Factors influencing the use of scientific evidence in conservation practice and policy: insights from a systematic map

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Acknowledgements: PM and ID were funded by Ikerbasque Fellowships, the Basque Government through the BERC 2022-2025 programme, and the Spanish Ministry of Science and Innovation through the BC3 María de Maeztu excellence accreditation (MDM-2017-0714). In addition, PM was funded by a Ramon y Cajal fellowship (RYC2024-050060-I) funded by MICIU/AEI/10.13039/501100011033 and by FSE+.NZ-C is partly funded by the Spanish Government through Ref. EX2021-001201-M23 funded by MCIN/AEI/10.13039/501100011033. VF is funded by the Spanish Research Agency (PCI2023-145970-2) under the Driving Urban Transitions Partnership, which has been co-funded by the European Commission. MJG received financial support from the Research Council of Norway (Project no. 160022/F40). APC was funded through an Imperial College Research Fellowship by Imperial College London. TLTK was funded by Cambridge Philosophical Society through a Henslow Research Fellowship. NM was funded by a British Academy research grant (EPG/100663). JCW was funded by the Australian Research Council (DE210101030).

Author contributions: Philip A. Martin: Conceptualisation, analysis, funding acquisition, data collection and curation, project administration, validation, writing – original draft, writing – review and editing; Fereshteh Amirmohammedi: data collection and curation, writing – review and editing; Carlos Barreto: data collection and curation, writing – review and editing; Iris Berger: data collection and curation, writing – review and editing; Prishnee Bissessur: data collection and curation, writing – review and editing; Alec Christie: Conceptualisation, data collection and curation, writing – review and editing; Isabel Donoso: data collection and curation, writing – review and editing; Violeta Furlan: data collection and curation, writing – review and editing; Matthew Grainger: methodology, data collection and curation, writing – original draft, writing – review and editing; James Hartup: data collection and curation, writing – review and editing; Aidan M. Keith: data collection and curation, writing – review and editing; Tiffany Ki : data collection and curation, writing – review and editing; Nick A. Littlewood : data collection and curation, writing – review and editing; Sarah H. Luke: data collection and curation, writing – review and editing; Catia Matos: data collection and curation, writing – review and editing; Valentin Moser: data collection and curation, writing – review and editing; Nibedita Mukherjee: data collection and curation, writing – review and editing; Eñaut Martinez de Birgara: data collection and curation, writing – review and editing; Alvaro Moreno Martin: data collection and curation, writing – review and editing; Isobel Ollard: data collection and curation, writing – review and editing; Alice M. Oswald: data collection and curation, writing – review and editing; Santiago Perea: data collection and curation, writing – review and editing; Tabitha Taberer: data collection and curation, writing – review and editing; Elina Takola: data collection and curation, writing – review and editing; Ian Thornhill: data collection and curation, writing – review and editing; Noelia Zafra-Calvo:

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Conflict of interest: There are no conflicts of interest.

Abstract

Evidence-based conservation can lead to better outcomes for biodiversity, through the integration of scientific evidence with other forms of knowledge to make transparent and effective decisions. However, despite efforts to promote evidence-based practice, many management and policy decisions do not incorporate scientific information. To strengthen the interface between science and practice/policy in conservation, it is vital to understand which factors influence the use of scientific evidence in decisions. Use of evidence has been widely studied across different conservation settings and contexts, but no comprehensive broad synthesis of the topic exists. To fill this knowledge gap, we conducted a systematic map to summarise where this research has been conducted, who has been the focus of these studies, and what influences the uptake of scientific evidence. Our searches found 29,422 studies and following screening 167 studies were identified as relevant. Across the studies, we identified a strong bias in the evidence literature towards English-speaking countries. Very few studies reported which types of ecosystems, taxonomic groups or threats were being addressed, but those that did typically focused on marine, forest, or freshwater systems. The majority of studies investigated practitioners and researchers as actors, while relatively few studies included policymakers or other actors. Regarding factors influencing evidence use, relationships between scientists and decision makers, and the capacity and resources of conservation organisations were those most commonly reported. More broadly, factors relating to the characteristics of the evidence itself and the characteristics of practitioners/policymakers, their organisations, and decision contexts were frequently referenced, while there was little focus on factors relating to researchers and research organisations. *Synthesis and applications*. Addressing the individual factors we identify through interventions may useful. However, because of the interlinked nature of the factors impacting evidence use, we think that solutions that tackle multiple barriers in a holistic fashion are likely to prove more effective. Targeting the underlying causes of these limitations could create a systemic shift across the conservation sector towards evidence-based practice and policy, resulting in better biodiversity outcomes.

Keywords: Evidence-based conservation, evidence-informed conservation, evidence use, knowledge co-production, knowledge exchange, knowledge transfer, science-practice gap

Introduction

For more than two decades, the concept of evidence-based conservation has been promoted as a means to improve outcomes for biodiversity (Cook et al., 2013; Sutherland et al., 2004). This approach was originally defined as the use of scientific evidence to inform and improve conservation decision-making, in keeping with its inspiration by evidence-based medicine (Pullin & Knight, 2003; Sutherland et al., 2004). To support this goal, numerous initiatives have been launched to advocate for the use of evidence-based approaches in conservation, such as Conservation Evidence (Sutherland et al., 2019) and the Collaboration for Environmental Evidence (Collaboration for Environmental Evidence, 2025). However, despite these efforts, the use of scientific evidence in decision-making remains limited (Busbridge et al., 2021; Fabian et al., 2019; Lemieux et al., 2018). Research has shown that conservation practitioners and policymakers often rely on multiple forms of knowledge, such as personal experience (Virk et al., 2023), the advice of colleagues (Cook et al., 2012; Fabian et al., 2019), and Indigenous and local knowledge (Brondízio et al., 2021; Wheeler et al., 2020). While considering multiple forms of knowledge as part of the decision-making process for conservation is essential, the failure to use scientific evidence risks producing suboptimal outcomes for biodiversity and reducing cost-effectiveness (Sutherland, 2022).

This persistent gap between research and practice is known as a ‘science-practice gap’, ‘knowing-doing gap’, or ‘research-implementation gap/space’ (Hulme, 2014; Knight et al., 2008; Toomey et al., 2017). Natural scientists have tended to assume linearity in how evidence and practice interact, where knowledge is generated through research and then passed on to decision-makers, either in the form of scientific publications or by translating information into non-technical language (Bertuol-Garcia et al., 2018). In reality, however, the process by which evidence informs decision-making is complex and messy, as are the factors that influence whether scientific evidence is used and applied (Adams & Sandbrook, 2013; Cairney, 2015; Kadykalo, Buxton, et al., 2021). Recognition of this has led to the increasing popularity of knowledge co-production in conservation, in which a collaborative process is used to bring scientists and practitioners together to decide about the relevant questions to be investigated and then bring plural knowledge into the investigation and decision process to tackle conservation problems (Nel et al., 2016). However, the linear model persists as the predominant way in which this problem is viewed (Bertuol-Garcia et al., 2018).

The research community’s response to the science-practice gap reflects this linear thinking (Oliver et al., 2022). Past research has investigated the barriers and solutions to improve evidence use in Conservation (Rose et al., 2018; Walsh et al., 2019). These include availability and accessibility of the evidence (Cook et al., 2012; Taft et al., 2020), language barriers (Fabian et al., 2019), difference in time frames and priorities (Rose et al., 2020), and lack of political will (Kadykalo, Cooke, et al., 2021; Smith et al., 2017), among others. In addition, there is good evidence from fields such as policy studies, health, and education that scientific evidence use also depends on the capacities, cultures, and incentives of the individuals and organisations involved and the relationships between them (Boaz et al., 2019). For example, practitioners may lack the training or technical capacity to interpret or apply evidence (Busbridge et al., 2021; Cook et al., 2010; Sunderland et al., 2009) or may face time constraints (Fabian et al., 2019; Pullin et al., 2004).

A substantial body of research now examines the factors that influence the use of scientific evidence in biodiversity conservation, yet this literature remains fragmented. Existing syntheses focus on specific aspects of the problem, such as the role of knowledge brokers (Cvitanovic et al., 2025), or boundary-spanning organisations (Posner & Cvitanovic, 2019), on particular systems or types of management, such as marine resource management (Cvitanovic et al., 2015; Karcher et al., 2024) or fire management (Hunter et al., 2020), or are not comprehensive (Kadykalo, Buxton, et al., 2021). This fragmentation also constrains interdisciplinary learning, as researchers often work within disciplinary silos. Furthermore, we have limited understanding of which areas are well-studied areas (knowledge clusters) and those that remain relatively unexplored (knowledge gaps), and how these relate to the geographies, biomes, actors, organisations, and evidence types that have been investigated. Consequently, we lack a comprehensive overview of what the key factors influencing scientific evidence use in conservation are, which limits the ability of researchers, practitioners, and policymakers to draw on existing work and identify solutions to current barriers. Producing a more comprehensive overview of the literature will enable us to produce a road-map to prioritise future research efforts, including where more in-depth syntheses and targeted primary studies are needed. To address these gaps, we undertook a systematic map to answer the following questions:

1. In which decision-making contexts (e.g. geographic regions, biomes, conservation problems) has the science-practice interface been investigated?
2. Which actors (e.g. conservation practitioners, policymakers, researchers, or other stakeholders) and types of organisation (e.g. government/statutory bodies, non-governmental organisations) have been the focus of studies?
3. What are the most commonly reported factors affecting scientific evidence use in decision-making for conservation?

Methods

Searches and screening

Our systematic map focused on primary studies that reported factors influencing the use of scientific evidence in decision-making for conservation practice and policy. To guide the scope of the work, we defined five key elements: scientific evidence, evidence use, factors influencing evidence use, the populations of interest, and the geographic context. We considered evidence as “information used to assess one or more hypotheses related to a question of interest” (Salafsky et al., 2019), and so we defined scientific evidence as evidence generated using scientific methodologies, including both quantitative and qualitative information. Examples of types of evidence we considered relevant include peer-reviewed studies, data generated using scientific methods, and decision-making tools based on scientific evidence. We acknowledge that other forms of information are also vitally important for informing conservation practice, such as practitioners’ experience, Indigenous and local knowledge, and people’s values; however, these were considered beyond the scope of this systematic map. We follow the approach of Walsh et al. (2019) by using a broad definition of what constitutes the ‘use’ of scientific evidence, including: (i) instrumental - the direct application of information to help make a specific decision or solve a problem; (ii) conceptual - influencing thinking, perspectives, or the understanding of an issue; and (iii) symbolic - the use of evidence to provide credibility to a predetermined position (Nutley et al., 2007; Weiss, 1979). For the factors influencing the use of scientific evidence we used a modified version of the typology of Walsh et al. (2019), which identified 230 factors that facilitate or limit scientific evidence use in conservation management (more detail on this is provided in the data extraction section). The populations of interest were any person involved in the conservation science-practice/policy interface, including researchers, practitioners, policymakers, and other groups. Regarding geographic context, we made no restrictions of where a study could be undertaken.

To identify search terms, we created an initial search and then refined it using a benchmark list of ten studies deemed essential to be included in our searches (Table S1). Refinement continued until all benchmark studies were returned by our searches, thereby maximising the comprehensiveness of our search (Collaboration for Environmental Evidence, 2018; Foo et al., 2021). Once final search terms were identified, we performed platform-specific searches in Web of Science and Scopus (see details in Table S2), with no restrictions on the year in which studies were published. We combined our search results with 630 conservation-relevant studies found in the systematic map of Oliver et al (2026), which identified studies reporting factors impacting evidence use across all policy domains, including public health, education, and environmental management. The final searches were carried out on 25/01/2025. Once collated, all references were uploaded onto the Rayyan platform (Ouzzani et al., 2016) for article screening, where semi-automated deduplication was carried out.

We used Rayyan to screen articles against the following inclusion criteria: articles (1) were written in English, (2) focused on biodiversity conservation, (3) focused on policy and practice, (4) focused on the use of scientific evidence in decision-making, (5) identified factors that influence evidence use, (6) constituted a primary study, and (7) identified factors influencing evidence use using interviews, surveys, workshops, or documentary analysis (for more details see the supplementary methods section). The screening process consisted of two stages: first titles and abstracts were reviewed, and then, the full texts of the studies retained at this stage were assessed. At the title and abstract screening stage, studies had to meet criteria 1-5; at the full text stage, they had to meet all seven criteria. For articles excluded at the full-text screening stage, we provided reasons for the exclusion in accordance with ROSES guidelines (Haddaway et al., 2018; Figure S1). We focused only on English-language literature to simplify consistency checks between reviewers. We acknowledge that excluding literature written in non-English languages is a shortcoming that may lead to biases (Amano et al., 2021; Konno et al., 2020). Our detailed screening instructions can be seen in the supplementary methods section.

To ensure consistency at the screening stage, all reviewers first screened the titles and abstracts of 100 randomly selected studies using the inclusion criteria. All decisions were compared to those of the lead researcher. Any disagreements between the two people were discussed, and eligibility criteria were revised where appropriate. Cohen's Kappa scores were calculated to test the agreement between the two people (Cohen, 1960). If Kappa scores fell below 0.6, another 100 titles and abstracts were screened by the same two team members, with the process repeated until Kappa scores were >0.6, signifying substantial agreement (McHugh, 2012). The same process was followed for the full texts of publications that met the inclusion criteria, but this time using 10 full texts. After screening, mean Kappa score was 0.67 for titles and abstracts, and 0.71 for full texts.

Searches generated 29,422 individual studies, of which 28,849 were excluded at the title and abstract screening stage (Figure S1). To reduce screening workload, we used Rayyan's AI model to identify studies unlikely to meet our inclusion criteria, which we then automatically excluded. The lead researcher first screened 1,000 papers at the title and abstract stage and, using this as a training set, ran the AI tool to classify studies as 'Highly unlikely to include' or 'Unlikely to include.' This identified 13,087 articles eligible for exclusion. To test the sensitivity of this classification, the lead researcher screened 5% of the flagged studies classified as being likely to be excluded, finding only one potentially relevant article, equating to a false negative rate of <0.001%. The remaining 16,498 titles and abstracts were screened manually, with 15,762 of these excluded and 726 retained for full-text screening. Following full text screening, 167 studies were retained for synthesis (Figure S1).

Data extraction

Data extraction focused on collecting information on the factors reported in each study as influencing the use of scientific evidence, following the framework we detail above, as well as contextual information. To characterise included studies, we extracted information on a) their geographic and ecological settings, as well as the conservation threats; b) the actors involved in decision-making processes and the organisations they represented, and c) the factors influencing the use of scientific evidence. Specifically, we recorded the country or countries of focus, ecosystem type (e.g. freshwater, marine, forest), the scale of studies, focal taxonomic group, and the conservation problem being addressed. We also documented the focal population(s) as people involved in the decision-making processes (including conservation practitioners, policymakers, scientists, and other stakeholders) and the organisation types represented. In addition, we extracted information on the type of scientific evidence, the discipline from which the scientific evidence was drawn, the study design, and the type of data collected by researchers. Further details on the data extraction protocol are provided in the supplementary methods section.

To categorise the factors influencing the use of scientific evidence in conservation we adapted the typology of Walsh et al (2019). This typology groups factors influencing the use of scientific evidence into (i) the nature of the evidence itself, (ii) research-practice links; (iii) decision contexts; (iv) researchers and research organisations; (v) practitioners; (vi) management organisations; (vii) other stakeholders; and (viii) the wider community. To aid with communication, we simplified this to four categories (see Table 1): (i) evidence characteristics: including factors such as the existence of evidence, how accessible the evidence is, how relevant the evidence is; (ii) relationships, including those between scientists and practitioners/policymakers or those between colleagues; (iii) researchers and research organisations: including academic demands on researchers or their skills and awareness of practice and policy; and (iv) practitioners/policymakers, organisations, and decision contexts: including capacity and resources of organisations such as staff, time, and funding, the research skills of practitioners/policymakers, and their attitude towards evidence use. We also reduced the number of factors from the 230 identified by Walsh et al (2019), instead using 35 more broadly-defined factors. This involved rephrasing the factors so that they were neutral, rather than identified as barriers or facilitators. This aided the identification and classification of factors identified in primary studies by members of the review team.

Table 1 - Factors influencing evidence use that we extracted from the relevant primary studies based on the framework of Walsh et al. (2019). This is a hierarchical structure, with Category the highest level and factor the lowest, most precise level.

Category	Factor name	Description
Characteristics of scientific evidence	Existence	Whether the evidence exists or not
	Accessibility	How accessible the evidence is
	Format and language	The format and style of language in which evidence is presented
	Time lag	The time taken to produce research outputs
	Quantity of information	The quantity of scientific evidence (e.g. information overload)
	Language barrier	Information is in a language other than that of the native language of decision-makers
	Difficult to find	Difficulty in finding scientific evidence
	Relevance	The relevance of existing scientific evidence to the context of decision-making
	Rigour	The rigorousness or trustworthiness of the scientific evidence
	Uncertainty	Uncertainty associated with the scientific evidence
	Lack of uncertainty	Scientific evidence does not assess uncertainty
	Inconclusive	Research is inconclusive, or there are contradicting results
	Source of evidence	The researcher or organisation that produced the research
Characteristics of practitioners and policymakers, organisations, and decision contexts	Decision-maker characteristics	Alignment with the personal beliefs of decision-maker or their ecological knowledge
	Nature of decision	The nature of the decision being made, such as the time pressure, goals, importance of the issues, and whether it is a chronic and long-term problem vs an acute and short-term problem

	Social, political, and economic context	Alignment of evidence with social, political, or economic interests
	Implementation capacity	The feasibility of recommendations, their costs, and the resources needed to implement recommendations
	Practitioner/policymaker attitude towards evidence use	The attitude of practitioners or policymakers towards the use of scientific evidence, such as willingness or interest
	Practitioner/policymaker research skills	The research skills of practitioners or policymakers, such as scientific training, understanding of research, ability to read research papers, and skills to search for papers
	Practitioner/policymaker personal characteristics	The characteristics of practitioners or policymakers, such as openness to new ideas, aversion to risk, level of education, and role within an organisation
	Practitioner/policymaker decision process	Features of the process involved in the decision-making process
	Culture of practitioner/policymaker	The culture of practitioner and policymaker communities
	Practitioner/policymaker awareness of evidence	The awareness of practitioners and policymakers about scientific evidence
	Capacity and resources	Resources and capacity, such as staff and personnel, funding, time, and turnover
	Management	Features of management, such as managerial support for evidence use, legislative support, and communication channels with management
	Timeliness of evidence	Evidence is available at the right time for the decision-making process
	Other stakeholders values and beliefs	The values and beliefs of stakeholders who are not scientists, practitioners, or policymakers
Relationships	Scientist-actor	Relationships between scientists and practitioners/policymakers influence evidence use

	relationships	
	Relationship between colleagues	Relationships between fellow policymakers/practitioners
	Practitioner/policymaker-stakeholder relationships	Relationships between policymakers and practitioners with stakeholders other than scientists
Characteristics of researchers and research organisations	Researcher attitude towards evidence use	Attitude of the researcher towards the use of evidence in conservation decision-making
	Researcher skills and awareness	Skills and awareness of a researcher related to policy/practice, as well as their communication and dissemination skills
	Academic demands on researchers	Constraints and demands on researchers, such as time constraints and incentives to publish papers
	Culture of researchers	Cultural factors related to researchers, such as resistance to advocacy or recognition of experiential knowledge
Other	Other stakeholders' values and beliefs	The values and beliefs of stakeholders who are not scientists, practitioners, or policymakers

Analyses
Our analyses had two major aims: (i) the identification of themes that have been well-studied, those that have been studied rarely, and any biases present in the literature on the factors influencing the use of scientific evidence in conservation policy and practice, and (ii) the quantification of the factors most frequently cited in studies. Themes that have been well-studied, referred to as knowledge clusters, represent opportunities for in-depth synthesis, such as systematic review and meta-analysis. Those that have been studied relatively rarely, referred to as knowledge gaps, represent potentially useful topics for future primary research (James et al., 2016).

Our analysis quantified and biases concentrated for the contextual variables we extracted data on and the factors influencing the use of scientific evidence. All analyses were carried out in R version 4.5.0 (R Core Team, 2022). Data were cleaned and formatted using tidyverse R packages (Wickham et al., 2019), and the packages rnaturalearth (South et al., 2024), countrycode (Arel-Bundock et al., 2018), ggplot2 (Wickham, 2016), ComplexUpset (Krassowski, 2020), cowplot (Wilke, 2024) and lemon (Edwards, 2024) were used to produce figures.

Results

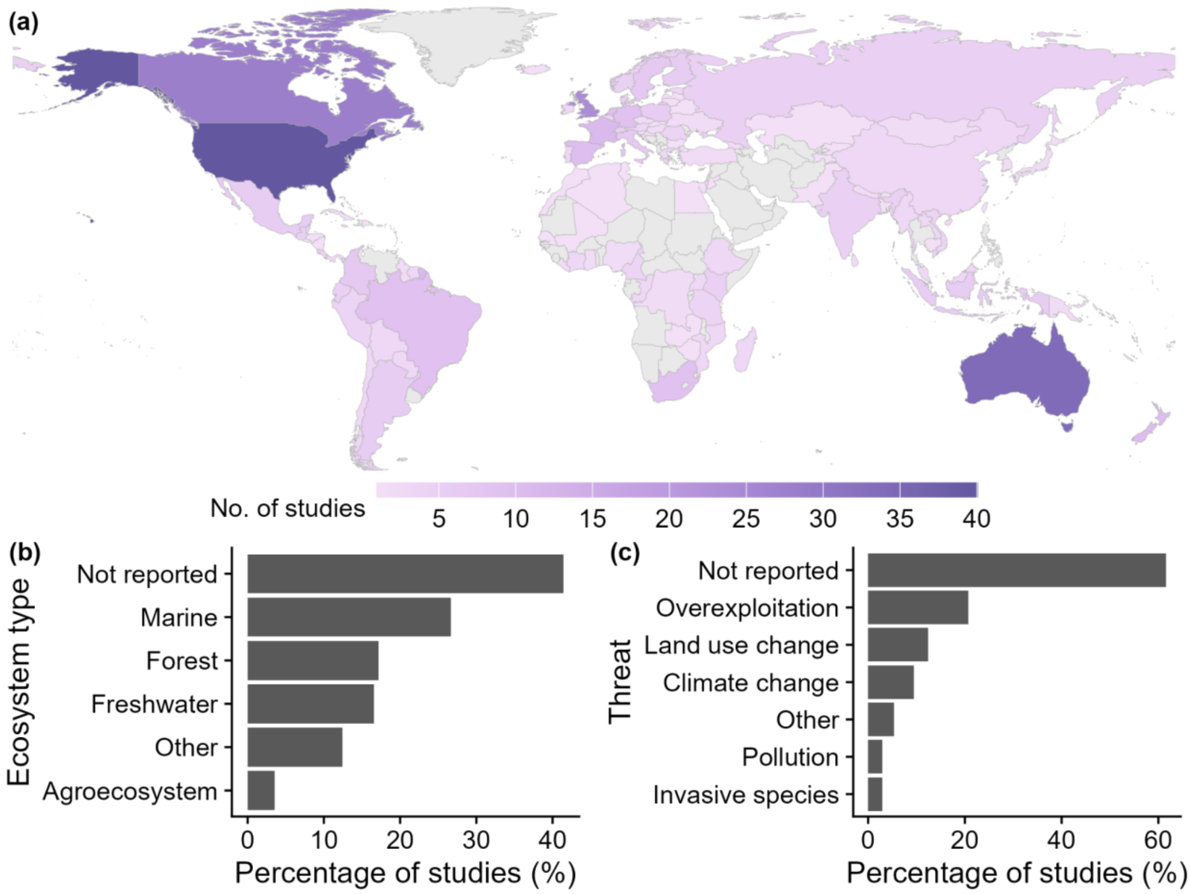

Figure 1 – The geographical, ecosystem type, and conservation context of the studies: (a) the number of studies on factors influencing evidence use found in each country (light grey indicates countries with no studies); (b) the percentage of studies related to different ecosystem types; (c) the percentage of studies addressing particular threats to biodiversity.

Our searches identified a total of 29,585 studies, of which 736 were retained after screening of titles and abstracts, with 16,498 studies excluded manually at this stage and 13,907 excluded using automated methods (Figure S1). At the full-text screening stage, 549 studies were excluded, with the most common reasons being that they were not primary studies (282 studies, Figure S1), included study designs other than interviews, questionnaires, workshops, or documentary analysis (70 studies), or were not about biodiversity conservation (79 studies). After screening, 167 studies were retained for synthesis.

For the 167 studies included in our systematic map, there were 474 country mentions, since studies could include more than one focal country. The mean number of focal countries per study was 3.2 (SD=6.7). There was a clear bias towards English-speaking countries, with the USA, Australia, Canada, and the UK representing 26.5% (n=126) of the studies identified (Figure 1a). The Americas (150 country mentions, 31.6%) was the most studied continent, closely followed by Europe (148 mentions, 31.2%). Oceania and Africa were equally studied with 58 country mentions each (12.2%), while Asia was marginally less studied (56 mentions, 11.8%). Regarding the scale at which studies were undertaken, the largest group was represented by those that focused on multiple organisations within the same sub-national region (30.8%), while a similar number of studies focused on organisations in multiple countries (30.2%). Fewer studies focused on multiple regions within a single country (21.3%) and on single organisations (13.0%). Regarding the spatial scale at which the decisions being made were studied, many studies did not report this (28.0%), with a similar number of studies reporting regional scale decision making (27.2%), and fewer local and national scale decisions (18.9% and 15.4% respectively) and relatively few at an international scale (7.1%).

Many studies (41.4%) did not report a focal ecosystem type (Figure 1b), with the most studied ecosystems being marine (26.6%), forest (17.2%) and freshwater (16.6%) systems. All other ecosystems - such as agroecosystems, grasslands, and shrublands - were represented by 15.9% of studies. Numerous studies focused on more than one biome type, and so percentages do not sum to 100%. Similarly, most studies (61.5%) did not focus on a particular threat to biodiversity (Figure 1c), while overexploitation (20.7%), land use change (12.4%), and climate change (9.47%) were the most common threats.

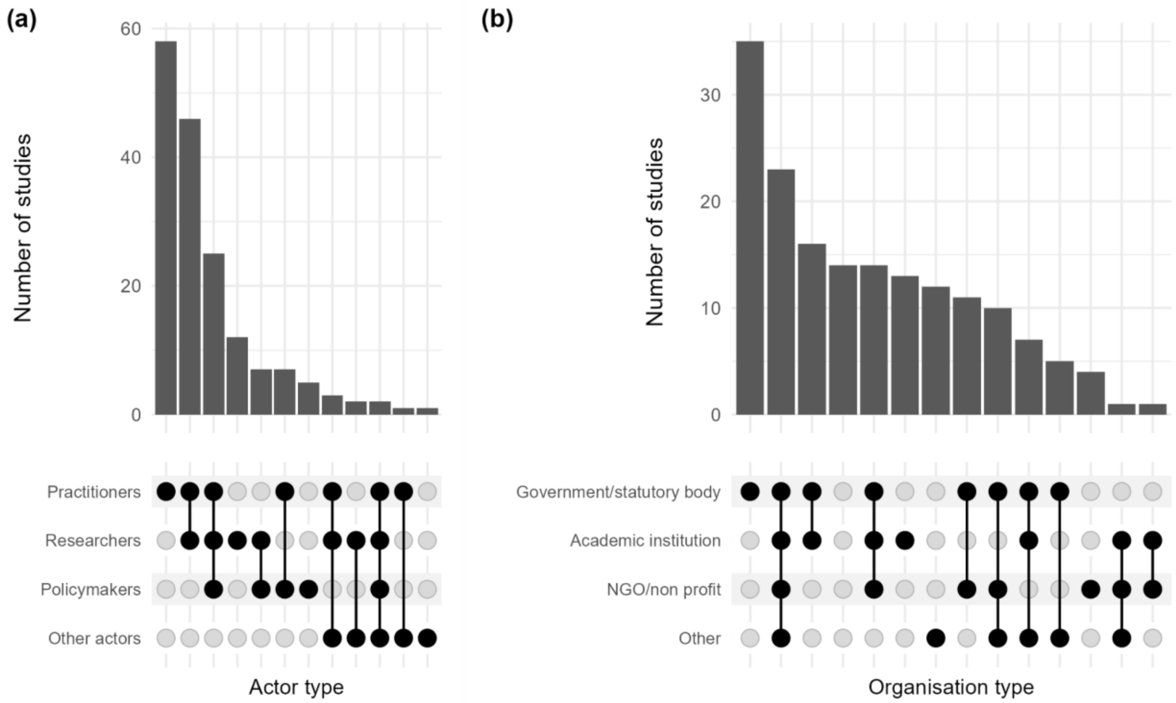

Figure 2 – The mix of (a) actors and (b) related organisations investigated in each study. In each figure, the lower part represents the different mixes of actors/organisations studied,

with a dark dot representing occasions where they have been studied, and grey dots those where they have not, lines indicate the combinations of these different mixes. The bars above each combination indicate the number of studies represented by each mix.

The vast majority of studies included practitioners as actors (85.0%, n=142), with a majority of studies also including researchers (58.1%, n=97), while relatively few studies included policymakers (27.5%, n=46) and other actors, such as research funders or citizens (5.4%, n=9). Most studies included more than one category of actor (55.7%), with the most common mixes being practitioners and researchers (27.5%, n=46, Figure 2a), practitioners, policymakers, and researchers (15.0%, n=25), and policymakers and researchers (4.2%, n=7). Government and statutory bodies were the most studied organisation type (Figure 2b), with academic institutions, NGOs, and non-profits also frequently studied, while the private sector and community organisations were studied less regularly. Similar to the results for actors, most organisation types - including academic institutions, NGOs and non-profit organisations, and other groups such as the private sector, and local or Indigenous organisations - were typically studied in conjunction with other organisations (Figure 2b).

Most studies (52.1%) did not provide details of what type of scientific evidence they considered. The most commonly mentioned types of scientific evidence related to peer reviewed studies (16.0%), decision-making tools (5.9%) and research data (5.9%). Most studies focused on evidence from the natural sciences (48.5%, Figure S2) while in 36.1% of studies it was unclear what discipline the scientific evidence used in decision-making was drawn from. Relatively few studies explicitly considered the use of both natural and social science evidence in conservation decision-making (14.2%) and studies that focused exclusively on the use of evidence generated by the social sciences were very rare (1.2%).

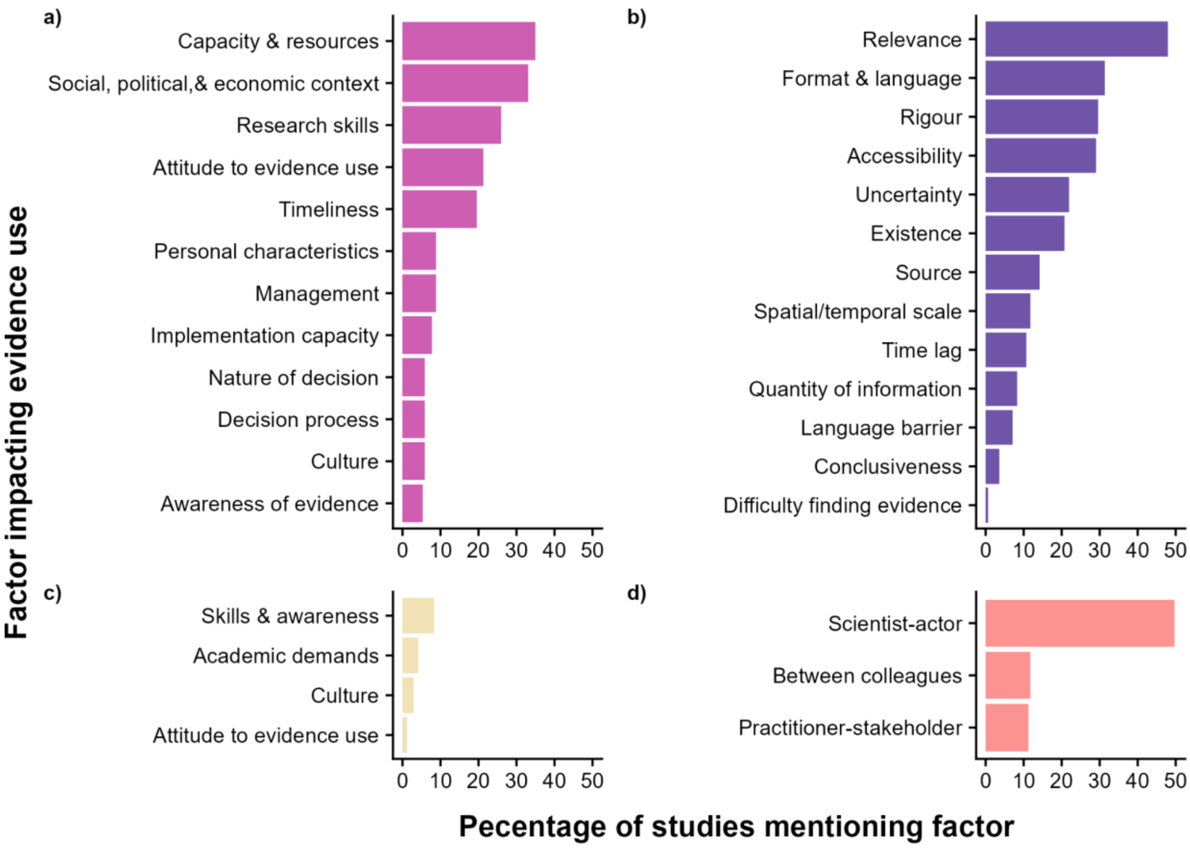

Figure 3 – The percentage of studies (n=167) that mention individual factors that influence scientific evidence use in biodiversity conservation. Factors are divided into broad thematic categories to facilitate interpretation: (a) characteristics of practitioners and policymakers,

organisations, and decision contexts, (b) characteristics of scientific evidence, (c) characteristics of researchers and research organisations, and (d) relationships.

The most commonly reported factor affecting evidence use was scientist-actor relationships, which were mentioned in around half of studies (49.7%, n=84, Figure 3d), closely followed by the relevance of the scientific evidence (47.9%, n=81, Figure 3b) and the capacity and resources of policy or practice organisations (34.9%, n=59, Figure 3a). The mean number of factors identified per study was 5.2 (SD=3.2), with 21.9% of studies identifying ≤2 factors and 9.5% of studies identifying ≥10 factors.

In addition to capacity and resources, the social, economic, and political context (33.1%, n=56), practitioner/policymaker research skills (26%, n=44), the attitude of practitioners and policymakers to the use of scientific evidence (21.3%, n=36), and the timeliness of the evidence (19.5% n=33) were all commonly reported factors influencing evidence use of policy or practice organisations.

Factors relating to the characteristics of scientific evidence were the most commonly studied, compared to other thematic categories. Approximately half of studies identified relevance of the evidence as important (47.9%, n=81studies, Figure 3b). The format and language (i.e. the format - such as peer-reviewed studies, reports, or presentations - and style of language in which evidence is presented, 31.4%, n=53), rigour (29.6%, n=50), the accessibility of evidence (29.0%, n=49), and uncertainty (21.9%, n=37) were also frequently mentioned in studies. Factors such as the existence of evidence, the source of the evidence, the spatial or temporal scale of the evidence and time lags associated with evidence production were mentioned moderately frequently, with 10-20% studies citing them as factors influencing evidence use (Figure 3b). Meanwhile, the quantity of information, language barriers, conclusiveness, and difficulty in finding the evidence were mentioned in fewer than 10% of studies (Figure 3b).

Factors associated with the characteristics of researchers were rarely identified in studies (Figure 3c), with the skills and awareness of researchers related to policy and practice receiving most attention (9%, n=12) while the other factors in this category were identified in fewer than 5% of studies. Regarding relationships, scientist-actor relationships were the most commonly cited factor (Figure 3d, 49%, n=64), whilst relationships that practitioners and policymakers have with their colleagues (15%, n=19), and relationships between practitioners/policymakers and other stakeholder groups (13%, n=17) were identified less frequently.

ies

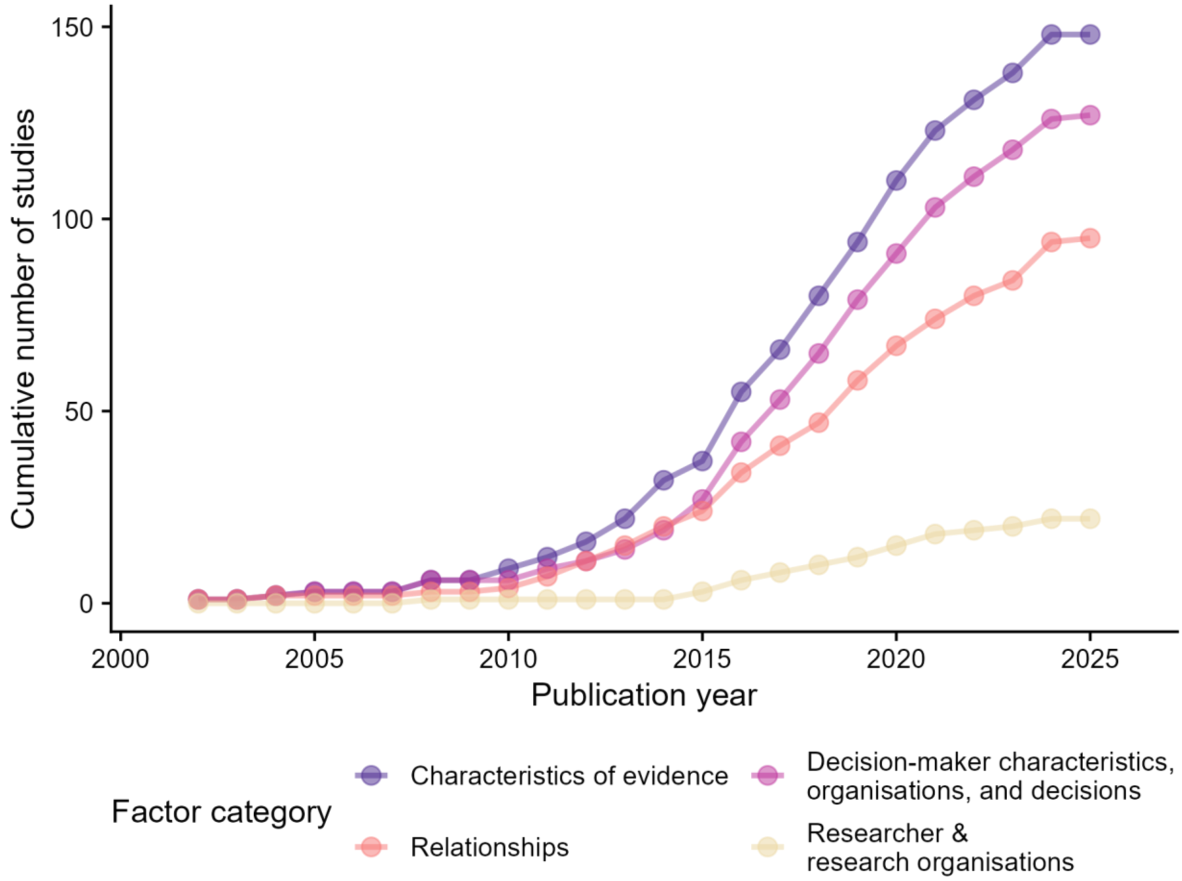

Figure 4 – Temporal changes in the cumulative number of studies that have addressed different broad categories of factors impacting scientific evidence use in conservation. Dots represent the cumulative total number of studies for each broad category of factors for a given year. Note that the data for 2025 is incomplete due to the date of the literature searches.

We did not find any studies on the factors influencing scientific evidence use in conservation prior to the early 2000's (Figure 4). The relative attention paid to the four broad categories of factor impacting evidence use has remained consistent since the mid 2010's (Figure 4), with characteristics relating to evidence the most commonly identified (mean = 7.1 studies per year), followed by the characteristics of decision-makers, their organisations, and decisions (6.1 studies per year), relationships (4.5 studies per year), and researcher and research organisations (1.1 studies per year). There was a noticeable increase in the number of studies from 2015 onwards.

Discussion

Our results show that the most frequently identified factors impacting the use of scientific evidence in conservation practice and policy are relationships between scientists and practitioners/policymakers, the relevance of scientific evidence, and the capacity and resources of policy or practice organisations - each mentioned in ≥35% of studies. Beyond this top three, studies often noted the importance of the practitioner and policymaker characteristics, such as their technical skills and attitude towards evidence use, as well as factors associated with the broader decision-making context, such as social, economic, and political conditions. Evidence-related factors were also commonly reported, particularly accessibility, rigour, and the format and style of language in which the information is communicated. In contrast, relatively few studies identified factors associated with researchers as impacting the use of scientific evidence.

These results are remarkably consistent with those of the much larger review of Oliver et al (2026), who synthesised factors influencing evidence use from 2199 studies across a broad range of fields such as public health, health care, climate change policy, and education. Like our review, Oliver et al (2026) identified relevance, staff and resources, communication and contact between practitioners and scientists, and accessibility of evidence as key to evidence being used to inform policy and practice. Together, these patterns suggest that evidence use is shaped less by the availability of scientific knowledge than by how evidence is embedded within organisational settings, decision processes, and professional relationships. The results of our study are also similar to those of the smaller review of Kadykalo et al (2021) who found that evidence relevance, accessibility, organisational capacity and resources, time limitations, and researchers' communication skills were all common barriers to the use of evidence in conservation.

Our results also indicate biases in the evidence-use literature, with a focus on English-speaking countries such as the USA, Australia, and Canada; a tendency for studies to focus primarily on practitioners, with policymakers consulted relatively rarely; and a predominance of studies examining governmental and statutory bodies. Despite the lack of studies, practitioners and policymakers in the global south likely experience similar barriers to evidence use as found in these countries, however, future research should aim to identify whether there are unique factors that impede the use of evidence, such as political and resource constraints like such as limited internet connectivity preventing access to databases and scientific studies.

Factors influencing scientific evidence use

A large proportion of primary studies identified characteristics of scientific evidence itself as influencing its use. Relevance was particularly prominent amongst these and is a recurring theme in conservation, where biodiversity outcomes from management can be highly context dependent (Cook et al., 2013). What determined relevance was rarely defined, but the studies often mentioned that data available at large scales were not relevant to local scale decisions (Gagné et al., 2020; Jacaban et al., 2022; Miljand & Eckerberg, 2022; Rasmussen et al., 2017). As such, relevance is likely influenced by the ecological and socioeconomic similarities between the contexts in which scientific evidence is generated and the decision context (Adams & Sandbrook, 2013; Christie et al., 2020, 2023). The format and style of language used to communicate scientific evidence was frequently cited as influencing evidence use, which reflects scientists' training to write for disciplinary specialists using technical language (Fazey et al., 2005), but can limit the interpretability and usability of evidence for practitioners and policymakers (Barrett & Rodriguez, 2021; Cvitanovic et al., 2016; Karam-Gemael et al., 2018). Accessibility of evidence was frequently mentioned in studies and reviews and has long been recognised as influencing evidence use (Pullin et al., 2004), but remains a problem due both to paywalls and difficulties in finding information (Cook et al., 2012; Fabian et al., 2019; Walsh et al., 2019). The rigour of scientific evidence was regularly highlighted as influencing its uptake, mainly noting its perceived trustworthiness (Lemieux et al., 2018), although a number of studies highlighted concerns about the rigorousness of data generated by models (Peters et al., 2018) and by citizen science (Suškevičs et al., 2021).

The importance of relationships in shaping decision processes is well recognised (Gray, 2016; Noble & Fulton, 2020; Walsh et al., 2019) and our results reflect the vital role of relationships between researchers and practitioners/policymakers. Decisions are not made through neutral application of information, but are embedded within social interactions, norms, and expectations between actors (Lejano, 2021). One key aspect of relationships between scientists and practitioners/policymakers was simply whether there was any contact and communication at all (Yocum et al., 2022), which often facilitated overcoming barriers such as lack of access to evidence or difficulty in understanding technical language (Noble & Fulton, 2020). Additionally, trust in researchers and the research they produce plays an important role in shaping perceptions of the credibility and legitimacy of scientific evidence and the recommendations derived from it. Our findings therefore align with broader literature suggesting that relationships act as an enabling condition for evidence use, rather than a substitute for evidence quality or relevance.

Our results indicate that organisational factors, individual capacity, and decision context play key roles in shaping the use of scientific evidence. In particular, the influence of organisational capacity and resources is likely to be a major constraint. Most conservation organisations operate with limited funding and small teams (Armsworth et al., 2012), leaving staff with little time to search for, interpret, and apply scientific evidence. Linked to this, many staff in conservation organisations also feel that they lack the technical skills to read and interpret scientific evidence, with evidence use often more common among practitioners with higher levels of formal education or scientific training (Lemieux et al., 2018). The social, political, and economic context was also frequently cited in studies we found, reflecting the fact that the wider decision-context is important in determining whether scientific evidence informs practice and policy. Use of evidence on topics that are politically contentious in some contexts, such as the use of climate change data for conservation strategies in US states, highlight this issue (Peters et al., 2018; Rasmussen et al., 2017; Yocum et al., 2022).

Relatively few studies identified factors associated with the characteristics of researchers and research organisations as influencing the use of scientific evidence. This is somewhat surprising given long-standing concerns that academic incentive structures prioritise novel findings and high-impact journals (Shanley & López, 2009) and disadvantage the production of policy- or practice-relevant evidence (Dedeurwaerdere et al., 2026). Our finding that researchers' knowledge of policy and practice contexts was relatively frequently cited, aligns with previous work showing that researchers' perceptions of what constitutes relevant or useful evidence often differ substantially from those of practitioners and policymakers (Cook, Mascia, et al., 2013). However, the limited attention paid to researcher and research organisation characteristics in the conservation evidence-use literature does not indicate that they are unimportant, but should be seen as a knowledge gap and research priority.

Potential solutions

Given the diversity and interrelatedness of the factors influencing the use of scientific evidence, the conservation sector must focus on delivering cross-cutting solutions that address multiple barriers. One such widely recognised cross-cutting solution is the use of knowledge co-production and participatory approaches (Nel et al., 2016), which can promote improved scientist-actor relationships, increased evidence relevance, and build capacity both for researchers and practitioners/policymakers. However, such approaches also have trade-offs: they may be time consuming, expensive, or impractical in many situations, and may generate questions that researchers find uninteresting (Sutherland et al., 2017; Walsh et al., 2019). While addressing specific issues such as accessibility, resources and capacity, and scientist-actor relationships, as discussed below, could be beneficial, ultimately, a systemic shift in how evidence is valued and applied in conservation decisions is required to overcome the underlying causes.

In the conservation literature there is a strong focus on initiating and improving relationships via bridging or connecting the research and practice/policy communities (Kadykalo, Buxton, et al., 2021; Wyborn, 2015) the use of knowledge brokers (Duncan et al., 2020), or boundary spanners (Posner & Cvitanovic, 2019) At the same time, while interventions that aim to build strong relationships may facilitate communication and trust, they cannot on their own overcome structural constraints such as limited organisational capacity, misaligned incentives, or political and institutional pressures. As such, relationships should be understood as part of a wider system of conditions shaping evidence use, interacting with organisational, contextual, and evidentiary factors rather than operating independently.

Solutions relating to evidence characteristics are perhaps the most tractable of the issues we identified in this study, since they largely relate to how researchers produce research outputs. Attempts to improve relevance and accessibility include synthesising primary studies and making the resulting information freely available through initiatives such as Conservation Evidence (Sutherland et al., 2019) and the Collaboration on Environmental Evidence. However, accessibility and relevance are insufficient, as evidence use is often impeded by the technical language and format used to communicate it. Conservation Evidence addresses this through structured, plain-language summaries of scientific publications on management effectiveness, while dedicated sections highlighting management implications in journals such as *Journal of Applied Ecology*, complement this approach (Groves et al., 2024). We encourage more journals that publish applied biodiversity research to follow this example. Emerging tools such as generative artificial intelligence may further address problems of technical language by allowing more conversational, user-tailored access to evidence, although careful testing is required to manage risks related to bias and error (Iyer et al., 2025).

The importance of organisational factors such as capacity, leadership, incentives, and resourcing is well-established in the broader evidence use literature (Criado-Perez et al., 2020; Currie et al., 2020) and addressing these factors can improve both evidence use and societal benefits (Boaz et al., 2024). Despite this, much of the conservation literature focuses on factors more amenable to alteration, such as the formatting or dissemination of evidence. However, there are important structural reasons for this. Biodiversity conservation is chronically underfunded (Guénard et al., 2025; Waldron et al., 2013). As such while interventions that aim to increase capacity and resourcing are often desirable, in many cases they may be unrealistic. This is in contrast with fields such as public health or education where organisations are typically larger and better resourced.

Biases and methodological limitations

Our study has a number of important caveats relating to the conceptualisation of the factors influencing evidence use and the methods we used. First, the frequency with which factors are mentioned does not necessarily indicate their relative importance, whether they were presented as barriers or enablers to evidence use, or their magnitude of influence. We recommend future syntheses assess what contexts each specific factor impedes or facilitates the use of evidence. Most studies in the systematic map elicited people’s opinions about factors influencing evidence use and so responses could be subject to biases, resulting in examples that come easily to mind being assumed to be more important than they are in reality. Equally, the factors we identified are interlinked, not independent of each other meaning that once one barrier is overcome, other factors are likely to become more important.

While we largely followed best-practice guidelines for conducting systematic maps (Collaboration for Environmental Evidence, 2018), time and resource constraints to our project meant that it was necessary to drop some elements, such as a publicly available a priori protocol. We did however share such a protocol within the review team (see supplementary methods). We did not search for or include studies in non-English languages or grey literature and acknowledge that this likely magnified the bias towards studies being conducted in English-speaking countries (Hannah et al., 2024; Nuñez & Amano, 2021). Finally, we did not conduct critical appraisal - a process which assesses the robustness and validity of studies included in synthesis (Collaboration for Environmental Evidence, 2018; Stanhope & Weinstein, 2022). Given the wide variation in the robustness of qualitative research in conservation (Moon et al., 2016; O'Brien et al., 2014; Young et al., 2018), we recommend such an assessment in future follow-up studies.

Conclusions

For researchers, the next challenge is to shift from the identification of factors impacting evidence use, to identifying and testing workable solutions for overcoming barriers. Particular attention should be paid to interventions that aim to reduce multiple barriers at once. To do this, researchers should follow the guidance provided by our systematic map and collaborate with decision makers when designing and conducting studies, to ensure strong interactions between actors and the production of relevant evidence.

For practitioners and policymakers, our findings reinforce the value of sustained collaboration with researchers, not only to address priority knowledge needs, but also to support the interpretation of technical results, and seek scientific advice when making decisions. Seeking scientific input early in decision processes, articulating priority knowledge needs, and investing in mechanisms that facilitate dialogue can help bridge gaps between evidence and action. However, our synthesis also underscores that expectations around evidence-informed practice must be realistic given the systemic chronic under-resourcing of conservation organisations.

Finally, although the literature on evidence use continues to grow, it is important to reflect on the position of evidence-informed decision making within broader political and institutional contexts. For example, the recent massive cuts to research spending in the USA threaten capacities to support evidence-based decisions (Donald, 2025). At the same time, there is increasing recognition of the importance of Indigenous leadership and diverse knowledge systems in conservation. Although our review focused specifically on scientific evidence, future work should continue to explore how different forms of knowledge can be combined since, despite much work on this topic, this is still challenging to do in practice (Tengö et al., 2017). Addressing the science-practice gap in conservation will ultimately require not only better evidence, but supportive institutions, inclusive processes, and sustained commitment to learning across knowledge systems.

Positionality statement

We would like to state our position because we believe that who is performing the research and how an issue is conceptualised and analysed depends on who is defining the problem and their visions and preferences about possible solutions. In this case, we are mostly natural and social scientists working in nature conservation, who believe that the use of scientific evidence to inform nature conservation decision-making processes is desirable. Our collective experience working at the science-practice interface has informed the research question of this study. We understand that our analysis and conclusions are inseparable from our aspiration to contribute to better nature conservation outcomes.

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Supplementary materials

Supplementary methods

Screening protocol for evidence factors synthesis

This protocol outlines the process used to screen articles for a systematic review examining the factors that influence evidence use in biodiversity conservation. This is a living document and will be updated in order to resolve any disagreements between members of the review team. The protocol is divided into the two sections, each linked to a phase of the screening: (i) title and abstract level screening; (ii) full-text screening.

Although the screening process is divided into yes/no questions there are situations in which the answer is not clear - representing a 'maybe' response. In these cases, reviewers should seek to include studies in order to not risk excluding potentially relevant material.

Title and abstract screening stage

1. Is the abstract in English?
    a. Yes - Go to 2.
    b. No - Mark 'Exclude with reasons' as 'Abstract not in English' and click 'Apply'.
2. Does the abstract mention biodiversity conservation[1]?
    a. Yes - Go to 3
    b. No - Mark 'Exclude with reasons' as 'Not about conservation' and click 'Apply'
3. Does the abstract mention policy[2] or practice[3]?
    a. Yes - Go to 4
    b. No - Mark 'Exclude with reasons' as 'Not about policy or practice' and click 'Apply'
4. Does the abstract focus on the use of scientific evidence[4] in decision-making about policy and practice?
    a. Yes - Go to 5
    b. No - Mark 'Exclude with reasons' as 'Not about Evidence use' and click 'Apply'.
5. Does the abstract mention factors[5] that influence evidence use?

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[1] We are interested in studies that focus on the preservation, protection, management, or restoration of wild biodiversity at any level (e.g. species, habitat, or ecosystem). Studies that mention terms that could include conservation such as natural resource management or fisheries, without any further detail should be considered relevant. Studies that focus on general environmental issues (e.g. pollution, agriculture, forestry) without any clear link to biodiversity conservation are not relevant. Additionally, we do not consider ecosystem services to be relevant.
[2] We consider 'policy' to represent formal guidelines, strategies, laws, regulations, and frameworks developed by governments, ranging from local to national, or intergovernmental organisations.
[3] We consider 'practice' to be the on-the-ground actions, behaviours, or management techniques applied by conservation practitioners, land managers, NGOs, or local communities.
[4] We define scientific evidence as information that is systematically generated through scientific methodologies (such as experiments, systematic observations, or surveys) and documented in a transparent and reproducible manner. This includes both quantitative and qualitative data. For our purposes, scientific evidence does not include anecdotal or traditional knowledge.
[5] We are interested in both barriers and enablers to evidence use which could include a wide range of different issues. These could include, but is not limited to, difficulties in understanding technical

a. Click 'Include'
b. No - Mark 'Exclude with reasons' as 'Not about factors that influence evidence use' and click 'Apply'.

Full text screening

1. Can you find a pdf of the article online?
   a. Yes - Go to 2.
   b. No - Mark 'Exclude with reasons' as 'pdf not available online'
2. Do you have access to the pdf online?
   a. Yes - Download the pdf of the article and upload it to Rayyan by clicking on the 'Upload' button. Go to 3.
   b. No - Mark 'Exclude with reasons' as 'pdf not accessible online'
3. Is the full text of the article in English?
   a. Yes - Go to 4
   b. No - Mark 'Exclude with reasons' as 'Not in English'
4. Is it a primary study (i.e. not an opinion piece or review of academic literature)? A primary study has to have collected information of some sort.
   a. Yes - Go to 5.
   b. No - Mark 'Exclude with reasons' as 'Not a primary study'
5. Does the study involve the collection or analysis of empirical data from stakeholders or decision-making contexts? This includes surveys, interviews, or workshops with stakeholders and/or documentary analysis of original policy, planning, or management documents. The stakeholders could be practitioners, policymakers, scientists, or anyone else involved in the process.
   a. Yes – Go to 6.
   b. No – Mark 'Exclude with reasons' as 'Not relevant study design'.
6. Does the study explicitly focus on biodiversity conservation[6]? We can afford to be quite strict about this E.g. Studies that look at general resource management without mentioning that this relates to biodiversity should be excluded.
   a. Yes - Go to 7.
   b. No - Mark 'Exclude with reasons' as 'Not about conservation'
7. Is the study about conservation policy[7] or practice[8]? We can be a little generous about this, including anything that might relate to policy or practice.
   a. Yes - Go to 8
   b. No - Mark 'Exclude with reasons' as 'Not about policy or practice'

scientific language, lack of relevant evidence, lack of time to consult evidence, or lack of contact with scientists.

[6] We are interested in studies that focus on the preservation, protection, management, or restoration of biodiversity at any level (e.g. species, habitat, or ecosystem). Studies that do not have an explicit link to biodiversity conservation are not relevant. Additionally, we do not consider ecosystem services to be relevant.

[7]We consider 'policy' to represent formal guidelines, strategies, laws, regulations, and frameworks developed by governments, ranging from local to national, or intergovernmental organisations.

[8] We consider 'practice' to be the on-the-ground actions, behaviours, or management techniques applied by conservation practitioners, land managers, NGOs, or local communities.

8. Is the study about the use[9] of scientific evidence[10] in decision-making?
    a. Yes - Go to 9
    b. No - Mark 'Exclude with reasons' as 'Not about scientific evidence use'.
9. Does the study identify factors[11] that influence scientific evidence use in conservation management and/or policy? These factors could include, but are not limited to, difficulties in understanding technical scientific language, lack of relevant evidence, lack of time to consult evidence, or lack of contact/relationship with scientists.
    a. Yes - Click 'Include'
    b. Mark 'Exclude with reasons' as 'Not about factors that influence evidence use'

Data extraction protocol

1. Study details

Below is the workflow for filling out the Google form with which to extract data from the primary studies. This will ensure data extraction is relatively simple, will help to standardise inputs, and reduce errors. Tables 1 and 2 give detail about the data to be extracted and a description of each variable.

1. Add your name under the reviewer name field
2. Add the 'rayyan key' for the study you are extracting data for. This allows for unique identification of each study
3. Enter the details of the country or countries in which the study was conducted If the study was conducted in more than one country separate these with a comma (e.g. France, Spain, UK). Where regions (e.g. South America) have been studied, enter this. If studies cover the entire world enter 'Global' in this field. If there are no details provided about the location of the study enter 'No details' in this field.
4. Enter the details of the Scale of the study. This variable captures whether the study was done at a small or large scale. This only refers to the study itself rather than the scale of decision making. Enter one of the following values:
    a. Not reported: No reported scale or not clear
    b. Single (one organisation, one municipality, one ministry).
    c. Multi-unit (several units in the same state/region/country).
    d. Multi-region within one country (several states/provinces/regions).
    e. Multi-country (respondents from more than one country).
5. Enter information on the biome or biomes that are the focus of the study. If the biome studied is not represented enter these details
6. Enter information on the taxonomic group or groups that are the focus of the study. If

[9] We define 'use' as use that informs a specific action, use that indirectly influences people's understanding, and use of evidence to justify a position or action
[10] We define scientific evidence as information that is generated using scientific methodologies that could be used to assess a hypothesis/question, including both quantitative and qualitative data. For our purposes, scientific evidence does not include anecdotal or traditional knowledge. It does however, include citizen science.
[11] We are interested in both barriers and enablers to evidence use which could include a wide range of different issues. These could include, but is not limited to, difficulties in understanding technical scientific language, lack of relevant evidence, lack of time to consult evidence, or lack of contact with scientists.

the taxonomic group studied is not represented enter these details

7. Enter information on the conservation problem that is the focus of the study. If the conservation problem studied is not represented enter these details
8. Enter a description of the type of decision that is the focus of the study. This could include things like protected area management, fisheries management, or forest restoration planning. If there are no details about this enter ‘No details’ in this field.
9. Enter the details of the stakeholder populations which were the focus of the study. If the type of stakeholder is not listed then enter this detail.
10. Enter details of the type of organisations studied, these can include:
    a. Government/statutory bodies
    b. NGOs/non-profits
    c. Community/local organisations
    d. Intergovernmental organisations
    e. Private sector
    f. Academic institution
    g. Other - enter details
11. Enter details of the scale of decision-making, this can include:
    a. Local: local/municipal government site-level managers;
    b. Regional: States/provinces
    c. National: country level NGOs or government departments
    d. International: Intergovernmental bodies, multinational NGOs
12. Enter details of the type of scientific evidence related to the decision-making that was investigated. If no information is provided on this select ‘No description provided’. If the type of evidence investigated is not in the options provided enter this information under the ‘Other’ option. Here we refer to ‘Peer-reviewed studies’ as scientific studies of any sort that have been through a peer-reviewed process and are published in some format. ‘Research data’ refers to the data generated by scientific research which may be of interest to decision-makers. ‘Decision-making tools’ refers to tools that aid with this decision making process that are based on scientific evidence of some form.
13. Enter details on the discipline represented by the scientific evidence which is being used by stakeholders. If there are no details of this enter ‘Not mentioned’. Here ‘Natural sciences’ refers to science that investigates the physical world such as biology, geology, chemistry or physics. ‘Social sciences’ refers to science that investigates human societies, relationships, and culture, such as sociology, psychology, economics, anthropology, and political science.
14. Enter details on the study design used to collect information on factors influencing evidence use, such as surveys, interviews, focus groups, workshops, and documentary analysis.
15. Enter details on the data collected by researchers such as stakeholder perceptions, document-based information, or mixed data.

Factors affecting evidence use

16. Enter data on the factors influencing evidence use. These could be factors that positively influence scientific evidence use (e.g. good relationships between researchers and practitioners) or negatively influence scientific evidence use (e.g. a lack of relationships between researchers and practitioners). In this study we make

no distinction between whether these factors were barriers or facilitators. Refer to Table 2 for a detailed description of these factors.

17. Click submit and start extracting data for the next study

Table S1 - Benchmark studies used in the design of search strings

Author	Year	Title	Journal	doi
Walsh et al.	2019	A typology of barriers and enablers of scientific evidence use in conservation practice.	*Journal of Environmental Management*	https://doi.org/10.1016/j.jenvman.2019.109481
Lemieux et al.	2018	Evidence-based decision-making in Canada's protected areas organizations: Implications for management effectiveness.	*FACETS*	https://doi.org/10.1139/facets-2017-0107
Karam-Gemael et al.	2018	Poor alignment of priorities between scientists and policymakers highlights the need for evidence-informed conservation in Brazil.	*Perspectives in Ecology and Conservation*	https://doi.org/10.1016/j.pecon.2018.06.002
Arias et al.	2021	Use of evidence for decision-making by conservation practitioners in the illegal wildlife trade.	*People and Nature*	https://doi.org/10.1002/pan3.10258
Fabian et al.	2019	How to close the science-practice gap in nature conservation? Information sources used by practitioners.	*Biological Conservation*	https://doi.org/10.1016/j.biocon.2019.04.011
Cvitanovic et al.,	2015	Overcoming barriers to knowledge exchange for adaptive resource management; the perspectives of Australian marine scientists.	*Marine Policy*	https://doi.org/10.1016/j.marpol.2014.10.026
Nguyen et al.	2019	What is "usable" knowledge? Perceived barriers for integrating new knowledge into management of an iconic Canadian fishery.	*Canadian Journal of Fisheries and Aquatic Sciences*	https://doi.org/10.1139/cjfas-2017-0305
Pullin & Knight	2005	Assessing conservation management's evidence base: A survey of management-plan compilers in the United Kingdom and Australia.	*Conservation Biology*	https://doi.org/10.1111/j.1523-1739.2005.00287.x
Young & Van Aarde	2011	Science and elephant management decisions in South Africa.	*Biological Conservation*	https://doi.org/10.1016/j.biocon.2010.11.023
Gossa et al.	2015	The research–implementation gap: how practitioners and researchers from developing countries perceive the role of peer-reviewed literature in conservation science.	*Oryx*	https://doi.org/10.1017/s0030605313001634

Table S2 - Search strings used for each of the platforms used to find literature

Platform	Search string	Number of results
Web of Science	TS=((evidence* OR ("knowledge NEAR/5 use*") OR ("scientific NEAR/5 information")) AND (barrier* OR facilitat* OR uptake* OR utilis* OR utiliz* OR implement* OR adopt* OR "research translation" OR "science-practice gap" OR "science-implementation gap" OR "knowing-doing gap" OR "decision making" OR "decision-making") AND (conservation OR biodiversity OR ecosystem* OR fishery OR fisheries OR marine OR freshwater OR "natural resource management"))	23415
Scopus	TITLE-ABS-KEY ((evidence* OR (knowledge W/5 use*) OR (scientific w/5 information)) AND (barrier* OR facilitat* OR use OR used OR uptake* OR utilis* OR utiliz* OR "science$practice gap" OR "science$implementation gap" OR "knowing$doing gap" OR "decision making" OR "decision-makin g") AND (conservation OR fishery OR fisheries OR marine))	13893

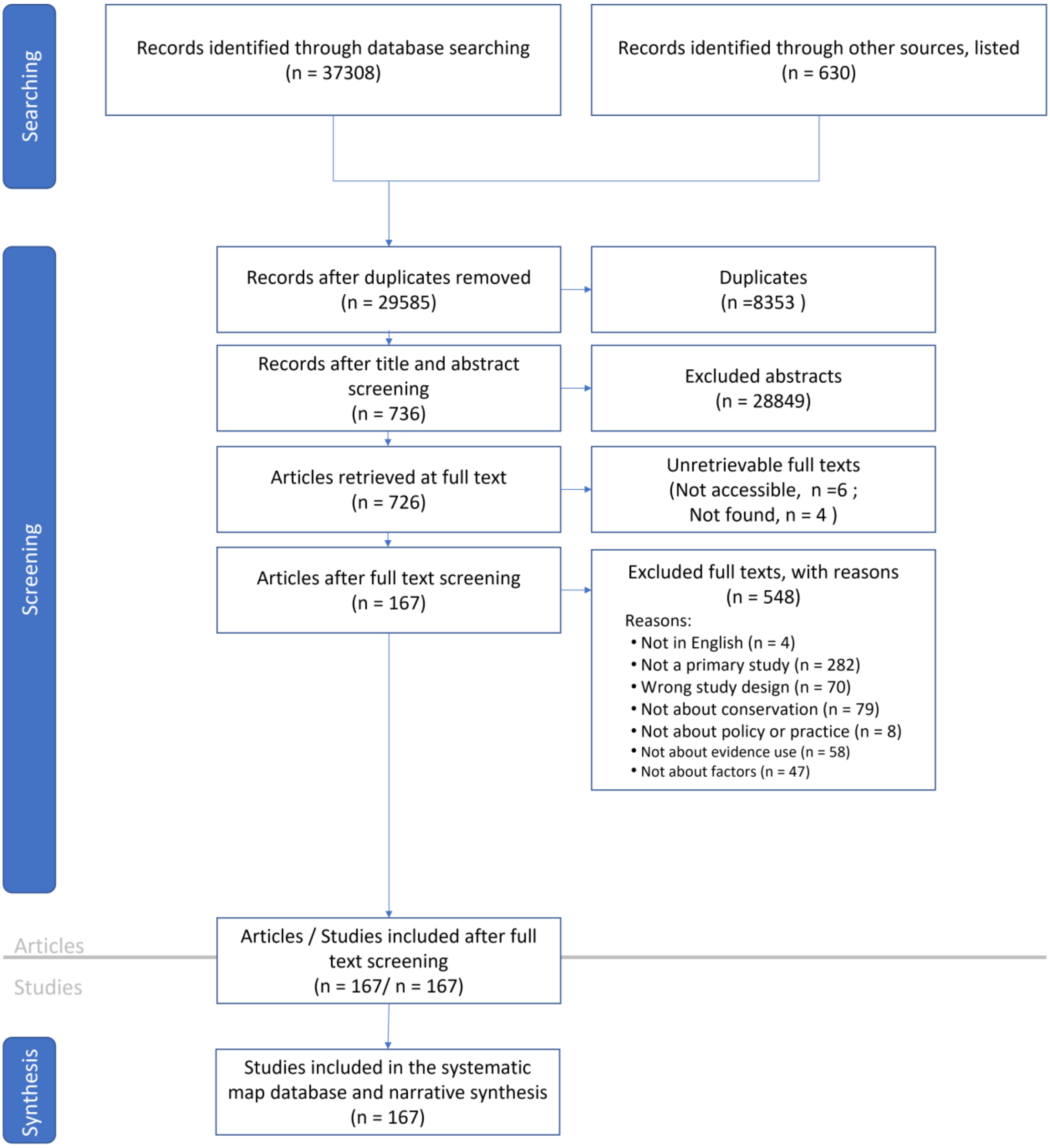

Figure S1 - ROSES diagram representing the searching and screening process carried out to construct the systematic map

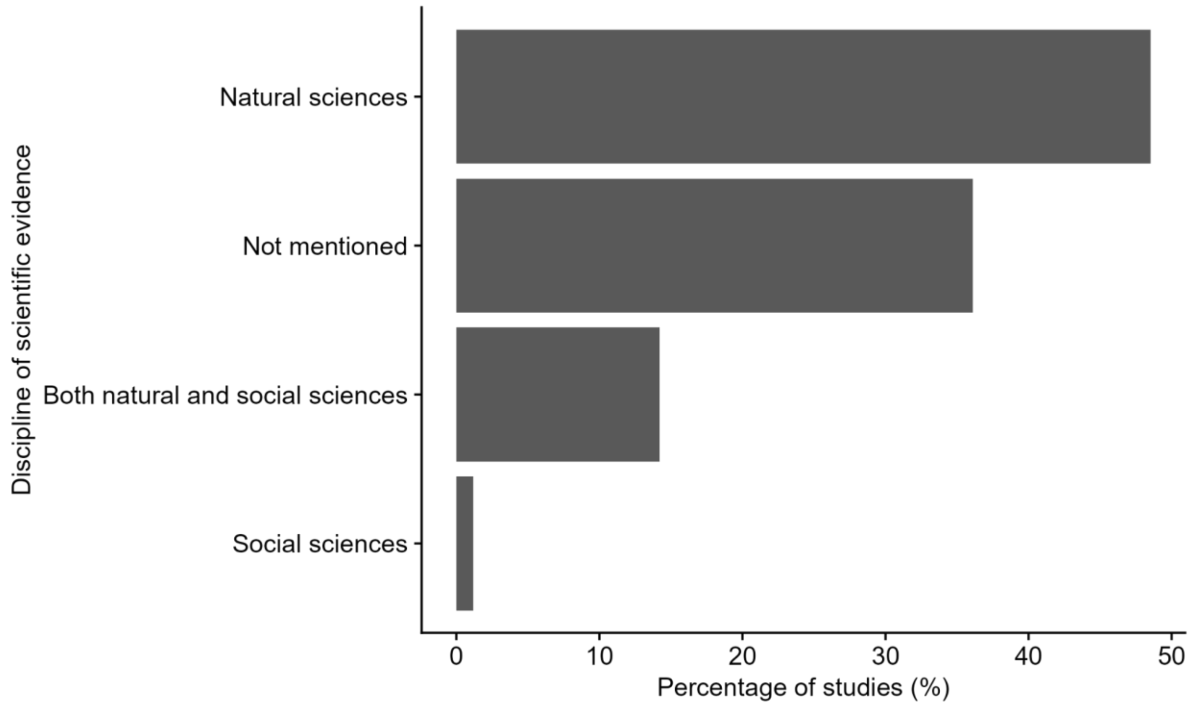

Figure S2 - The frequency with which different disciplines of scientific evidence were investigated in studies assessing factors impacting the use of scientific evidence in conservation decision-making

Studies used in systematic map

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