of evidence-related or political factors, we conducted mean comparison tests (independent-sample *t*-tests). Correlation matrices (Pearson's *r*) were also calculated to assess the internal consistency and interconnections between items grouped under the dimensions of credibility, legitimacy, and political influence. All statistical analyses were performed using Qualtrics' built-in analytics. Given the non-representative nature of the sample, the analysis is exploratory and aims to identify plausible patterns rather than establish generalisable findings.

To determine whether policy-makers prioritized EBP or instead held exclusively political decision-making attitudes, the first section included questions designed to elicit local officials' general attitudes towards planning policy. Therefore, administrators were asked to clarify the purpose of planning decisions by selecting up to three of the characteristics from Table 1. This represents different rationalities and provides a framework for their classification.

The second and third sections of the survey focus on the reasons for the use of technical information and data employed when voting on the town plan. At a conceptual level, the questions (responses on a 5-point Likert scale) indicate likely factors that the literature suggests may encourage the use of evidence or exogenous politics-related variables that may discourage its use.

The second set of questions elicits views on the social and environmental evidence gathered as the outcome of the SEA, which is a legal requirement to which urban masterplans are subject and is carried out by independent practitioners.

The third section, focusing on officers' voting choices regarding the complete urban plan, explores the crucial preconditions for evidence utilization. This evidence is presented to decision-makers in both SEA reports and the urban plan drafts submitted for voting considerations. They concern: the perceived credibility of the plan proposals (gauged through trust in planners and assessments of the plan by authorities); the legitimacy of the plan based on external judgments; its perceived comprehensiveness; local knowledge (as expressed in residents' and stakeholders' opinions), and political considerations.

Similarly, in question 4 we asked respondents to rate the degree to which these factors were present in the overall voting attitude of the municipal assembly. Some entries were included in either question 3 or 4 only, as they were deemed unsuitable for the other one. It should be emphasized that the purpose of these questions was to measure the importance of various factors in the choices made by political decision-makers, rather than to determine the direction of their influence, which could manifest as either approval or rejection of the proposed urban plan.

3.2 | Limitations

This research design presents some shortcomings. The questionnaire data are not statistically representative of the universe, as 193 (with 157 valid responses) persons returned the questionnaire out of the maximum number of 4379 potential respondents. This limitation restricts the extent to which the data can be generalized. We assume that this response rate is not high because many assemblymen and assemblywomen, especially in smaller municipalities, do not possess an official email address. We sent our survey to these latter as well as all

private email addresses that we could gather from the municipalities' webpages. This amounted to 677 personal addresses. Where the latter were not available, we had to rely on the local authority's secretariat to forward our request to fill in the questionnaire. We suspect this was not always the case, despite sending reminders.

Table 2 shows the profile of respondents who completed the survey. Age and gender data only show marginal differences from the universe. Yet the self-selected sample under-represents officers from small municipalities and, conversely, over-represents those from large ones.

Furthermore, we did not explore all the dimensions of the CRELE and ACTA frameworks. We did not assess the relevance of the evidence, as the information provided by experts and practitioners for both the SEA and the plan itself is deemed pertinent. Superfluous or tangential information is typically excluded to avoid distracting lay politicians; perhaps most importantly, gathering such information consumes valuable time and resources, which are always limited in local public policy processes. Moreover, accessibility is not an issue, as all documents must be submitted to decision-makers prior to the official committee and assembly meetings where the plan's vote is scheduled. At the municipal level, statutes and assembly regulations empower councilors to access administrative services, gray documentation, and drafts prepared before council deliberations. Similarly, at the regional level, councilors possess the same authority and the financial resources to commission independent research, as several interviewees did.

4 | Findings

4.1 | Policy-Making Rationalities

Figure 1 illustrates respondents' preferred decision-making rationalities. Evidence-based and problem-solving rationalities are the most prevalent attitudes, along with a tendency towards politically balanced decisions, which is typically a major challenge in land use policy (Hengstermann et al. 2023). Conversely, the timeliness of the plans and their alignment with the interests of stakeholder groups appears to be the least important considerations.

To determine whether such attitudes influence voting considerations, we conducted a series of tests to measure the statistical significance of the differences in mean responses regarding the subjective components of the vote (question 3), with the null hypothesis stating that there is no difference in means. We obtained only a limited number of statistically significant results, which are presented in Table 3.

While we were unable to establish statistically significant connections between decision-making rationalities and the significance of most components influencing respondents' votes, a few reliable findings highlight the importance of evidence. Specifically, respondents with an EB approach to policymaking place greater value on SEA results (by external experts) compared to those without this approach. Additionally, respondents who prioritize aligning planning decisions with citizens' wishes are more inclined to value citizens' opinions during the voting process on the plan, compared to those who do not.

TABLE 2 | Profile of survey respondents and universe (%).

	Population of the municipality					
	< 5000	5000–50,000	> 50,000	Female	Under 35-year-old	*N*
Respondents	25.5	50.3	24.2	32.3	12.3	157
Universe	48.2	43.7	8.1	36.7	15.2	4379

Note: Data for the universe are drawn from the Interior Ministry dataset of regional and local elected officers available at https://dait.interno.gov.it/elezioni/open-data/amministratori-locali-e-regionali-in-carica (accessed May 31, 2024).

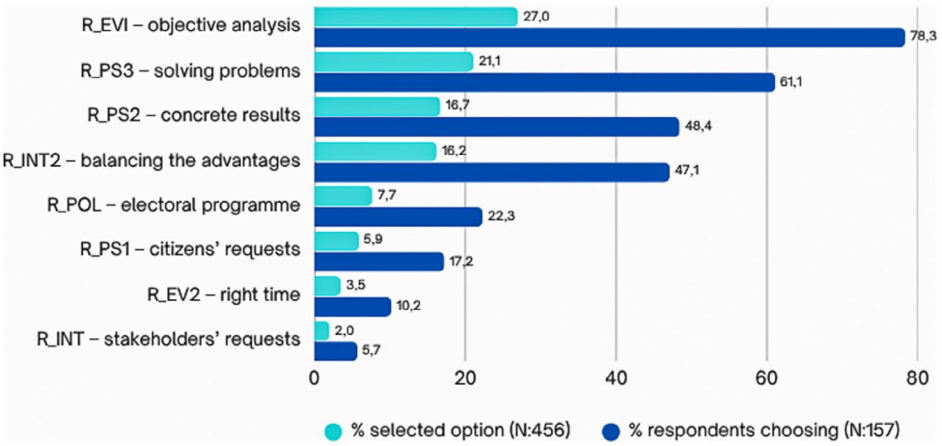

FIGURE 1 | How planning decisions should be shaped (question 1). The black bars represent the percentage of respondents who selected each option at least once, while the gray bars indicate the percentage of total selections made.

TABLE 3 | Results of statistical tests on subjective components in the vote.

Policy-making rationality	Factors in voting (question 3)			
	D_EV		*T*-test (Cohen's *d*)	*N*
	Mean	SD		
R_EV1 selected	3.18	0.97	0.625**	89
R_EV1 not selected	2.58	0.93		24
	D_POL5 (electoral programme)			
R_POL selected	3.65	0.75	0.386*	26
R_POL not selected.	3.28	1.04		94
	D_POL1 (citizens' opinions)			
R_PS1 selected	3.13	0.96	0.555*	16
R_PS1 not selected	2.56	1.04		102
	D_CO			
R_PS3 selected	3.52	0.98	0.361*	75
R_PS3 not selected	3.85	0.83		47

Note: Mean values on a scale from 1 (*completely disagrees*) to 5 (*completely agrees*).
*$p < 0.05$.
**$p = 0.01$.

Furthermore, respondents who believe that plans should align with the electoral programme of the winning party also find the coherence (or lack thereof) of the plan with their own party's manifesto more influential in shaping their vote preference, in contrast to those who do not prioritize this aspect. Overall, despite the sporadic nature of our findings, they demonstrate a coherent relationship between decision-making rationalities and the elements that decision-makers perceive as affecting their votes.

In terms of problem-solving, one result defied expectations: individuals who argued that planning decisions should address the main issues of their area rated the comprehensiveness of the plan lower when voting on it, compared to those who did not prioritize this concern.

4.2 | Evidence, Credibility, Legitimacy, Comprehensiveness, and Politics

We investigated the impact of evidence characteristics versus political influences on officeholders' decisions in two phases. First, we correlated (Table 4) the perception of the evidence-related factors in SEA documents with their influence on administrators' voting behavior regarding the plan (D_EV).

TABLE 4 | Correlation (Pearson's *r*) between perceived credibility, legitimacy, comprehensiveness, and timing of SEA documents and their relevance in voting choices. N: 106–107.

SEA attributes (Question 2)	D_EV (question 3)
SEA_CR	0.254**
SEA_LE	0.0141
SEA_CO1	0.248*
SEA_CO2	0.228*
SEA_TI	−0.0499

Note: Other values: $p > 0.05$.
*$p < 0.05$.
**$p < 0.01$.

Decision-makers demonstrated that higher credibility and comprehensiveness in the SEA documents significantly influenced their importance in voting decisions on the town plan. In contrast, timely environmental information appeared to have little impact, and the perceived legitimacy of the SEA was also deemed not important.

The subsequent phase was to examine the weight of different considerations in local officials' voting behavior regarding the urban plan (questions 3 and 4) (Figures 2 and 3).

The respondents' aggregate assessment of the perceived relevance of the measured items (Figure 2) shows little variance when compared to their views on their colleagues' behavior (Figure 3). Comprehensiveness (D_CO) and the credibility of planners (D_CR1) emerge as the most important elements. With respect to political drivers, respondents manifestly distinguish between those concerned with political identity, allegiance, and stances (D_POL5, 6, and 7), which are highly valued, and those stemming from external demands and pressures (D_POL1, 2, and 4). Corporate interests (D_POL3) and party politics (D_POL8, 9, and 10) rank among the least significant factors. The opinions of both internal (D_LE3) and external professionals (D_LE2) are widely valued, while those from people lacking technical expertise (D_LE1) are not. The credibility of plans assessed by governmental agencies is considered of average importance (D_CR4).

Most items in the credibility dimension, legitimacy elements, and many of the items related to politics are correlated, sometimes strongly, with the other variables in the same dimension (Tables 5 and 6). This indicates that municipal decision-makers perceive a sense of coherence among similar dimensions. This is not surprising, as it reflects an intuitive perception of coherence between institutional or sectoral actors with their roles. For instance, the strong connection between government agencies (local health agency, environmental protection agency) with regional government suggests perceived coherence among public actors and could indicate a collective trust in formal evaluation processes. However, it should not be assumed that these

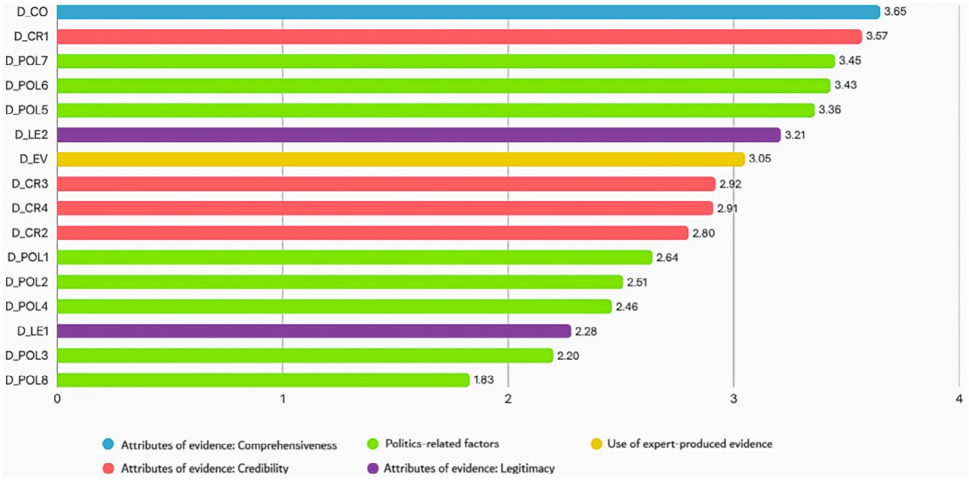

FIGURE 2 | Influence of factors in personal voting decisions (mean value on a scale of 1–5). (*N*: 119–123).

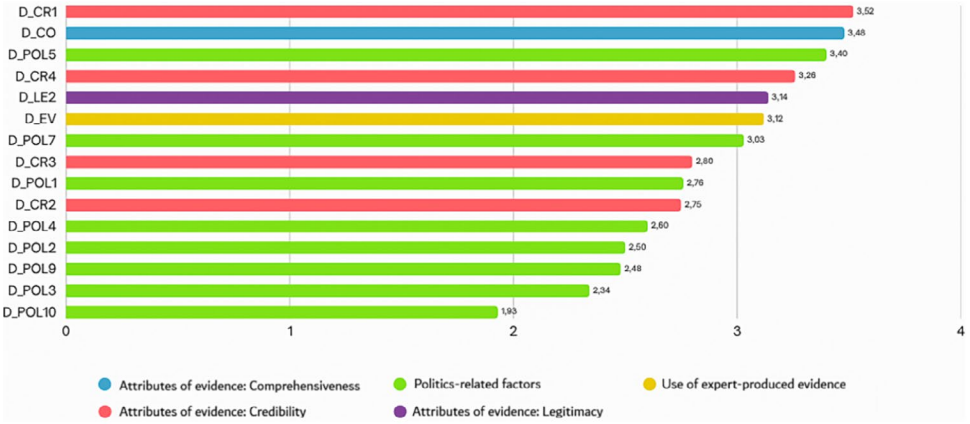

FIGURE 3 | Perceived factors influencing votes in the municipal assembly (*N*: 112–117).

interconnected circles of mutual validation among the analyzed factors necessarily indicate a robust perception of well-founded town plans.

Significant positive correlations exist between elements across different dimensions. First, environmental evidence from the SEA (D_EV) is related to comprehensiveness (D_CO). Credibility items are correlated with comprehensiveness as well as with the legitimacy conferred to the plan by both external professionals (D_LE2) and the municipality's technicians (D_LE3). This indicates that the opinions on the plan from agents both outside and inside the municipal institution are perceived as tightly connected. In contrast, only D_POL1, D_POL5-POL8, D_POL9, and D_POL10 show (weak to moderately strong) correlations with legitimacy variables. The independence from these political factors of most credibility aspects, as well as of D_LE2 and D_LE3, highlights the perceived autonomy of technical expertise from partisan politics. In contrast, D_POL2 and D_POL3 in Table 5, and D_POL4 in both Tables 5 and 6 show correlations with D_EV and credibility (excluding D_CR1). This again suggests that the judgments of SEA practitioners and external agencies are perceived by officeholders as aligned with the opinions of additional external actors, namely local stakeholders, all of which are considered independent from the less relevant political actors and processes (D_POL5 to 10).

4.3 | The Use of Evidence in the Regional Spatial Policy Process

The interviews with regional lawmakers provide interesting insights. First, three of the eight interviewees expressed that they find local knowledge, derived by professionals, local officers, and interest associations, equally or more trustworthy than expert knowledge. While the latter is acknowledged and always considered, it is also "mediated" and "reconciled" with local requests and needs. An opposition legislator asserts that local knowledge is even more reliable than scientific knowledge:

> we contacted a few academics, let's say for specific cases, occasionally on the spot. However, it is easier, so to speak, to maintain lasting relationships with those who know the subject very well because they have experienced it professionally, but they are not in academia.

On the other hand, credibility is the most frequently cited factor in the use of expert-produced evidence, and the extent to which lawmakers trust their information sources is considerably contingent on their reputation. For some lawmakers, the reliability of

TABLE 5 | Pairwise correlations between the significance of factors affecting personal votes on the urban plan (*N*: 108–121).

	D_CR1	D_CR2	D_CR3	D_CR4	D_LE1	D_LE2	D_LE3	D_CO	D_POL1	D_POL2	D_POL3	D_POL4	D_POL5	D_POL6	D_POL7	D_POL8
D_EV	0.398***	0.368***	0.465***	0.408***	0.196*	0.205*	0.163	0.408***	0.134	0.331***	0.349***	0.404***	0.0167	−0.00633	0.0252	0.0442
D_CR1		0.201*	0.182*	0.222*	0.193*	0.348***	0.503***	0.601***	0.0694	0.118	0.0741	0.0486	0.170*	0.0864	0.0776	0.00884
D_CR2			0.829***	0.731***	0.0735	0.331***	0.378***	0.176[a]	0.180	0.293*	0.380***	0.260**	0.0661	0.0559	0.0748	0.121
D_CR3				0.759***	0.0543	0.211*	0.335***	0.225*	0.169	0.310***	0.361***	0.352***	0.0862	0.0571	0.0826	0.0908
D_CR4					0.105	0.265**	0.353***	0.245**	0.243**	0.328***	0.378***	0.269**	0.0856	0.00307	−0.0501	0.0247
D_LE1						0.271**	0.0389	0.115	0.268**	0.221*	0.166	0.107	0.08	0.0166	0.0477	0.188*
D_LE2							0.343***	0.168	0.163	0.154	0.117	0.117	0.296**	0.192*	0.198*	−0.00408
D_LE3								0.364***	0.102	0.217*	0.163	0.0814	0.183*	0.0935	0.0575	0.133
D_CO									0.0618	0.156[a]	0.166[a]	0.147	0.0558	−0.080	−0.0915	−0.0929
D_POL1										0.616***	0.446***	0.425***	0.202*	0.244**	0.230*	0.179
D_POL2											0.678***	0.676***	0.196*	0.129	0.0706	0.204*
D_POL3												0.639***	0.155	0.0290	−0.0225	0.359***
D_POL4													0.152	0.0937	0.160	0.223*
D_POL5														0.567***	0.465***	0.143
D_POL6															0.417***	0.227*
D_POL7																0.243*

Note: All other values: $p > 0.05$.
[a]$p < 0.10$.
*$p < 0.05$.
**$p < 0.01$.
***$p = 001$.

TABLE 6 | Pairwise correlations between the significance of factors affecting votes of municipal assemblies on the urban plan (N: 103–111).

	D_CR1	D_CR2	D_CR3	D_CR4	D_LE2	D_LE3	D_CO	D_POL1	D_POL2	D_POL3	D_POL4	D_POL5	D_POL9	D_POL10
D_EV	0.438***	0.426***	0.479***	0.361***	0.242*	0.142	0.426***	0.124	0.162	0.135	0.259**	0.148	−0.0976	0.153
D_CR1		0.238*	0.273**	0.286**	0.293**	0.543***	0.484***	0.0915	0.0487	−0.00562	0.0633	0.265**	−0.0486	−0.0154
D_CR2			0.962***	0.811***	0.316***	0.308**	0.268**	0.253**	0.469***	0.330***	0.358***	−0.0266	−0.0172	0.286**
D_CR3				0.796***	0.319***	0.307**	0.307**	0.244*	0.475***	0.340***	0.393***	−0.00164	−0.0404	0.250*
D_CR4					0.316***	0.351***	0.318***	0.327***	0.385***	0.271**	0.270**	−0.0392	−0.00181	0.161
D_LE2						0.317***	0.390***	0.0949	0.219*	0.168[a]	0.213*	0.294**	−0.0871	0.0755
D_LE3							0.320***	0.0847	0.216*	0.119	0.166	0.162	0.00181	−0.0812
D_CO								0.141	0.138	−0.0177	0.112	0.217*	−0.271**	−0.116
D_POL1									0.508***	0.316***	0.363***	0.228*	0.272**	0.332***
D_POL2										0.732***	0.691***	0.233*	0.185[a]	0.434***
D_POL3											0.676***	0.0824	0.187[a]	0.442***
D_POL4												0.226*	0.175[a]	0.349***
D_POL5													0.183[a]	−0.0490
D_POL9														0.525***

Note: All other values: $p > 0.05$.
[a]$p < 0.10$.
*$p < 0.05$.
**$p < 0.01$.
***$p = 001$.

information and evidence constitutes a crucial perceived feature of experts and academia. For others, their trust in knowledge producers derives from either personal acquaintance or esteem. The neutrality of experts is an additional source of credibility, appearing to be secured by their independence from the government, as particularly evident in academics and nongovernmental research centers. Lastly, the uniformity of requests and positions presented by different actors is also recognized as an element of the credibility of their claims and proposals. As one lawmaker stated, evidence is reliable when information provided by different sources "aligns".

Second, timeliness is a significant attribute that information must possess, largely due to the time constraints faced by decision-makers. As one majority councilor articulated: "often" the use of evidence "is also a matter of timing, meaning that there isn't much time or many days available, but one needs to be a bit faster".

Third, concerning political influence, a prevailing belief (6 out of 8 interviewees), spanning both right-wing and left-wing politicians, is that political parties have virtually uninfluential sway over regional policy decisions. As established in studies of party politics, elected officials constitute the party "in public office" (Katz and Mair 2002) and dictate party policy positions. Far more crucial are the power imbalances between the executive and assembly members, with the former playing a decisive role in directing policy and facilitating its adoption by the council.

From the perspective of evidence providers, stakeholders identify the relevance of evidence as a factor influencing its use by decision-makers. Three out of four interviewees state that salience is vital for the information they provide to gain public attention, which in turn prompts its use by politicians. In the absence of salience, policy-makers exhibit a lack of interest, leading to the disregard of information. One interviewee acknowledges that research results and data may occasionally be too narrowly focused on specific issues to achieve a broader impact.

Moreover, credibility is crucial. All but one stakeholder interviewed possessed a significant regional notoriety. This goes hand in hand with their credibility, which, according to two interviewees, stems from the seriousness of their inquiry and of the information produced, a key factor in earning decision-makers' respect. Consequently, stakeholders tend to engage with institutions (the executive and the council) rather than individual political parties or politicians, due to concerns about being instrumentalized by them; in other words, they are concerned about risking their credibility. Conversely, one lawmaker explicitly declares that they view professional stakeholders as credible but also as partisan and biased. The representatives from the construction association admit that the knowledge they produce, despite being reliable and objective, is used instrumentally to amplify their lobbying efforts.

Finally, decision-makers' literacy is crucial, as all interviewed stakeholder representatives lament the insufficient competence of lawmakers, including those in the executive branch, in environmental matters. This knowledge gap hinders the impact of the evidence that experts generate and relay to politicians.

5 | Discussion

Following the CRELE and ACTA frameworks, the analysis yielded several key insights regarding the attributes of evidence deemed significant for its use in policymaking.

5.1 | Evidence-Based Policymaking

Among municipal decision-makers, evidence-based and outcome-based rationalities prevail over accommodating interests and adopting timely decisions. The correlation among various types of decision-making rationalities suggests that there is no conflict between promoting EBP and the belief that policy should also reflect decision-makers' values and goals (as articulated in their electoral platforms) while also complying with the public's appreciation of urban plans.

5.2 | Comprehensiveness and Relevance

Comprehensiveness appears to be highly valued, as both regional and municipal SEA and planning documents are legally mandated to encompass the entire territory, including its environmental, landscape, demographic, social, transport, and economic dimensions.

Our evaluation of evidence salience, conducted solely through interviews, revealed that it is significant to legislators and especially to stakeholders seeking to impact their decisions.

5.3 | Credibility and Legitimacy

Credibility is crucial at both the local and the regional levels. At the regional level, credibility derives from the trust placed in evidence suppliers and their neutrality; locally, as measured through the judgments on town plans by technical bodies (e.g., government agencies), it is correlated with the relevance of evaluations by other experts: the municipality (D_LE3) and private professionals (D_LE2), as well as stakeholders (D_PO2-PO4).

The legitimacy of the planning process, as endorsed by external professionals, is enhanced by the coherence of the electoral program. The legitimacy attributed by nonexpert opinions positively correlates with the political influence of citizens and with external professionals.

There are no identified issues regarding the legitimacy of SEA documentation related to potential executive-led guidance; however, legislators and stakeholders emphasized the importance of independence from government and political neutrality. Therefore, as argued by CRELE, the legitimacy of evidence is crucial for it to be fully considered.

The identified links between credibility and legitimacy might suggest that decision-makers view external players as figures who legitimize the technical processes through an outside perspective. This finding challenges the notion that trust in technical evidence serves as a substitute for other legitimizing sources (local knowledge), as also emerges from legislators. The openness to diverse

opinions may be argued to indicate an integrative approach by decision-makers, while still upholding an implicit hierarchical relationship between credibility sources and political influence. These positive correlations indicate that, contrary to expectations, trust in planners enhances, rather than isolates, the perception of other sources of judgment. However, it is also possible that decision-makers may view the opinions of technical agencies and stakeholders as potential obstacles if they contradict their preferences, rather than as tools for political legitimation.

5.4 | Timing

The timeliness of the evidence gathered for spatial policy appears to be an important factor influencing its application in regional legislative activities; however, local representatives do not regard it as essential in their planning efforts. This observation may reflect a distinctive aspect of the planning function, where, unlike the law-making process, decisions pertaining to local land use often require considerable time before yielding tangible changes. If this interpretation holds true, it would indicate a level of maturity among administrators who understand that town plans may not produce immediate effects in the "conformative" Italian planning system, where institutions "assign spatial development rights through generalized prescriptive zoning," allowing market forces to determine when and how to transform the territory while complying with established regulations (Berisha et al. 2024, 564).

5.5 | Politics

Local decision-makers place considerable importance on various political factors, namely the weight of their electoral commitments and personal beliefs. While sectoral interests (i.e., the opinions of trade associations) are somewhat less influential, they remain closely interconnected, suggesting an important area for mediation by decision-makers. The same applies also to the alignment of one's assembly group. Interviewed stakeholders identify the limited literacy of policymakers as a significant barrier, not only to the acceptance of evidence by politicians, but even to their receptiveness to it.

The lack of notable correlations with other political players, especially party organizations, reflects the long-debated issue of the diminished relevance of political parties in Italy (Newell 2000; De Luca 2018) and other European democracies (van Biezen et al. 2012; Poguntke et al. 2024). It could be seen as an opportunity to enhance the role of technical knowledge and experts in the planning process. This notion is further supported by lawmakers' assertions of the minimal impact of regional-level party policy formation. Nonetheless, this does not imply a depoliticisation of policy, as electoral obligations continue to hold significant importance for representatives.

Following the critical realist conception of the interdependence of contextual structure and human agency (Lewis 2000; McEvoy and Richards 2003), we interpret the resulting picture as an outcome of decision-makers' need to create appropriate spatial plans that are both coherent with their electoral promises and responsive to the priorities and perspectives of local stakeholders. We associate this with the notion of policy acceptability, upon which the preferability of policy solutions is contingent according to seminal studies on policy planning (Lindblom 1977) and instrument choice (Salamon 2002; Landry and Varone 2005). In turn, the political and social acceptability of policies is related to contextual circumstances and constraints, including consensus among citizens and stakeholders (Dunn 2018). This argument has been extensively emphasized in the context of environmental policies, where effective implementation and sustainable, accepted outcomes (Dreyer and Walker 2013) can be enhanced through formulation processes that are open to stakeholder participation (de Vente et al. 2016; Rust et al. 2022) and align with the beliefs of the target population (Ejelöv and Nilsson 2020). Acceptability also appears to be especially critical for regulatory policies, such as spatial planning (Decoville and Feltgen 2025).

In conclusion, decision-makers leverage evidence to enhance the legitimacy of their choices, positioning evidence as a form of technical information that bolsters and improves policy preferences rooted in political objectives (Majone 1989). Our findings suggest a connection between the concepts of acceptability of policy measures and appropriateness of evidence as articulated in the EBP literature (Parkhurst 2017), where appropriateness involves taking local knowledge into account. Although sometimes local knowledge is treated as superfluous, especially by top-down technological solutions and technocratic discourses of urban planning (Söderström et al. 2014; Shelton et al. 2015), our findings show it is deemed essential for place-based planning, complementing expertise of a technical nature.

6 | Conclusions

This paper has focused on the characteristics that evidence and information, curated by experts and conveyed to lay decision-makers, must possess in order to be considered for policy decisions. Spatial planning has been deemed a privileged field for exploring this topic, not least because the concepts and methods underpinning our work are predominantly derived from environmental sciences. The research objective was to determine whether the CRELE and ACTA frameworks are sufficiently robust to articulate the qualities that evidence must exhibit to be included in the evaluation of planning policy choices by decision-makers. Accordingly, we operationalized the features highlighted by these models that are most relevant to planning policy in our case study, namely local and regional decision-making in the Italian region of Lombardy. To achieve this, we distributed a questionnaire to municipal policymakers and conducted interviews with regional-scale policymakers and stakeholders, aimed at elucidating which attributes are most significant, for what purposes, and how they interrelate.

The findings of our analysis provide novel empirical insights into how evidence is used and interpreted in local spatial planning, a domain where theoretical guidance is still underdeveloped. Evidence, political beliefs and rationales, and the influence of sectional interests are not mutually exclusive: decision-makers do not necessarily regard them as isolated elements. Rather, they appear to integrate these dimensions pragmatically. Therefore, it would be futile to conceptually oppose EBP to politics-based and interest-based logics.

We found that the comprehensiveness and relevance of evidence are widely regarded as significant factors in predicting its usability, alongside the credibility of its sources and the acknowledged legitimacy of the environmental assessment and planning processes. Conversely, while the timeliness of expert information appears to be salient in spatial policy rulemaking, it is less impactful in planning itself. Nevertheless, the policy preferences of decision-makers consistently represent a considerable metric against which evidence is evaluated. This is particularly pertinent to the accountability and responsiveness of decision-makers and their inclination to deliver visible outcomes.

Our study partially challenges the idea, advanced by Dunn and Laing (2017), that deficiencies in single CRELE/ACTA attributes necessarily reduce evidence usability. In our case, decision-makers appear to weigh and reconcile different attributes flexibly, especially under political and contextual pressures. It has also been claimed that CRELE "criteria fail to fully account for external political forces upon knowledge systems" (Tangney 2017, 148). Our findings offer empirical support for this critique, while also identifying a specific political driver—alignment of policy decisions with electoral programs—that is both independent of the CRELE-ACTA variables (Tables 5 and 6) and moderately significant in shaping decision-makers' perspectives (Figures 2 and 3). Consistent with major theoretical accounts of contemporary democracy, electoral accountability emerges as a vital principle of decision-making in a political system where representatives face electoral vulnerability (Bartolini 2002) and must therefore be responsive (Dahl 1971) to contextual expectations and demands. Thus, for instance, the legitimacy of evidence considered in decision-making does not appear as the mere "conformity to recognized principles or accepted rules and standards" (Heink et al. 2015, 677), i.e., procedural legitimacy (Lindblom 1990), nor just the perceived "fairness" (Cash et al. 2002, 5) of the evidence-assembling process. Legitimacy emerges as encompassing political legitimacy provided by stakeholders' appreciation and the electoral mandate afforded by voters.

These insights strengthen the argument that political logics, such as responsiveness to voters, play a constitutive role in shaping how evidence is used: not merely as external constraints, but as endogenous drivers that co-determine its perceived value. Thus, our findings illustrate the interplay between the usefulness and usability of evidence: information considered useful because it is aligned with political goals or electoral programs does not automatically become usable unless it fits institutional routines, timing, and stakeholder expectations.

To conclude, our results contribute to current debates on the scope and limitations of existing heuristic models. Rather than rejecting the CRELE and ACTA frameworks, we suggest that they require contextual adaptation when applied to spatial planning. We have presented new insights that nuance and extend the heuristic value of these frameworks. While they provide helpful analytical guidance, our results show that, in the context of local planning, certain assumptions—such as the separation between credibility and legitimacy—are more blurred than previously acknowledged. As advanced by critical realist theory (Pawson and Tilley 1997), it is the interplay between causal variables—such as, in our study, the CRELE or ACTA features of evidence—and place-based context that generates outcomes—in our case, the use of evidence for policy decisions. Therefore, we suggest that future research should acknowledge that the "key determinants" of the meaningful use of evidence for policy decisions "depend on the many context-specific exogenous and endogenous factors within which knowledge exchange practices"—including both the supply and reception of evidence—"are situated" in a given political context, since "every governance arena will possess its own unique enablers and barriers to knowledge exchange success" (Gardiner et al. 2025, 363). However, akin to planning policy strategies (Decoville and Feltgen 2025), goals, and instruments (Hengstermann et al. 2023), it would be unwise to concentrate solely on local practices to understand broader patterns and factors related to evidence use. Thus, when applying interpretive frameworks, a crucial precaution—though not novel in social research—is to balance the generalization of inferences from case studies with the situational local variables that are indispensable in spatial planning.

Author Contributions

Martino Mazzoleni is responsible for conceptualization, methodology, data analysis, and visualization. Both authors are responsible for data interpretation and writing (original draft, review, and editing).

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Ethics Statement

The template of interviews, whose results are reported in the paper, was submitted to the Ethics Commission for Research in Psychology of the Catholic University of Milan and received approval on May 8, 2024.

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

Data will be made available upon request.

References

Bandera, S., M. C. Cattaneo, M. T. Galanti, and A. Lippi. 2024. "Advising the Prince: The Pluralization of the Internal Policy Advisory System in Italy (2019–2021)." *Italian Political Science Review/Rivista Italiana di Scienza Politica* 54, no. 3: 190–208. https://doi.org/10.1017/ipo.2024.8.

Bartolini, S. 2002. "Electoral and Party Competition: Analytical Dimensions and Empirical Problems." In *Political Parties: Old Concepts and New Challenges*, edited by R. Gunther, J. R. Montero, and J. J. Linz,

84–110. Oxford University Press. https://doi.org/10.1093/0199246742.003.0004.

Berisha, E., G. Cotella, U. Janin Rivolin, and A. Solly. 2024. "Spatial Governance and Planning Systems *Vis-à-Vis* Land Consumption in Europe." *European Planning Studies* 32, no. 3: 553–568. https://doi.org/10.1080/09654313.2023.2207605.

Beunen, R., J. Patterson, and K. Van Assche. 2017. "Governing for Resilience: The Role of Institutional Work." *Current Opinion in Environmental Sustainability* 28: 10–16. https://doi.org/10.1016/j.cosust.2017.04.010.

Boeing, G., C. Higgs, S. Liu, et al. 2022. "Using Open Data and Open-Source Software to Develop Spatial Indicators of Urban Design and Transport Features for Achieving Healthy and Sustainable Cities." *Lancet Global Health* 10, no. 6: e907–e918. https://doi.org/10.1016/S2214-109X(22)00072-9.

Cairney, P. 2016. *The Politics of Evidence-Based Policy Making*. Palgrave Macmillan.

Cairney, P., and K. Oliver. 2017. "Evidence-Based Policymaking Is Not Like Evidence-Based Medicine, So How Far Should You Go to Bridge the Divide Between Evidence and Policy?" *Health Research Policy and Systems* 15, no. 1: 35. https://doi.org/10.1186/s12961-017-0192-x.

Cao, K., W. Li, and R. Church. 2020. "Big Data, Spatial Optimization, and Planning." *Environment and Planning B: Urban Analytics and City Science* 47, no. 6: 941–947. https://doi.org/10.1177/2399808320935269.

Cash, D., W. Clark, F. Alcock, N. Dickson, N. Eckley, and J. Jäger. 2002. *Salience, Credibility, Legitimacy and Boundaries: Linking Research, Assessment and Decision Making*. John F. Kennedy School of Government, Harvard University. https://doi.org/10.2139/ssrn.372280.

Christensen, T., and P. Lægreid. 2022. "Special Issue on the Scientization of Public Decision-Making Processes – The Relevance for the Handling of the COVID-19 Pandemic." *Public Organization Review* 22, no. 2: 215–221. https://doi.org/10.1007/s11115-022-00632-x.

Clarence, E. 2002. "Technocracy Reinvented: The New Evidence Based Policy Movement." *Public Policy and Administration* 17, no. 3: 1–11. https://doi.org/10.1177/095207670201700301.

Cradock-Henry, N. A., and B. Frame. 2021. "Advancing Relevance, Credibility, Legitimacy, and Effectiveness as a Heuristic for Local-Parallel Scenarios." *Frontiers in Climate* 3: 705229. https://doi.org/10.3389/fclim.2021.705229.

Dahl, R. 1971. *Polyarchy: Participation and Opposition*. Yale University Press.

Davoudi, S. 2006. "Evidence-Based Planning. Rhetoric and Reality." *disP—The Planning Review* 42, no. 165: 14–24. https://doi.org/10.1080/02513625.2006.10556951.

De Luca, M. 2018. *Partiti di Carta. Leader, Iscritti ed Elettori nella Politica Contemporanea*. Carocci.

de Vente, J., M. Reed, L. Stringer, S. Valente, and J. Newig. 2016. "How Does the Context and Design of Participatory Decision-Making Processes Affect Their Outcomes? Evidence From Sustainable Land Management in Global Drylands." *Ecology and Society* 21, no. 2: 24. https://doi.org/10.5751/es-08053-210224.

Decoville, A., and V. Feltgen. 2025. "Towards a Credible, Relevant and Legitimate Implementation Framework for the EU no Net Land Take Objective." *Journal of Environmental Planning and Management*: 1–21. https://doi.org/10.1080/09640568.2024.2434175.

Dreyer, S. J., and I. Walker. 2013. "Acceptance and Support of the Australian Carbon Policy." *Social Justice Research* 26, no. 3: 343–362. https://doi.org/10.1007/s11211-013-0191-1.

Dunn, G., and M. Laing. 2017. "Policy-Makers Perspectives on Credibility, Relevance and Legitimacy (CRELE)." *Environmental Science & Policy* 76: 146–152. https://doi.org/10.1016/j.envsci.2017.07.005.

Dunn, W. N. 2018. *Public Policy Analysis: An Integrated Approach*. 6th ed. Routledge.

Ejelöv, E., and A. Nilsson. 2020. "Individual Factors Influencing Acceptability for Environmental Policies: A Review and Research Agenda." *Sustainability* 12, no. 6: 2404. https://doi.org/10.3390/su12062404.

European Parliament. 2021. "Evidence for Policy-Making. Foresight-Based Scientific Advice." Accessed 6 February 2024. https://www.europarl.europa.eu/RegData/etudes/BRIE/2021/690529/EPRS_BRI(2021)690529_EN.pdf.

Evers, D., I. Katurić, and R. van der Wouden. 2024. "Urbanization in Europe." In *Past Developments and Pathways to a Sustainable Future*. Palgrave Macmillan. https://doi.org/10.1007/978-3-031-62261-8.

Faludi, A., and B. Waterhout. 2006. "Introducing Evidence-Based Planning." *disP—The Planning Review* 42, no. 165: 4–13. https://doi.org/10.1080/02513625.2006.10556950.

Fernández, R. J. 2016. "How to Be a More Effective Environmental Scientist in Management and Policy Contexts." *Environmental Science & Policy* 64: 171–176. https://doi.org/10.1016/j.envsci.2016.07.006.

Fryer, T. 2022. "A Critical Realist Approach to Thematic Analysis: Producing Causal Explanations." *Journal of Critical Realism* 21, no. 4: 365–384. https://doi.org/10.1080/14767430.2022.2076776.

Gallie, W. B. 1955. "Essentially Contested Concepts." *Proceedings of the Aristotelian Society* 56, no. 1: 167–198. https://doi.org/10.1093/aristotelian/56.1.167.

Gardiner, N. B., D. Liggett, N. Gilbert, and C. Cvitanovic. 2025. "Practitioners' Perspectives on the Enablers and Barriers to Successful Antarctic Science-Policy Knowledge Exchange." *Environmental Policy and Governance* 35, no. 2: 362–381. https://doi.org/10.1002/eet.2143.

Goldman, I., and M. Pabari. 2021. "Lessons for Using Evidence in Policy and Practice." In *Using Evidence in Policy and Practice. Lessons From Africa*, edited by I. Goldman and M. Pabari, 224–241. Routledge.

Greenhalgh, S., K. Müller, S. Thomas, M. L. Campbell, and T. Harter. 2022. "Raising the Voice of Science in Complex Socio-Political Contexts: An Assessment of Contested Water Decisions." *Journal of Environmental Policy and Planning* 24, no. 2: 242–260.

Haas, P. 2004. "When Does Power Listen to Truth? A Constructivist Approach to the Policy Process." *Journal of European Public Policy* 11, no. 4: 569–592. https://doi.org/10.1080/1350176042000248034.

Haselswerdt, L., and E. Rigby. 2021. "What Do Advocates Want From Policy Research? Evidence From Elite Surveys." *Evidence & Policy* 17, no. 3: 385–403. https://doi.org/10.1332/174426420X16000978959673.

Head, B. W. 2010. "Reconsidering Evidence-Based Policy: Key Issues and Challenges." *Policy and Society* 29: 77–94. https://doi.org/10.1016/j.polsoc.2010.03.001.

Heink, U., E. Marquard, K. Heubach, et al. 2015. "Conceptualizing Credibility, Relevance and Legitimacy for Evaluating the Effectiveness of Science–Policy Interfaces: Challenges and Opportunities." *Science and Public Policy* 42: 676–689. https://doi.org/10.1093/scipol/scu082.

Hengstermann, A., F. Wenner, M. Jehling, and T. Hartmann. 2023. "Innovative Land Policies in Europe." *Raumforschung Und Raumordnung | Spatial Research and Planning* 81, no. 6: 575–578. https://doi.org/10.14512/rur.2246.

Hertin, J., J. Turnpenny, A. Jordan, M. Nilsson, D. Russel, and B. Nykvist. 2009. "Rationalising the Policy Mess? Ex Ante Policy Assessment and the Utilisation of Knowledge in the Policy Process." *Environment and Planning A: Economy and Space* 41: 1185–1200. https://doi.org/10.1068/a40266.

Higgins, J. P. Y., T. Lasserson, J. Chandler, et al. 2022. *Methodological Expectations of Cochrane Intervention Reviews (MECIR)*. Cochrane Collaboration. https://www.cochrane.org/sites/default/files/uploads/PDFs/MECIR/MECIR.

Juntti, M., D. Russel, and J. Turnpenny. 2009. "Evidence, Politics and Power in Public Policy for the Environment." *Environmental Science & Policy* 12: 207–215. https://doi.org/10.1016/j.envsci.2008.12.007.

Kafkalas, G., and M. Pitsiava. 2023. "Bridging the Evidence Gap in Spatial Planning." *Region* 10, no. 3: 59–81. https://doi.org/10.18335/region.v10i3.474.

Kano, H., and T. I. Hayashi. 2021. "A Framework for Implementing Evidence in Policymaking: Perspectives and Phases of Evidence Evaluation in the Science-Policy Interaction." *Environmental Science & Policy* 116: 86–95. https://doi.org/10.1016/j.envsci.2020.09.001.

Katz, R., and P. Mair. 2002. "The Ascendancy of the Party in Public Office: Party Organizational Change in Twentieth-Century Democracies." In *Political Parties. Old Concepts and New Challenges*, edited by J. R. Montero, J. Linz, and R. Gunther, 113–135. Oxford University Press.

Krizek, K., A. Forysth, and C. Schively Slotterback. 2009. "Is There a Role for Evidence-Based Practice in Urban Planning and Policy?" *Planning Theory & Practice* 10, no. 4: 459–478. https://doi.org/10.1080/14649350903417241.

Ladner, A., N. Keuffer, and H. Baldersheim. 2016. "Measuring Local Autonomy in 39 Countries (1990–2014)." *Regional and Federal Studies* 26, no. 3: 321–357. https://doi.org/10.1080/13597566.2016.1214911.

Landry, R., and F. Varone. 2005. "The Choice of Policy Instruments: Confronting the Deductive and the Interactive Approaches." In *Designing Government. From Instruments to Governance*, edited by F. P. Eliadis, M. M. Hill, and M. Howlett, 106–131. McGill–Queen's University Press.

Langer, L., and V. Weyrauch. 2021. "Using Evidence in Africa. A Framework to Assess What Works, How and Why." In *Using Evidence in Policy and Practice. Lessons From Africa*, edited by I. Goldman and M. Pabari, 34–53. Routledge.

Lewis, P. 2000. "Realism, Causality and the Problem of Social Structure." *Journal for the Theory of Social Behaviour* 30, no. 3: 249–268. https://doi.org/10.1111/1468-5914.00129.

Lindblom, C. E. 1959. "The Science of "Muddling Through"." *Public Administration Review* 19, no. 2: 79–88.

Lindblom, C. E. 1977. *Politics and Markets: The World's Political Economic Systems*. Basic Books.

Lindblom, C. E. 1990. *Inquiry and Change: The Troubled Attempt to Understand and Shape Society*. Yale University Press/Russel Sage Foundation.

Littell, J. H., and H. White. 2018. "The Campbell Collaboration: Providing Better Evidence for a Better World." *Research on Social Work Practice* 28, no. 1: 6–12. https://doi.org/10.1177/1049731517703748.

Lord, A., and S. Hincks. 2010. "Making Plans: The Role of Evidence in England's Reformed Spatial Planning System." *Planning Practice and Research* 25, no. 4: 477–496. https://doi.org/10.1080/02697459.2010.511019.

Majone, G. 1989. *Evidence, Argument, and Persuasion in the Policy Process*. Yale University Press.

March, J. 1994. *A Primer on Decision Making*. Free Press.

McEvoy, P., and D. Richards. 2003. "Critical Realism: A Way Forward for Evaluation Research in Nursing?" *Journal of Advanced Nursing* 43, no. 4: 411–420. https://doi.org/10.1046/j.1365-2648.2003.02730.x.

McNie, E. C. 2007. "Reconciling the Supply of Scientific Information With User Demands: An Analysis of the Problem and Review of the Literature." *Environmental Science & Policy* 10: 17–38. https://doi.org/10.1016/j.envsci.2006.10.004.

Mukherjee, I., M. K. Coban, and A. S. Bali. 2021. "Policy Capacities and Effective Policy Design: A Review." *Policy Sciences* 54, no. 2: 243–268. https://doi.org/10.1007/s11077-021-09420-8.

Newell, J. 2000. *Parties and Democracy in Italy*. Routledge. https://doi.org/10.4324/9781315193519.

OECD. 2015. *Scientific Advice for Policy Making: The Role and Responsibility of Expert Bodies and Individual Scientists, OECD Science, Technology and Industry Policy Papers 21*. OECD Publishing. https://doi.org/10.1787/5js33l1jcpwb-en.

OECD. 2017. *Land-Use Planning Systems in the OECD: Country Fact Sheets*. OECD Publishing. https://doi.org/10.1787/9789264268579-en.

OECD. 2020. "Providing Science Advice to Policy Makers During COVID-19." Accessed 6 February 2024. https://read.oecdilibrary.org/view/?ref=132_132655-cbl92gnv49&title=Providing-science-advice-to-policymakers-during-COVID-19.

OECD. 2022. *Regional Governance in OECD Countries: Trends, Typology and Tools, OECD Multi-Level Governance Studies*. OECD Publishing. https://doi.org/10.1787/4d7c6483-en.

Oliver, K., and A. Boaz. 2019. "Transforming Evidence for Policy and Practice: Creating Space for New Conversations." *Palgrave Communications* 5, no. 60. https://doi.org/10.1057/s41599-019-0266-1.

Parkhurst, J. O. 2017. *The Politics of Evidence: From Evidence-Based Policy to the Good Governance of Evidence*. Routledge.

Paulson, L., and M. Büchs. 2022. "Public Acceptance of Post-Growth: Factors and Implications for Post-Growth Strategy." *Futures* 143: 103020. https://doi.org/10.1016/j.futures.2022.103020.

Pawson, R., and N. Tilley. 1997. *Realistic Evaluation*. Sage.

Poguntke, T., P. Webb, and S. E. Scarrow. 2024. "Parties and Democracy. A Difficult Relationship." In *Political Parties and the Crisis of Democracy*, edited by T. Poguntke and W. Hofmeister, 581–591. Oxford University Press. https://doi.org/10.1093/oso/9780198888734.003.0027.

Popper, K. 1959. *The Logic of Scientific Discovery*. Routledge.

Radaelli, C. M. 1995. "The Role of Knowledge in the Policy Process." *Journal of European Public Policy* 2, no. 2: 159–183. https://doi.org/10.1080/13501769508406981.

Raymond, C. M., I. Fazey, M. S. Reed, L. C. Stringer, G. M. Robinson, and A. C. Evely. 2010. "Integrating Local and Scientific Knowledge for Environmental Management." *Journal of Environmental Management* 91: 1766–1777. https://doi.org/10.1016/j.jenvman.2010.03.023.

Rincón, L. 2021. "The Silver Bullet Reversed: The Impact of Evidence on Policymaker Attention." *Evidence & Policy* 17, no. 3: 423–446. https://doi.org/10.1332/174426420X16017817089543.

Rust, N., O. Lunder, S. Iversen, et al. 2022. "Perceived Causes and Solutions to Soil Degradation in the UK and Norway." *Land* 11, no. 1: 131. https://doi.org/10.3390/land11010131.

Salamon, L. M. 2002. "The New Governance and the Tools of Public Action: An Introduction." In *The Tools of Government: A Guide to the New Governance*, edited by L. M. Salamon, 1–47. Oxford University Press.

Sarkki, S., J. Niemelä, R. Tinch, S. van den Hove, A. Watt, and J. C. Young. 2014. "Balancing Credibility, Relevance and Legitimacy: A Critical Assessment of Trade-Offs in Science–Policy Interfaces." *Science and Public Policy* 41: 194–206.

Sarkki, S., R. Tinch, J. Niemelä, et al. 2015. "Adding 'Iterativity' to the Credibility, Relevance, Legitimacy: A Novel Scheme to Highlight Dynamic Aspects of Science–Policy Interfaces." *Environmental Science & Policy* 54: 505–512. https://doi.org/10.1016/j.envsci.2015.02.016.

Saurman, E. 2016. "Improving Access: Modifying Penchansky and Thomas's Theory of Access." *Journal of Health Services Research & Policy* 21, no. 1: 36–39. https://doi.org/10.1177/1355819615600001.

Serrao-Neumann, S., G. Di Giulio, and D. L. Choy. 2020. "When Salient Science Is Not Enough to Advance Climate Change Adaptation: Lessons From Brazil and Australia." *Environmental Science & Policy* 109: 73–82. https://doi.org/10.1016/j.envsci.2020.04.004.

Shelton, T., M. Zook, and A. Wiig. 2015. "The 'Actually Existing Smart City'." *Cambridge Journal of Regions, Economy and Society* 8, no. 1: 13–25. https://doi.org/10.1093/cjres/rsu026.

Shepherd, E., A. Inch, and T. Marshall. 2020. "Narratives of Power: Bringing Ideology to the Fore of Planning Analysis." *Planning Theory* 19, no. 1: 3–16. https://doi.org/10.1177/1473095219898865.

Söderström, O., T. Paasche, and F. Klauser. 2014. "Smart Cities as Corporate Storytelling." *City* 18, no. 3: 307–320. https://doi.org/10.1080/13604813.2014.906716.

Stringer, L., and A. Dougill. 2013. "Channelling Science Into Policy: Enabling Best Practices From Research on Land Degradation and Sustainable Land Management in Dryland Africa." *Journal of Environmental Management* 114: 328–335. https://doi.org/10.1016/j.jenvman.2012.10.025.

Tang, S., and S. Dessai. 2012. "Usable Science? The UK Climate Projections 2009 and Decision Support for Adaptation Planning." *Weather, Climate, and Society* 4, no. 4: 300–313. https://doi.org/10.1175/WCAS-D-12-00028.1.

Tangney, P. 2017. "What Use Is CRELE? A Response to Dunn and Laing." *Environmental Science & Policy* 77: 147–150. https://doi.org/10.1016/j.envsci.2017.08.012.

UK Government, Department for Business, Innovation and Skills. 2010. "The Government Chief Scientific Adviser's Guidelines on the Use of Scientific and Engineering Advice in Policy Making." Accessed 6 February 2024. https://assets.publishing.service.gov.uk/media/5a7c0160e5274a7202e18f3f/10-669-gcsa-guidelines-scientific-engineering-advice-policy-making.pdf.

van Biezen, I., P. Mair, and T. Poguntke. 2012. "Going, Going...Gone? The Decline of Party Membership in Contemporary Europe." *European Journal of Political Research* 51, no. 1: 24–56. https://doi.org/10.1111/j.1475-6765.2011.01995.x.

Weiss, C. H. 1979. "The Many Meanings of Research Utilization." *Public Administration Review* 39, no. 5: 426–431.

Weiss, C. H., and M. J. Bucuvalas. 1980. "Truth Tests and Utility Tests: Decision-Makers' Frames of Reference for Social Science Research." *American Sociological Review* 45, no. 2: 302–313. https://doi.org/10.2307/2095127.

Wendel, H. E. W., R. K. Zarger, and J. R. Mihelcic. 2012. "Accessibility and Usability: Green Space Preferences, Perceptions, and Barriers in a Rapidly Urbanizing City in Latin America." *Landscape and Urban Planning* 107, no. 3: 272–282. https://doi.org/10.1016/j.landurbplan.2012.06.003.

Widmer, T. 2009. "The Contribution of Evidence-Based Policy to the Output-Oriented Legitimacy of the State." *Evidence & Policy* 5, no. 4: 351–372. https://doi.org/10.1332/174426409X478743.

Wilson, J., and E. Swyngedouw. 2014. "Introduction. Seeds of Dystopia: Post-Politics and the Return of the Political." In *The Post-Political and Its Discontents. Spaces of Depoliticisation, Spectres of Radical Politics*, edited by J. Wilson and E. Swyngedouw, 1–22. Edinburgh University Press.

Supporting Information

Additional supporting information can be found online in the Supporting Information section. **Data S1:** ropr70073-sup-0001-Supinfo.docx.