

SUOMALAINEN TIEDEAKATEMIA FINNISH ACADEMY OF SCIENCE AND LETTERS ACADEMIA SCIENTIARUM FENNICA

The Finnish Science-for-Policy Ecosystem

DISCUSSION PAPER





SUOMALAINEN TIEDEAKATEMIA FINNISH ACADEMY OF SCIENCE AND LETTERS ACADEMIA SCIENTIARUM FENNICA

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The views expressed in this document are those of the authors and do not represent the official position of the Finnish Academy of Science and Letters.

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J&AE JANE AND AATOS

Table of Contents

Acknowledgements						
Introduction 5						
1. Conceptual Framework, Method, and Data						
	1.1	Conceptual Framework: types and properties of advisory functions	6			
	1.2	Method and data collection	7			
2.	Big pi	cture: The Finnish Science-for-Policy Ecosystem	9			
	2.1	Historical developments	10			
	2.2	Large language model text analysis on Finnish science-for-policy	12			
3.	Main /	Actors in the Science-for-Policy Ecosystem	17			
	3.1	Synthesis of the types of organisations	17			
	3.2	Higher Education Institutions	19			
	3.3	Research Council of Finland	24			
	3.4	Strategic Research Council	27			
	3.5	Ministries and agencies	30			
	3.6	Government Research Institutes	32			
	3.7	Non-Governmental Research Institutes	34			
	3.9	Commissions and Councils	38			
	3.10	Science Panels	40			
	3.11	Learned Societies and Academies of Science	43			
	3.12	Foundations	45			
	3.13	Knowledge brokering organisations	47			
	3.14	Interest groups and trade unions	49			
	3.15	Other intermediaries	51			
	3.16	Conclusion	52			
4.	Devel	opment Needs in the Science-for-Policy Ecosystem	53			
	4.1	Interaction and communication	53			
	4.2	Knowledge brokering	55			
	4.3	Structures	56			
	4.4	Culture	57			
5. Conclusion: Three Messages on the Future of the Ecosystem						
6.	Apper	ndices	61			
Re	ferenc	ces	64			
List of abbreviations 6						
List of tables and figures						

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Introduction

This discussion paper provides an overview of the science-for-policy ecosystem in Finland. In broad terms, science-for-policy can be understood as "social processes that involve relationships between scientists and other actors in policymaking, enabling exchanges, co-evolution, and the joint construction of knowledge with the goal of enhancing decision-making."¹

The paper has been written with optimism that new bridges between science and policy can be built in the future. More specifically, the paper has three objectives. First, it provides a high-level introduction to Finland's science-for-policy ecosystem, primarily for international audiences seeking to understand the national context. Second, it contributes to broader global discussions on science-for-policy by responding to the Commission Staff Working Document,² which calls for strengthening national ecosystems in European Union Member States. The paper is part of a series of similar discussion papers published in other EU Member States. The national papers done in other contexts, e.g., in Denmark, Greece, France, Portugal and Spain, have been tremendously helpful for the work on science-for-policy in Finland. Through this paper, we hope to reciprocate by offering perspectives that can inform the European and global dialogue. Finally, the paper presents general evaluative observations on Finland's science-for-policy ecosystem. With these, we wish to contribute to national policy discussions on the future of sciencefor-policy in Finland.

From the outset, we have recognised that mapping the science-policy interface is far from straightforward. Offering a comprehensive overview poses methodological challenges, and we acknowledge that this paper, by necessity, remains incomplete. Despite these limitations, we believe that even an incomplete or preliminary analysis is preferable to the absence of any contribution, and trust that it will serve as a helpful starting point for further work. We also hope that the discussion paper serves as a foundation for enriching discussions on how the science-for-policy ecosystem in Finland is organised and how it could be developed in the future.

The paper proceeds as follows. The first chapter outlines the conceptual framework and methodology utilised in authoring the paper. The second chapter introduces the big picture of the Finnish science-for-policy interface by looking into historical milestones and providing a large language model text analysis on the use of science in the parliamentary context. Chapter three introduces an overview of the Finnish science-policy ecosystem's various institutions, mechanisms, and actors. Chapter four expands the analytical lens from individual actors to the broader ecosystem and summarises key development needs relating to it. The concluding chapter brings the earlier chapters together by summarising three take-away messages on the future direction of the ecosystem.

1 Van den Hove, 2007: 807 2 European Commission, 2022

1. Conceptual Framework, Method, and Data

This discussion paper focuses on the institutional capacities of the Finnish science-for-policy ecosystem. It has been inspired by Joint Research Centre's (JRC) project "Strengthening and connecting ecosystems of science for policy across Europe",3 and similar discussion papers done in other EU Member States, including Denmark,⁴ Greece,⁵ France,⁶ Portugal,⁷ and Spain.⁸ The European Commission has identified that building robust science-for-policy ecosystems in EU Member States requires better connections and relationships between actors and organisations throughout the ecosystem.9

Conceptual Framework: types and 1.1 properties of advisory functions

This discussion paper follows the conceptual framework of similar reports on the Danish, Greek, French, Portuguese, and Spanish science-for-policy ecosystems.¹⁰ It builds on the framework proposed by Gluckman,¹¹ which outlines roles and functions of different stakeholders in the national science-for-policy ecosystem (Table 1).

	Advisory functions	Brief characterisation
Roles	Knowledge generator	Producing original scientific knowledge at the highest international level.
	Knowledge synthesiser	Producing reviews and integrated assessments of scientific knowledge and best practices.
	Knowledge broker	Translating, mobilising and communicating research and evidence to policymakers and practitioners.
	Capacity builder	Strengthening the skills and capacities of the actors engaging at the science-policy interface. These skills and capacities can include science communication, synthesising knowledge, interaction skills, knowledge brokering, as well as competencies to identify and articulate knowledge needs in policymaking.
	Enabler	Enables research and innovation potentially strengthening the connection of science and policy.
Tasks	Providing unsolicited input	Providing advice to policymakers on the initiative of the mechanism, e.g., if new important research is identified.
	Providing requested input	Responding to specific requests from policymakers, e.g., risk assessment, technical reports, etc.
	Identifying options	Pointing to potential actions and their consequences, balancing scenarios and desired outcomes.
	Monitoring	Technical monitoring of specific policy areas and collecting data on effects (and effectiveness) of regulation.
	Evaluating	Analysis and appraisal of policies and regulations, and evaluation of advisory services and functions.
Practices	Continuity	The degree of continuity of the advisory relationship / active engagement at the science-policy interface.
	Rapidness	Acting rapidly in emergency situations where consequences are unknown, and uncertainties prevail.

Table 1 Typolog	v of advisor	vfunctions	(roles ta	sks and	practices)12
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European Commission, 2024 Pedersen & Hvidtfeld, 2021 Ladi et al., 2022 Maxim, 2024 Simões et al., 2022

3456789

Sinios et al., 2022 European Commission et al., 2024 European Commission, 2022 Pedersen & Hvidtfeld, 2021 (Denmark); Ladi et al., 2002 (Greece); European Commission & Maxim, L. 2024 (France); Simões, 2022 (Portugal); European Commission et al., 2024 (Spain) 10 (Portugal); Euro Gluckman, 2018 11 12

Pedersen & Hvidtfeld (2021: 7), with slight changes by the author (added categories of capacity builder and continuity, and their definitions).

Method and data collection 1.2

The paper was drafted using a mixed-method approach that included desktop research, a survey, qualitative roundtable discussions, semi-structured interviews, and text analysis with a large language model. This approach incorporates multiple data collection techniques based on the principle of triangulation. It addresses the limitations of singular data collection methods by gathering information through several sampling strategies. This approach ensured the inclusion of multiple viewpoints and positions.

Desk research 1.2.1

Desk research was used 1) to collate a broad overview of the science-policy interface and any changes to it in recent years, and 2) to identify suitable topics of focus for the later stages of the review process. We identified relevant reports and evaluations of organisations at the national science-policy interface (see the full list of reports in Appendix 2). The primary objectives were to identify key organisations in the interface and examine their effectiveness based on previous evaluations. For additional information about different actors, data was downloaded and analysed from reliable open sources such as Vipunen Education Statistics Finland,¹³ administered by the Ministry of Education and Culture, and Lakitutka, administered by the University of Turku.¹⁴

1.2.2 Survey

A survey was conducted among science-policy experts regarding the key actors¹⁵ in Finland's science-for-policy ecosystem. Respondents were asked to identify up to three key actors at the national interface and to evaluate their roles, functions, and effectiveness. The survey took place between 13th and 26th March 2024.

The survey was inspired by a similar one conducted for the Portuguese report.¹⁶ The authors of the Portuguese report were consulted in designing the survey, which was then adapted to the Finnish national context (see the full list of questions in Appendix 1).

Like in the Portuguese report,¹⁷ the aim was to gather responses from various perspectives of the science-policy interface. The "knowledge users/demand" side included civil servants from ministries and parliamentary committees, whereas the "knowledge generators/supply" side comprised experts from universities and research institutes.

A call for nominations was organised to identify suitable respondents from universities and government research institutes. The request for nominations was sent directly to all universities, while a request to the government research institutes was sent through the Tulanet network.¹⁸

The nomination criteria encompassed three requirements: strong knowledge of science advice, familiarity with the national science-for-policy ecosystem, and nominee diversity (e.g., in terms of gender and discipline). Each organisation was asked to nominate two to three researchers and one to two administrative staff members. This led to the nomination of 58 experts from universities and government research institutes.

The survey was distributed to 35 senior civil servants specialising in science advice across ministries and parliamentary committees to gather insights from knowledge users. In total, the survey was sent to 93 experts working in universities, government research institutes and civil servants from ministries and parliamentary committees.

We received 54 responses (42 from universities and government research institutes and 12 from ministries and Parliamentary Committees). The response rate was 58 percent (72% for respondents from universities and government research institutes and 34% for respondents in ministries and Parliamentary Committees).

Vipunen – Education Statistics Finland, n.d. Lakitutka. n.d.

¹⁴ 15 Lukiturua, na. In the survey, an actor at the science-policy interface was defined as "a group, a network or an organisation working at the interface. Examples of such actors include individual networks, knowledge brokering organisations, science panels, faculties funding instruments, programmes, or distinct units of universities" (Appendix 1).

¹⁶ 17 18

Simões et al. 2022 Simões et al. 2022 Tulanet is the cooperation body of eleven Finnish government research institutes (Tulanet, 2018).

1.2.3 **Roundtable discussions**

Three roundtable discussions were organised for participants from universities, research institutes, and ministries. The aim was to deepen our understanding of the ecosystem's overall performance and challenges and identify potential gaps within the system. Participants were identified through professional networks of the science and policy experts at the Finnish Academy of Science and Letters. In total 12 people participated in the discussions.

1.2.4 Interviews

During the roundtable discussions, it was identified that certain aspects of the ecosystem had been overlooked at previous stages of assessment. Hence, semi-structured interviews were conducted between June and September 2024. This was done especially to better understand the role of research funders in the ecosystem. Another set of semi-structured interviews was conducted in August and September for Members of the Parliament and experts working at the Parliament.

1.2.5 Content analysis

Both the in-depth interviews and the roundtable discussions were recorded. The audio was then transcribed using an automated transcription program.

The data collected was analysed in ATLAS.ti software. These included transcriptions of in-depth interviews, roundtable discussions, as well as open-ended responses to the survey. The chosen method of analysis was qualitative content analysis. The data was analysed by paying attention to particularly reoccurring patterns and repeating themes. The data was coded and then thematically organised into code groups: overview of the system; interaction; knowledge brokering; institutions; culture. The coding was done manually by the writers without the use of AI and consisted of initial round of coding and second round of verifying the initial coding.

Text analysis of government proposals using large language models 1.2.6

We analysed government proposals and expert statements from 2015 to 2023 to understand how research informs Finnish national policymaking processes. This analysis encompasses two parliamentary terms in Finland: 2015-2019 and 2019-2023. The chosen timeframe is significant for two reasons: it is sufficiently recent to reflect current practices while offering adequate historical context through two electoral cycles. Conducted in autumn 2024, the analysis includes only complete calendar years, thus excluding 2024.

The primary data was collected from the Lakitutka (legislative radar) service,¹⁹ which retrieves government documents from the Government's Project Register (Hankeikkuna)²⁰ and the Parliament's Open Data²¹ online service. This included all government proposals and associated expert statements. The metadata also included details about which parliamentary committee requested the statement.

The analysis focused on expert statements given to parliamentary committees by invitation. We extracted three key identifiers from the metadata of each expert statement: the expert's full name, their professional title at the time the statement was given, and their affiliated organisation. We performed additional data enrichment for those identified as researchers by matching individuals to their field of study. This involved querying the Ministry of Education and Culture's Research Information Portal²² service with the researcher's name and assigning their field of study based on the most commonly associated areas within their scientific publications, utilising GPT-40. We acknowledge potential limitations in cases where two individuals from different academic fields share the exact name. To address this, we conducted random verification tests on the GPT-40 processing to ensure accuracy.

This categorisation was then mapped to broader categories, corresponding to those in the Finnish Ministry of Education and Culture's science field classification.²³ Due to their significant representation compared to other academic fields, we treated legal scholars as a separate category rather than a subfield of Social Sciences.

¹⁹ 20 21 22 23

Alvesalo-Kuusi et al., 2022 Government's Project Register [Hankeikkuna], n.d. Open data service of the Parliament of Finland [Eduskunnan avoin data], n.d. Tutkimustietovaranto [Research Information Repository], n.d. Finto - Finnish thesaurus and ontology service, n.d.

The organisations were then categorised using GPT-40, following previous categorisation frameworks.²⁴ The purpose of this categorisation was to understand the relative representation of research organisations in giving statements compared to other expert organisations. To verify the accuracy of the categorisation done by GPT-40, we conducted random tests and made corrections if necessary.

It should be noted that Lakitutka only includes government proposals related to legislation being prepared. Whilst Lakitutka is not an official state data portal, it contains information from two different official portals and is maintained by the University of Turku.

In accordance with data protection principles, we collected only data necessary for the analysis. During the analysis, all data was stored on the Finnish Academy of Science and Letters' protected server and was deleted upon completion of the analysis. The enrichment of data with fields of study was deemed proportionate to the research objectives, as it enabled analysis of how representatives from different scientific fields are consulted in policymaking. This research serves the public interest by increasing transparency in policymaking processes.

2. Big picture: The Finnish Science-for-Policy Ecosystem

Finland has a strong tradition of integrating scientific research into the policymaking process. This stems in part from the features of modern Finland, including political stability, high levels of trust, and a robust culture of cooperation.²⁵

Compared to many other European Union Member States, Finland is a relatively small country with a small population (roughly 5.6 million). Rather than operating as a centralised system, Finland's science-for-policy ecosystem functions as a network of stakeholders. It lacks some of the formal structures directly tied to national government, such as Chief Scientific Advisors, which is utilised in other countries.

It is also noteworthy that Finland lacks a national discourse on "science advice" (tiedeneuvonta), and the national narratives and political discussions on science-for-policy overlap to a significant degree with the concept of "evidence-informed policymaking" (tietopohjainen päätöksenteko). In Finnish the term "tieto" is used interchangeably to denote "evidence" and "knowledge", which at times complicates public discussions on science-for-policy.

The national science-for-policy ecosystem includes 13 universities, 22 universities of applied sciences, 12 government research institutes operating in seven different administrative sectors, the Research Council of Finland, academies of science, science panels, boundary organisations, and ad hoc working groups and task forces.

International comparisons suggest Finland has a relatively strong structure for science-policy dialogue and is at the forefront of creating instruments and policies for linking knowledge producers, users, intermediaries and others.²⁶

ne categorised was based on Nieminen et al., 2019: 97.

2.1 **Historical developments**

Finland's science-for-policy ecosystem has developed to its present form through various legislative changes, institutional reforms, and other initiatives. In recent decades, several important Government-led reforms and initiatives affecting the Finnish science-for-policy ecosystem have taken place:

Abolishment of the standing committee system, 2003

Standing committee system was abolished and replaced by the current broad working group system. Since then, preparing large multisector legislation has occurred through broad working groups. Researcher participation in these groups declined from 7-8% (2000-2010) to 5% (2015) and further to 3% (2018), marking a clear shift in expert involvement in policymaking.27

Amendments to Universities Act. 2004²⁸

The amendment concerned, among other things, the section about the mission of universities. It added the 'third mission' of universities into the Finnish legislation: in carrying out their tasks, universities must interact with the rest of the society and promote the social impact of research results and artistic activities.

The Reform of Universities Act, 2010²⁹

The Act separated universities from the state budget, making them public corporations under private law. The Act increased the autonomy of universities for their own management.

Establishment of the Finnish Climate Change Panel, 2011

The Panel is an independent scientific advisory panel that supports climate policy with research expertise. The role and tasks of the Panel were defined for the first time in the 2015 Climate Act.³⁰ In 2023 a new government decree on the Panel further specified its composition, tasks and term.³¹ The members are from various academic disciplines and selected on the basis of proposals from universities and research institutes.

Government Resolution on Comprehensive Reform of State Research Institutes and Research Funding, 2013³²

TULA reform. 2013

The main objective of the TULA reform was to make research more effective as a strategic resource for societal development and decision-making.33

Establishment of the Strategic Research Council. 2013

Strategic Research Council was established within the Research Council of Finland to allocate strategic research funding. Its aim was to support problemoriented, long-term and programmatic scientific research that provides solutions to major societal challenges.34

Establishment of the Government's Analysis, Assessment and Research Activities (VN TEAS), 2013

The VN TEAS instrument was tasked with producing knowledge that supports both horizontal and ministry-specific decisionmaking, strengthening evidence-informed policy and strategic understanding, and enhancing the systematic and comprehensive utilisation of knowledge in decision-making.35

The establishment of the **Expert Panel for Sustainable** Development, 2013

The Finnish Innovation Fund Sitra established the Panel to deliver sustainability science perspectives to Finnish politics, policymaking and societal debate. In 2019 the Panel became coordinated by two government Research Institutes (Finnish Environment Institute and Natural Resources Institute) and Helsinki Institute of Sustainability Science.36 In 2023 the Panel began to operate under the Prime Minister's Office.³⁷ Throughout the years it has had members from various disciplines, and it has supported, in particular, the work of the Finnish National Commission on Sustainable Development. The Panel's tasks and role are not based on law but on the government's power to appoint an ad hoc committee on specific issues.38

kka, 2021. It is also noteworthy that during standing committees, researchers' representation grew from 5-7% (1980s) to 10-12% (1990s). stolain muuttamisesta (715/2004). (Only in Finnish) tamisesta (1997-9997, 2007) 2009).). (Only in Finnish) is Suomen ilmostopaneelista (349/2023). (Only in Finnish) is Suomen ilmostopaneelista (349/2023). (Only in Finnish) no Comprehensive Reform of State Research Institutes and Research Funding (2013).

- , Sustainable Development, n.d. ssion on Sustainable Development, 2022

The establishment of the Finnish Nature Panel. 2015

The Panel is a scientific advisory body that supports nature and biodiversity policy planning and decision-making. Upon its establishment the Panel also included civil servants. After the year 2020 it has been an independent actor consisting of scientific experts from various disciplines who are selected on the basis of proposals submitted by higher education institutions and research institutes.³⁹ In 2023 its tasks and role were added to the Nature Conservation Act which are further specified in government decree on the Panel.40

Act on Business Finland, 2018

Before 2018, Tekes was a government agency that activated and funded research and development projects in companies, universities, higher education institutions and research units. A new Act on Business Finland changed Tekes into the Business Finland innovation funding agency,41 which among other things is tasked in its funding to promote research, development and innovation activity.42

The launch of Scientific Advice Initiative of Finland (Sofi), 2019

The three-year initiative (2019–2021) was coordinated by the Finnish Academy of Science and Letters and aimed at building next generation scientific advisory system in Finland. The work was funded by the Ministry of Education and Culture.4 The initiative led, among other things, to new practices to support research utilisation in Finnish ministries. It led to subsequent establishment of a new science-for-policy mechanism in the Finnish Academy of Science and Letters.

The launch of Finnish Behavioural Policy (FINBEPOL) in Government. 2020

The application of behavioural science in public administration started as a pilot in 2020 and led to a follow-up project and the broader establishment of the approach in the public administration. The FINBEPOL team operates under the Prime Minister's Office and is composed of four experts who are supported by a development team. The team has organised trainings and produced reports to support the role of behavioural science in the state's central administration.44

The launch of Data Room, 2023

Data Room started as a pilot project in 2023 and has since been permanently established. It produces reports that make use of register data to support policymaking and to assess the impacts of policy solutions. The Data Room is an independent unit of VATT Institute for Economic Research funded by the Ministry of Finance and the Ministry of Education and Culture. Researchers and civil servants take part in its activities. 4

Discontinuation of Government's Analysis, Assessment and Research Activities (VN TEAS). 2023

VN TEAS instrument was abolished in the Government Formation Talks in spring 2023. This marked a significant change in how cross-sectoral research was funded to support governmental decision-making, though in autumn 2024 the government introduced a new six-million-euro funding scheme for policy-relevant research.46

Act on Research and Development Funding, 2023

In 2023 a national plan to raise R&D funding was announced. Its targets include increasing the national research and development expenditure to four per cent of GDP by 2030 to accelerate sustainable growth, strengthen competitiveness and boost productivity.47

The establishment of Finnish Forest Bioeconomy Science Panel, 2023

The Panel provides research expertise to support policymaking on forests and to support innovation development in the forestry sector.⁴⁸ The Panel's research experts are appointed by the two ministries that establish it the Ministry of Agriculture and Forestry and the Ministry of Economic Affairs and Employment.49

The historical milestones outlined here are responsible for the evolution and current state of the ecosystem in different ways. Perhaps the most significant reforms to date, specifically aimed at transforming science-for-policy, are the reforms of 2013, which resulted in the establishment of the Strategic Research Council and the Government's Analysis, Assessment and Research Activities (see above). In recent years, these instruments have encountered significant political pressure, with the latter being abolished in 2024 by a Prime Minister from the same party that had originally established it a decade earlier. Following a public backlash, the instrument was reintroduced in a weakened form at the beginning of 2025. Currently, the government is also reviewing the roles and mandates of the national science panels. As of February 2025, initial government plans to merge the existing four science panels into a single panel were leaked to the national press.

- 40 41 42
- Vature Panel (nd.); Backman, 2024 suojelulaki (9/2023). (Only in Finnish) of Economic Affairs and Employment of Finland, 2017 of Aconomic Affairs and Employment of Finland and a limited liability Company called i Finland (146/2017), od Latters 2021 Finnish Academy of Science and Letters, 2021 Prime Minister's Office, 2024 Prime Minister's Office, 2024 In the autumn 2024 budget, the Government decided to allocate a new six million euro for research to support the decision-making process of the Government (Pelkonen, 2024: 36). Finnish Government, 2024 Binnish Government, 2024 Backman, 2024
- 43 44 45 46

- 47 48 49

2.2 Large language model text analysis on Finnish science-for-policy

Across OECD countries, trust in governments has steadily declined in recent years, while research demonstrates a strong correlation between evidence use and government trustworthiness.⁵⁰ Although Finland has historically enjoyed high levels of public trust, confidence in its institutions and expertise has begun to erode.⁵¹ In this challenging environment, understanding how science impacts policymaking becomes increasingly vital. High-quality legislative drafting requires a solid knowledge base. Finnish guidelines specifically require government proposals to articulate relevant research findings and cite research sources.52

Measuring policy impact of science presents significant challenges, particularly in identifying the most important pathways to policy influence and developing meaningful indicators. Numerous studies have explored how evidence is utilised in Finnish policymaking.^{53,54} Admittedly, this is notoriously difficult to capture, as the analysis often has to rely on proxies for the actual use of research, such as the number of public hearings.55 Making assumptions about the state of evidenceinformed policymaking from this type of quantitative data is difficult, if not even impossible.⁵⁶

Despite these methodological challenges, understanding science's contribution to policy is essential for our analysis of how the Finnish science-for-policy ecosystem functions. In this section, we explore the findings of a text analysis of government proposals and expert statements. This large language model (LLM) analysis was carried out using the Lakitutka data portal.57 The analysis focuses on government proposals during two complete parliamentary terms in Finland: 2015-2019 and 2019-2023.

It should be noted that some information gaps also became apparent during the analysis. For instance, data from the Finnish Parliament's information service does not provide a ready-made categorisation for the experts heard in committees, only the names and organisations represented by the experts. For this discussion paper, the organisations were first classified using Open-AI's GPT-40. For the experts classified as researchers, their scientific field was determined by cross-referencing the expert names with the Research Information Hub's database of scientific publications by assigning them the field in which they had the most publications (see further details in Chapter 1.2.6).

Use of Experts in Parliamentary Committees

Expert statements to parliamentary committees are provided by invitation and constitute a critical component of the government's legislative drafting process. Figure 1 illustrates the annual distribution of government proposals (orange) and expert statements (green) submitted to parliamentary committees from 2015 to 2023.

The figure clearly demonstrates how electoral cycles influence both government proposals and the number of experts being consulted. Election years (2015, 2019, and 2023) show significantly fewer government proposals, which naturally results in fewer expert hearings during these periods. Conversely, the final year of each electoral cycle shows a marked increase in government proposals, correspondingly leading to a higher utilisation of expert input.

OECD, 2024 50 51

DECD, 2024. Fiedebarometri, 2024. It should be noted that decline in trust to some institutions decreased slightly compared to the previous survey (e.g., the police, universities, universities of applied sciences), and the change fails within the margin of error. However, for some other institutions such as parliament, the European Union, the church, and political parties trust has decreased more Ousikyia et al., 2023: 31 see e.g., Leppänen et al., 2020; Seppänen et al., 2023; Nieminen et al., 2019 It should be mentioned that the Finnish Council of Regulatory Impact Analysis aims to improve the quality of law drafting and the impact assessment of government proposals (Prime Minister's Office of Finland, n.d.) see also Pelkonen, 2024 Pelkonen, 2024 Lakitutka, n.d.

55 56 57

⁵² 53 54



Number of govt. proposals and expert statements per year

Figure 1. Number of government proposals (orange) and expert statements (green) provided to parliamentary committees per year from 2015-2023.

Disciplinary Imbalance in Expert Consultation

Table 2 illustrates the distribution of expert statements by scientific field from 2015 to 2023, revealing a pattern in how parliamentary committees seek expertise. Legal scholars consistently dominate these consultations, contributing the largest share of expert statements nearly every year reviewed.

This heavy reliance on legal expertise indicates how Finland approaches expert consultation. When committees seek advice, they typically seek guidance on procedural matters—what's legally feasible, which laws apply, and how legislation needs to be modified. This stands in contrast to what we might consider traditional "science advice," which deals more with empirical evidence about real-world conditions and impacts.

When legal experts are removed from the assessment, social sciences dominate the remaining consultations (22%). It is noteworthy that humanities represent only 1 percent of all expert statements given, suggesting a significant underrepresentation of these perspectives in the policy-making process.



Table 2. Number of Expert Statements by Field of Science (2015-2023)

Concentrated Expertise: The Uneven Distribution of Expert Input

The distribution of expert statements to parliamentary committees reveals an uneven pattern among researchers. While most academics provide only occasional input, a small number of researchers dominate the consultation process. The statistics tell a compelling story: most researchers gave just one statement (the mode), the median stands at only two statements per researcher, yet the maximum reaches an astonishing 391 statements from a single individual during the period of 2015-2023 (see Table 3).

This imbalance underscores how expert consultation often "snowballs" towards a select few voices. In fact, 18% of researchers contributed only a single statement, and approximately half (50%) provided just one or two statements throughout the studied period. This concentration of expertise raises significant questions about the diversity of perspective and the potential for echo chambers in the policy advice process, where committees may repeatedly engage familiar experts rather than seeking broader scholarly input.

	Field of science	Number of expert statements given by researcher
Expert 1	Law	391
Expert 2	Law	245
Expert 3	Law	133
Expert 4	Law	118
Expert 5	Law	55

Table 3. The top 5 experts classified as researchers, by number of statements given to parliamentary committees (2015-2023)

The distribution is more balanced when the field of law is not included in the calculations (see Table 4).

	Field of science	Number of expert statements given by researcher
Expert 1	Social sciences excl. Law	32
Expert 2	Natural sciences	28
Expert 3	Social sciences excl. Law	17
Expert 4	Social sciences excl. Law	16
Expert 5	Natural sciences	15
Expert 6	Social sciences excl. Law	14
Expert 7	Natural sciences	13
Expert 8	Engineering and technology	12
Expert 9	Social sciences excl. Law	12
Expert 10	Medical and health sciences	11
Expert 11	Social sciences excl. Law	10
Expert 12	Social sciences excl. Law	10
Expert 13	Social sciences excl. Law	10
Expert 14	Social sciences excl. Law	9
Expert 15	Social sciences excl. Law	9
Expert 16	Social sciences excl. Law	9
Expert 17	Social sciences excl. Law	9
Expert 18	Medical and health sciences	9
Expert 19	Engineering and technology	9
Expert 20	Social sciences excl. Law	9

Table 4. The top 20 experts classified as researchers (excluding Law), by number of statements given to parliamentary committees (2015-2023)

Research Knowledge and Other Expert Voices in Parliamentary Committees

Table 5 presents the distribution of expert statements by organisational type during 2015-2023, providing insight into whose knowledge shapes Finnish policy development. Government bodies dominate the consultation process, with ministries providing the highest number of statements (12,925), followed by advocacy organisations (11,526) and other authorities (10,158). This strong governmental presence suggests that internal expertise plays a crucial role in policy formation.

Notably, researchers account for only 3,107 statements—approximately 6.4% of all expert input—placing them fifth among the categories of consulted experts. This relatively modest representation raises important questions about the role of academic knowledge in policy development. Is research-based evidence competing with other forms of knowledge in the policymaking process? The data suggests that policy formation in Finland draws more heavily on government expertise and interest group perspectives than on academic research. This pattern may reflect institutional practices in committee hearings, where researchers are often scheduled last in expert consultations, potentially diminishing their influence.

Expert Category ⁵⁹	Total number of statements given	% of total number of statements
Ministry	12 925	26.1
Advocacy Organisation	11 526	23.3
Other Authorities	10 158	20.5
Civil Society Organisation	4 567	9.4
Researcher	3 107	6.3
Municipality / City	2 662	5.4
Company / Cooperative	2 355	4.8
Other	1 510	3.0
Financial / Insurance Institution	505	1.0
Church / Other Religious Body	154	0.3

Table 5. Number of expert statements given in 2015-2024, classified by the type of organisation the expert represents⁵⁸

Conclusion

Our text analysis examined researchers' contributions to Finnish policymaking. We focused on the volume of expert statements, their distribution across scientific disciplines, individual contribution patterns, and how research-based expertise compares with other knowledge sources in the legislative process.

Our analysis highlights three key challenges regarding Finland's utilisation of research for policy: 1) disciplinary imbalances that particularly marginalise contributions from the humanities; 2) the concentration of input from a limited pool of researchers, which creates potential echo chambers; and 3) the relatively low overall contribution of academic research (only 6.3% of expert statements) when compared to government bodies and advocacy organisations.

Similar observations have been made in other studies.⁶⁰ Nieminen et al. found that in 2017, administrative bodies were the primary source of research citations, accounting for 59% of all references. Academic research played a notably minor role, with only 6% of citations classified as academic research. Their study concluded that purely academic research was used relatively sparingly in the policymaking processes.⁶¹

Nieminen et al., 2019: 97 Following the categorisation framework of Nieminen et al., 2019: 97. e.g., Nieminen et al., 2019: Seppänen et al. 2023 Nieminen et al., 2019: 42 58 59 60 61

3. Main Actors in the Sciencefor-Policy Ecosystem

This chapter provides an overview of the key actors in the Finnish science-for-policy ecosystem. It highlights several main actor types within the ecosystem and outlines their functions, essential competencies, and operational models.62

The aim here is to highlight the nature and focus of different actors' activities, their varying scales of operation, and their respective strengths and challenges within the science-policy landscape. We have described the fields of actors very broadly, recognising that for some organisations, sciencefor-policy functions represent a core mission, while for others they constitute only a minor aspect of their overall activities. This inclusive approach allows us to present a more comprehensive picture of the diverse ways in which scientific knowledge enters the policymaking process in Finland.

3.1 Synthesis of the types of organisations

Table 6 provides a comprehensive overview of the organisation types in the Finnish science-policy interface, detailing their roles, tasks and practices. It outlines the categorisation used in this chapter and provides an overview of the different types of functions these actors serve. The structure follows the format used in similar discussion papers from other EU Member States to facilitate cross-national comparison.⁶³ However, our categorisation differs slightly from previous reports, as it was informed by responses from our Science-for-Policy Survey, in which experts were asked to identify the three key actors in the ecosystem. Hence, we added categories of organisation types, if they were mentioned in the survey as key actors. This empirically-grounded approach ensures that our analysis reflects how key stakeholders themselves understand the institutional landscape, while still maintaining sufficient comparability with international frameworks.

In the following sub-sections of this chapter, we examine each of these organisation types in detail. For each category, we provide a concise description of its structure and function, followed by an analysis of its strengths and challenges in the science-policy interface. This assessment draws on established literature and new insights gathered during the preparation of this discussion paper, including expert interviews and survey responses.

ne categorisation of actors presented here is admittedly, to some extent, arbitrary and incomplete, i.e., it does not fully capture ne diversity of actors or the variations within the classifications. Due to the practical limitations of a single report, and in der to remain coherent with other countries 'similar reports, certain organisational types, such as political party think tanks nd consulting companies, have been excluded. Similarly, private sector companies were not included, despite their recognised le in Finland's science-policy interface. We also recognise that there are many independent researchers, who work outside ganisational frameworks, contributing to the Finnish science-policy interface. Pedersen & Hyidteld, 2021 (Denmark); Ladi et al., 2020; (Greece); European Commission & Maxim, L. 2024 (France); Simões et " 2022 (Portugal); European Commission et al., 2024 (Spain) 62

⁶³

Table 6. An overview of the actors in the Finnish science-for-policy ecosystem and their roles, tasks and practices⁶⁴

Organisation		Role		Task						Prac	otice
type	Knowledge generator	Knowledge synthesis	Knowledge broker	Capacity building	Unsoli- cited input	Requested input	ldentify options	Monitor	Evalua- tion	Conti- nuity	Rapidness
Higher Education Institutions	+++	++	++	+++	+	++	+++		+	++	
Government Research Institutes	+++	+++	++	++	++	+++	+++	++	++	++	++
Non-Go- vernmental Research Institutes	+++	+++	++		+++	++	+++				+
Ministries & Agencies		++	+			+	+++	+++	+++	++	
Research Council of Finland	+++	++		++							
Strategic Research Council	+++	+	+	++	+++	+	+		+++		
Interim panels, working groups and task force	+	++	+++	++	+	++	++	÷	++	++	++
Commissions and Councils	+	++	+++	++	+	++	++	+	++	+++	++
Science Panels	+	+++	+++		+++	++	+++	++	++	+++	+++
Learned Societies and Academies of Science			+++	++		++	+	++		++	++
Foundations				++							
Knowledge brokering organisations		++	+++	+++	++	++	+			+	+++
Interest groups & trade unions	+	++	+		+	+	++			++	++

64 Source: where applicable, Gluckman (2018), adapted for the Finnish science-for-policy ecosystem. In the table, the different groups of actors are broken down by their roles, tasks and practices, assessed qualitatively (on a scale from "blank" to "+++"). The data was collected through an expert questionnaire in which respondents were asked to assess the nature and differences in emphasis of the roles, tasks and practices of the actors. The table was updated from the qualitative discussion (see further details in Appendix 3).

3.2 **Higher Education Institutions**

Higher education institutions, including universities and universities of applied sciences (UAS), serve as critical actors of the science-policy interface. Their primarily role is producing and synthesising high-quality research and building capacity through education, which is a legally mandated function. In 2022, the number of R&D personnel in higher education institutions was over approximately 35 000.65

Universities

In Finland, there are 13 universities that operate as independent legal entities with core funding from the Ministry of Education and Culture (see Table 7, core funding). Two of these universities (Aalto University and University of Tampere) are foundations under the Foundations Act, whilst the others are corporations under public law. The 14th university is the Finnish National Defence University, which operates under the administration of the Finnish Defence Forces.⁶⁶ The Universities Act⁶⁷ governs their legal position and explicitly requires universities to interact with society and promote the social impact of research results and artistic activities.

Several universities have also established specialised thematic departments and institutions that foster transdisciplinary research and coordinate participation in the science-policy interface, offering researchers enhanced opportunities for impact work. Examples include the Finland Futures Research Centre (FFRC),⁶⁸ Arctic Centre,⁶⁹ Helsinki Institute of Sustainability Science (HELSUS),⁷⁰ and Helsinki Inequality Initiative (INEQ).71 These centres take an active role in knowledge synthesis. For instance, both the FFRC and HELSUS have published policy recommendations, whilst FFRC also provides specialised education to external organisations through services such as Futures Focus education and development.

Universities' Research Funding (EUR million)	Core funding	External funding	Institutional resources	Total
University of Helsinki	162.3	255.5	18.8	436.6
Aalto University	111.6	121.6	-	233.1
Tampere University	80.0	112.4	6.0	198.4
University of Turku	73.4	93.6	5.0	171.9
University of Oulu	66.7	84.8	14.4	165.9
University of Eastern Finland	83.2	60.0	1.1	144.3
University of Jyväskylä	59.1	57.8	-	116.9
LUT University	39.7	31.6	-	73.9
Åbo Akademi University	18.9	29.1	1.5	49.5
University of Vaasa	14.3	8.8	_	23.1
University of Lapland	14.3	5.5	_	19.8
University of the Arts Helsinki	10.3	1.5	_	11.8
Hanken School of Economics	6.6	4.5	_72	11.1
National Defence University ⁷³	2.2	0.6	_	2.8

Table 7. Universities' Research Funding in 2023

The table 7 presents universities' funding for 2023. Core funding refers to funding allocated by the Ministry of Finance, based on the Government budget. External funding refers to competitive funding allocated by different actors such as different ministries, European Union or Business Finland. Institutional resources refer to each institution's own funds.⁷⁴

Research Council of Finland 2024

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Research Council of Finland, 2024 Research Kin, nd, a University of Turku, nd, a University of Turku, nd, a University of Lapland, nd. University of Helsinki, nd, a University of Helsinki, nd, a University of Helsinki, nd, a As number in this table are rounded to the nearest tenth of a million euros, the table does not capture that the institutional As number in this table are rounded to the nearest tenth of a million euros, the table does not capture that the institutional As number in this table are rounded to the nearest tenth of a million euros (Vipunen Education Statistics Finland, 2024a). It should be noted that the National Defence University is in this paper categorised amongst the universities, even though in Vipunen Education Statistics Finland, 2024b. Vipunen Education Statistics Finland, 2024b. 74

Universities of Applied Sciences

Finland has 22 universities of applied sciences, which operate as independent legal entities with core funding from the Ministry of Education and culture (see Table 8, core funding). In addition to this, there are two exceptions: the Högskolan på Åland (Åland University of Applied Sciences, operating in the autonomous Åland) and the Police University College (operates under the mandate of the Ministry of the Interior).75

Similarly to universities, universities of applied sciences have tasks related to supporting the societal impact of research, particularly through research, development, and innovation (RDI). Their statutory role includes conducting applied research to support employment opportunities and regional developments, promoting RDI activities that renew the region's economic structure, and supporting artistic activities. In 2023, universities of applied sciences carried out RDI activities worth almost 273 million euros.76

Universities of Applied Sciences' Research Funding (EUR million)	Core funding	External funding	Institutional resources	Total
South-Eastern Finland (XAMK) UAS	12.8	19.3	_77	32.2
LAB UAS	15.4	10.6	-	26.0
Turku UAS	12.8	10.7	-	23.5
Jyväskylä UAS	3.8	16.5	-	20.3
Lapland UAS	8.0	9.2	-	17.2
Savonia UAS	6.5	9.0	-	15.6
Metropolia UAS	8.9	7.0	-	15.8
Laurea UAS	6.6	8.3	-	15.0
Häme UAS	5.1	9.1	-	14.2
Seinäjoki UAS	4.4	6.1	0.2	10.7
Tampere UAS	3.4	6.9	-	10.3
Oulu UAS	1.8	5.5	-	7.3
Centria UAS	3.1	8.2	-	11.3
Haaga-Helia UAS	3.7	6.8	-	10.6
Satakunta UAS	3.3	4.6	-	7.9
Kajaani UAS	1.4	7.3	-	9.7
Karelia UAS	1.0	4.9	-	5.9
Novia UAS	1.7	3.9	-	5.6
Diaconia UAS	0.6	3.7	-	4.2
HUMAK UAS	0.3	2.1	-	2.4
Arcada UAS	-	2.1	0.1	2.2
Vaasa UAS	0.4	1.3	-	1.7

Table 8. Universities of Applied Sciences' Research Funding in 2023

The table 8 presents universities of applied sciences' funding for 2023. Core funding refers to funding allocated by the Ministry of Finance, based on Government budget. External funding refers to competitive funding allocated by different actors such as different ministries, European Union or Business Finland. Institutional resources refer to each institution's own funds.78

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Ministry of Education and Culture of Finland. (n.d.). Finnish Universities of Applied Sciences. (n.d.). As number in this table are rounded to the nearest tenth of a million euros, the table does not capture that the institutional resources of the XAMK in 2023 were 48 000 euros (Vipunen Education Statistics Finland, 2024b). Vipunen Education Statistics Finland, 2024b

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Evaluation

A) Summary of previous evaluations

The role of higher education institutions in the ecosystem is partially addressed through individual evaluations of different universities. These evaluations, conducted by the Finnish Education Evaluation Centre (FINEEC), provide insights into each university's current role and potential areas for development.⁷⁹ For instance, previous evaluations of the University of Helsinki⁸⁰ and LUT University⁸¹ concluded that education is their principal contribution to the science-for-policy ecosystem.

Beyond education, universities contribute to advancing the societal impact of research through various means, including science communication and collaboration with the private sector. However, the evaluations observe that despite universities emphasise societal participation and impact in their strategies, their practices remain heavily focused on traditional research and education activities and the indicators that measure them. These indicators are strongly influenced by the Ministry of Education and Culture's funding metrics.

Universities have also conducted their own research assessments. The University of Helsinki's 2018-2019 assessment specifically examines the societal impact of research, given that it is the 'third mission' of universities. The assessment focuses on different Units (defined as Faculties, Institutes, Departments, disciplines or combinations thereof) and their societal impact. This assessment concluded that successful units demonstrated direct engagement with policy-making processes and utilised media to increase awareness of research results.⁸² Similarly, the University of Eastern Finland's 2019-2022 assessment examined its research impact beyond academia through societal interaction and science education.83

Universities have also conducted assessments that evaluate the impact of thematic university departments and institutes, which are valued individually or as part of a broader evaluation unit. The institutes engage in various activities that are recognised for their significant societal impact. The Arctic Centre is described as being "constructed to facilitate societal impact" due to its unique location and facilities for science communication.⁸⁴ The Aleksanteri Institute has received notable recognition for its policy-shaping societal impact, as it engages in a range of activities, including open seminars, conducting government-commissioned research, and even briefing the President of Finland for his meeting with President Putin in 2018.85 The societal impact of Information and Knowledge Management NOVI is particularly evidenced through collaborations among universities, industries, and the public sector.86

B) Main findings from our assessment

Our assessment focuses on universities, but we believe that some of these observations could also apply to universities of applied sciences.

Strengths:

- 1. Universities are vital producers of high-quality research that advances societal knowledge and informs decision-making. While research serves policy needs, its intrinsic value extends beyond practical applications.
- Universities develop the next generation of policymakers and experts through science 2. education, equipping them to incorporate current research in their work.
- Universities are responsible for making research accessible to society through effective 3. knowledge translation and science communication.

All evaluations are accessible from the FINEEC's website (Finnish Education Evaluation Centre, n.d.) Bernard Coulie et al., 2022 Wiklund et al., 2021 Mälkki et al., 2019 Jäntti & Liikanen, 2023 Salmenkivi et al., 2029 Mälkki et al., 2019 Himanen & Ihonen, 2022

⁸⁰ 81 82 83 84 85 86

Challenges:

- 1. Lack of internal coordination at the institutional level: Universities' engagement with science-policy remains predominantly reactive and ad-hoc. While thematic institutions and departments provide collaboration models, institutional coordination could be improved to ensure strategic engagement. There is still a lot of reliance on the active engagement of individual researchers, which limits the efficiency and strategic potential of these efforts. This challenge could be addressed, for example, by hiring specialists in impact work and knowledge brokering to develop more systematic approaches to policy engagement.
- 2. **Insufficient recognition and resources for researchers to participate:** Individual researchers face significant constraints in participating in impact activities due to limited time allocation and recognition. University funding and merit systems primarily reward publication output rather than policy impact, creating disincentives for researchers to engage in science-policy interface despite its societal importance.
- 3. **Underdeveloped collaboration models:** There is a notable absence of structured models for collaboration between academic institutions and policymakers. This gap hinders consistent knowledge exchange and reduces opportunities for research to inform policy development in a timely and relevant manner.
- 4. Lack of inter-institutional coordination: Coordination between universities and other knowledge institutions remains underdeveloped, leading to potential duplication of efforts and missed opportunities for synergy. Enhanced inter-institutional collaboration could amplify the collective impact of the academic sector on policy development.

Impact example: Researcher's online course on research impact, University of Helsinki⁸⁷

Function: capacity building

What: An open and free-of-charge online course providing researchers with a comprehensive understanding of how their work can influence society. Course also gives practical tools for enhancing societal impact.

Who: University of Helsinki

How: Delivered via the DigiCampus platform, the course requires three to six hours to complete, varying according to participants' prior knowledge and interest in exploring the topic in depth.

In the science-for-policy ecosystem: This course addresses the need to build researchers capacities to participate in the science-policy interface and support evidence-informed policymaking. While targeting researchers across all disciplines, it remains accessible to other stakeholders interested in research impact. It develops researchers' essential skills for policy engagement, including understanding the mechanisms through which research influences policy, assessing the policy relevance of their research, and learning effective methods to communicate findings to decision-makers.

87 University of Helsinki, 2024.

Research Council of Finland 3.3

The Research Council of Finland is a key enabler in the science-for-policy ecosystem. It is an expert organisation in science and research, which funds high-quality scientific research and provides expertise in science and science-policy. It also aims to strengthen the position of science and research in society.88 In 2024, its funding for research amounted to 543 million euros (511 million in 2023).89

The Act on Research Council of Finland governs its legal status.⁹⁰ It is an expert organisation for science and research, operating under the management of the Ministry of Education and Culture. The Finnish government appoints its chair and board members based on a proposal by the Ministry of Education and Culture for a three-year term.

Research Council has different funding instruments for research, including instruments like Flagships, Academy programmes, Strategic Research Council, Profiling Funding, and Infrastructure Funding.

- Flagship Programme aims to enhance Finnish research by creating high-level research and impact clusters through collaboration across fields, benefiting economic growth and societal development. The Flagship programme requires a strong commitment from the host organisation.⁹¹ The Research Council of Finland's total funding contribution to the Finnish Flagship Programme is almost 300 million euros.
- The profiling initiative, known as PROFI, has allocated funds to 14 universities (13 after a merger), with grants ranging from 350,000 euros to 28 million euros, based on biennial rounds that distribute funds and aim to impact strategic performance, especially benefiting smaller universities. Between 2015 and 2024, eight rounds of funding decisions have been made, which have in total allocated 550 million to different universities.92
- The Finnish Research Infrastructure Committee (FIRI Committee), established in 2014, plays a pivotal role in funding, monitoring, and developing research infrastructures both nationally and internationally. Guided by a 10-year strategy published in 2020, it aims to support high-quality research and its impact. Between 2019 and 2023, the research infrastructure projects reported on received a total of 87.5 million euros in funding.93

The funding instruments mentioned, however, do not fully capture the Finnish Research Council's activities at the science-policy interface. Science-for-policy has a role in all Research Council research instruments, but the importance of this role varies between projects. Furthermore, they do not capture the individual activities of Research Council-funded researchers and their science-policy engagement.

Research Council also works in connection with the Strategic Research Council (see Chapter 3.4), which aims to tackle some of the central societal challenges.

Evaluation

A) Summary of previous evaluations

Latest evaluations of the Research Council of Finland note that it has a unique role as a public funding organisation, setting the standards for scientific excellence.⁹⁴ The 2013 evaluation points out that some in the policymaking community argue that the Research Council could make better use of its position to provide science advice. However, this presents a delicate balance – the Research Council must maintain its neutrality as a funding body while potentially taking on a stronger advisory

Research Council of Finland, n.d., a Research Council of Finland, 2023 Act on Research Council of Finland (2009/922). Research Council of Finland, n.d., b Research Council of Finland, 2024b Research Council of Finland, n.d., c Arnold et al., 2022; Arnold et al., 2013

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role.⁹⁵ The 2022 evaluation notes that the Research Council fulfils its statutory duty as a sciencefor-policy expert through several channels: producing the comprehensive 'State of Scientific Research in Finland' report, developing its funding instruments, participating in the Research and Innovation Council, and maintaining regular dialogue with universities and other funding organisations, including Business Finland.⁹⁶

B) Main findings from our assessment

Strengths:

- 1. Through strategic funding decisions, the Research Council **builds an essential high-quality knowledge base** that strengthens evidence-informed policymaking.
- 2. The Research Council **shapes Finland's scientific landscape through funding decisions**, balancing academic and other strategic objectives. Unlike government research institutions' demand-driven approach, the Council enables more supply-driven research. This distinction is crucial for preserving academic freedom.
- 3. The Research Council **champions scientific autonomy and evidence-informed policymaking**, and such promotes science and research in society. The importance of this is increasing, given the recent developments in increasing online targeting and shaming of researchers.

Challenges:

- The knowledge produced in the research outputs funded by the Research Council does not necessarily benefit policymakers. This could be due to misalignment with policymakers' timing needs or preferred formats. This could be addressed by encouraging policy briefs and knowledge synthesis during ongoing research projects.
- 2. The Research Council could strengthen its **leadership role in the science-for-policy ecosystem**, by taking a more proactive approach in guiding science-policy engagements and increasing unrestricted research funding and creating impact ecosystems.

Impact example: Flagship Programme⁹⁷

Function: Implementation and monitoring

What: An instrument established in 2018 to promote high-quality research through collaboration between academia, business, and international partners.

Who: The Finnish Research Council manages the Flagship Programme with funding from the Ministry of Education and Culture as part of its legal mandate to promote and fund research. The programme is supported by strong commitment from the host institution.

How: The programme supports 14 flagships that operate as large projects of research, development, and innovation. By providing substantial long-term funding, the Flagship Programme encourages collaboration between research institutions and different stakeholders to create know-how and sustainable solutions to societal challenges. The host organisations include nine universities, six research institutes, Helsinki University Hospital, the Finnish Red Cross Blood Service and CSC - IT Centre for Science Ltd.

In the science-for-policy ecosystem: Flagships Programme creates collaboration in the science-for-policy ecosystem across universities, government research institutions, non-profit organisations, and companies in various fields of expertise.

97 Research Council of Finland, n.d., b.

3.4 Strategic Research Council

The Strategic Research Council (SRC) is an independent body established within the Research Council of Finland. It provides funding for long-term and programme-based research, which aims to find solutions to the major challenges facing Finnish society.⁹⁸ The programmes and projects are thematically organised and run for 3-6 years. Its annual funding budget is around 55 million euros.99

It is governed by a subsection of the Act on Research Council of Finland, which states that its mandate is to: 1) present an initiative to the government on the key themes and priorities for strategic research, 2) decide on the programme structure for strategic research activities, 3) decide on the selection of research programmes based on their societal relevance, impact and quality of research, 4) take responsibility for monitoring and evaluating the impact of research projects.¹⁰⁰

The SRC consists of eight members and a chair appointed by the Government for a three-year term, with a possible extension of a further three-year term.

Each year, the SRC prepares a proposal on key strategic research themes and priorities to be approved by the Finnish Government. The Government determines the research needs and decides the final themes, which the SRC then formulates into research programmes.¹⁰¹

Field of science	Funding (in M €)	% of total
Social sciences	113.4	42.1
Natural sciences	49.9	18.5
Engineering and technology	28.9	10.7
Agriculture and forestry	7.7	2.9
Medical and health sciences	7.0	2.6
Other/unspecified	62.3	23.1

Table 9. Funding by the Strategic Research Council by research field in the years of 2020-2024

Evaluation

A) Summary of previous evaluations

According to the peer-reviewed evaluation,¹⁰² the Strategic Research Council has effectively produced knowledge and practical solutions for policy development, which have promoted scientific advice to decision-makers, particularly when preparing new guidelines and strategies.

The evaluation highlights SRC's emphasis on knowledge co-production through continuous researcher-stakeholder collaboration, though this occurs primarily at the project rather than programme level. It was pointed out that this takes up many resources and systematic efforts at the implementation level.

The evaluation identified several key achievements: 1) research questions now better align with societal needs, 2) future research projects increasingly address societal challenges and practical knowledge needs, 3) and private sector collaboration has enabled previously unfeasible research. The greatest societal impact has been achieved in the preparation of policies and legislation, promoting evidence-informed policymaking, stakeholder engagement, and capacity-building.

Research Council of Finland, n.d., c. Research Council of Finland, n.d., c. Act on Research Council of Finland (922/2009) 5 § Research Council of Finland, n.d., c. Kivistö et al., 2022

Intensified dialogue with policymakers through program activities have supported timely evidence-informed policymaking, with tools like the Impact Annual Clock¹⁰³ ensuring that impact actions are targeted to the correct target audiences at the right time.

The evaluation suggests room for improvement in connecting research themes even better with societal knowledge needs, particularly regarding national competitiveness and business interests.

B) Our assessment

The SRC and its projects are generally seen as an important and unique producer of knowledge in the Finnish science-for-policy ecosystem.

Strengths:

- 1. SRC plays an important role in **funding policy-relevant research**. Its projects are distinctive in combining multidisciplinary research excellence with direct policy needs. Research themes are specifically selected to support policymaking, ensuring societal relevance while maintaining scientific rigor.
- SRC synthesise multidisciplinary knowledge to various formats, including policy briefs, 2. Solutions from Science -online platform¹⁰⁴ and Solution Cards -formats.¹⁰⁵
- SRC fosters co-production of knowledge through building bridges between researchers 3. and knowledge users.
- 4. Through structured engagement with decision-makers, SRC projects build and enhance researchers' capacities to engage in science-policy interactions.

Challenges:

- 1. Effectively communicating research results requires significant time and expertise, leading many SRC projects to outsource this work to consultants. This might create gaps in the monitoring the impact, given that the programme managers still oversee the strategic planning of the impact work.
- Concentrated SRC funding in specific themes risks creating fragmentation, as substantial 2. investment in select areas may lead to research convergence rather than diversity.
- While some of the projects have generated practical solutions and new approaches, chal-3. lenges persist in scaling these successful practices beyond individual projects.

28

Impact example: Strategic Research Council's Impact Stories¹⁰⁶

Function: Implementation and monitoring

What: The impact stories are used to monitor the societal impact of SRC-funded projects and programmes during the funding period.

Who: Programme Directors are responsible for reporting the Impact stories. Some of them are published by the Research Council of Finland's materials bank.

How: SRC-funded projects produce impact stories that document their research's societal contributions. They provide specific examples of, for example, how the projects engaged with stakeholders, and provided concrete information on the societal changes or solutions the projects have sought to promote. The Research Council collects these stories from all funded projects, requesting permission before making them publicly available.

In the science-for-policy ecosystem: the impact stories encourage SRC projects to monitor their societal impact activities. In this way, it may encourage researchers in the SRC projects to engage with stakeholders and policy processes from the early stages of the project, rather than waiting until the final stages of their projects to consider policy applications.

106 Strategic Research, n.d., b.

3.5 Ministries and agencies

Ministries¹⁰⁷ operate in the science-policy interface quite literally, managing the institutionalised forms of science advice. They exercise decision-making power and often include research as a basis for their decision-making. As leaders in national legislative drafting, ministries significantly shape how research knowledge is integrated into decision-making processes.

Ministries in Finland¹⁰⁸

The Finnish Government consists of 12 ministries, which are:

- 1 Prime Minister's Office
- 2. The Ministry for Foreign Affairs
- З. Ministry of Justice
- 4. Ministry of the Interior
- 5. Ministry of Defence
- Ministry of Finance 6.
- Ministry of Education and Culture 7
- 8. Ministry of Agriculture and Forestry
- Ministry of Transport and Communications 9.
- 10. Ministry of Economic Affairs and Employment
- 11. Ministry of Social Affairs and Health
- 12. Ministry of the Environment

Evaluation

Main findings from our assessment

Strengths:

- 1. Knowledge from diverse sources is synthesised during expert preparation in ministries and Parliament to inform policy development. Ministerial working groups and advisory councils play key coordination roles, integrating domestic research with international benchmarks. The Prime Minister's Office serves as a central hub for knowledge synthesis, supporting both policy development and implementation. While primarily serving decision-makers, this synthesised knowledge also benefits the broader society.
- 2. Ministries and agencies actively fund policy-relevant research and studies, including legislative impact assessments both ex-ante and ex-post. These institutions serve dual roles as both knowledge users and funders across national, regional, and local levels.
- Some ministries and agencies employ specialised units and experts to integrate research into 3. decision-making through multiple functions: disseminating research findings, bridging research-management gaps, managing commissioned research, providing scientific advice, and analysing organisational data. These units and their experts take on knowledge brokering roles and are crucial in supporting evidence-informed decision-making.

Finnish administrative terminology shows overlap between government agencies, research institutions, and commissions. While the constitution formally recognises 'agencies, institutions and other bodies' in central administration (731/1999), agencies primarily execute ministerial operative tasks. This conceptual flexibility is reflected in Agency Evaluations, which included research institutions like Luke and THL
 Finnish Government, n.d.

Challenges:

- 1. The core challenge for ministries lies in **effectively utilising research knowledge**. External political pressures, tight deadlines, and resource constraints (monetary or human) often lead to reliance on reports from consultants or think tanks over peer-reviewed research.
- 2. Scientific advice is often requested late in policy processes, after, for example, key issues have already been established. This late-stage consultation limits the impact of research and the quality of evidence-informed policymaking.
- 3. Interactions between researchers and civil servants may also be limited when they rely on established connections. Actively identifying and engaging new experts would help prevent policy capture by narrow interests and ensure broader assessment of needs and impacts. Direct researcher collaboration could be more effective for knowledge transfer than formal expert hearings.
- 4. Civil servants' varying research skills affect their ability to evaluate evidence effectively. Increasing the proportion of **academically trained staff** would enhance capacity to assess the quality of evidence and knowledge, understand methodological differences, and evaluate the reliability of conclusions.

Impact example: Statistics Finland

Function: knowledge producer, knowledge synthesiser

What: Government agency processing and providing data on the conditions in society.

Who: A nationally funded agency under the Ministry of Finance, with position and tasks defined by the Statistics Finland Act.¹⁰⁹

How: Synthesises and disseminates data from various sources, including registration authorities. It offers data for researchers on demand and provide means of doing research such as questionnaires and microsimulation. Additionally, it synthesises data on different societally pressing themes such as the Russian war on Ukraine¹¹⁰ or immigration.¹¹¹

In the science-for-policy ecosystem: Statistics Finland produces essential statistical knowledge and as such supports researchers with the availability and use of data. Also supports closely the knowledge needs of decision-makers. As such, has an essential role in the evidence-informed policymaking.

Statistics Finland Act (48/1992)
 Statistics Finland, n.d., a
 Statistics Finland, n.d., b.

Government Research Institutes 3.6

The 12 government research institutes in Finland operate in seven different administrative sectors.¹¹² They collaborate with the ministry responsible for their performance management to define research priorities. The research itself is independent, funded partly from the state budget and partly from several competitive sources.¹¹³

Government research institutes have several roles in the Finnish science-for-policy ecosystem. They produce and synthesise knowledge, but they also play a role in communicating it to policymakers, other stakeholders, and society at large. They provide science advice, particularly to the ministry they are connected to.



Figure 3. Funding of the Finnish Government Research institutes.¹¹⁴

Evaluation

A) Summary of previous evaluations

Several evaluations have been conducted of the 12 institutes separately. Most recently evaluations have been made of THL,115 Finnish Geospatial Research Institute working directly under NLS,116 Luke,¹¹⁷ VATT,¹¹⁸ SYKE¹¹⁹ and VTT.¹²⁰

Overall, government research institutions have been assessed as respected and trusted actors in the Finnish society.¹²¹ The role of government research institutions as both high-level independent research institutes and providers of policy-relevant research is represented in the former evaluations.

The access of some research institutes to unique databases and clear research priorities serves as an important foundation for high-quality applied research. The research conducted is of the highest level nationally and, for some, internationally. Many institutes consider publishing peer-reviewed research articles in international journals as an indicator of impact.¹²²

While stakeholders value their policy-relevant research, the evaluations note that some institutes could better utilise their data resources¹²³ and others maintain policy relevance also in the future.124

Lahtinen & Pekkala, 2023 Lahtinen & Pekkala, 2023 There are currently 12 government research institutes in Finland. Core funding (suom. perusrahoitus) refers to funding allocated by their administrating ministry or government. External funding (suom. ulkopuolinen rahoitus) refers to competitive funding allocated by different actors such as different ministries, European Union or Business Finland. Institutional resources (suom. own of al. 2022

Jesse et al., 2023 Hämäläinen et al., 2023 Kleemola et al., 2021

Ministry of Finance, 2020 Bach et al., 2020 118 119

bacn et al., 2020 Hjelt -Solveig et al., 2019 Bach et al., 2020; Hjelt -Solveig et al., 2019; Ministry of Finance, 2020 Hjelt -Solveig et al., 2019; Kleemola et al., 2021; Ministry of Finance, 2020 Hămălăinen et al., 2023 Hjelt-Solveig et al., 2019

¹²² 123 124

B) Main findings from our assessment

Strengths:

- 1. Government research institutes provide timely, **applied knowledge** that is directly aligned with ministerial needs due to their statutory role and proximity to various ministries. Their primarily applied and solution-oriented research approach renders their outputs particularly valuable for policymaking, especially in comparison to knowledge produced at universities.
- 2. Statutory positioning gives some government research institutes **privileged access to datasets** (i.e. compared to universities), which they can use to produce regular reviews and forecasts and also provide advice in crises (such as the COVID-19 pandemic). These registers and other data resources also provide opportunities for monitoring and evaluating policy actions.
- 3. Government research institutes excel at **synthesising and disseminating knowledge** through policy briefs and other accessible formats. They also have the know-how to communicate their research findings in an easily accessible way.

Challenges:

- 1. While government research institutes have better capacities to provide faster scientific advice than other institutions, they still face **agility challenges** in meeting rapid knowledge needs. Balancing rapid-response capabilities with long-term science advice remains a persistent challenge.
- 2. Compared to universities, government research institutes have a closer connection to policy-makers, which can be both a strength and a weakness. Whereas it can offer opportunities for sustained collaboration, it may risk **narrowing perspectives.** This proximity creates two key challenges: knowledge fragmentation through focus on specific issues without broader context, and potential blind spots from adhering too closely to predetermined knowledge needs.
- 3. Reliance on competitive funding forces government institutes to dedicate significant time to grant applications and reporting, potentially disrupting continuous policy support. This funding structure also risks misalignment between research priorities and decision-makers' knowledge needs.

Impact example: Data Room¹²⁵

Function: rapid response, requested input

What: An independent research unit that promotes data-driven policymaking by analysing and combining individual-level registry data. It started as a pilot in 2023 but has since been made permanent.

Who: Operates under VATT Institute for Economic Research and collaborates closely with Statistics Finland and Helsinki Graduate School of Economics (GSE). Receives funding from the Ministry of Finance and the Ministry of Education and Culture.

How: Addresses government knowledge needs through three themed research groups: Business; Environment and Energy and Education; and Labour Markets and Households. Its policy briefs and reports are delivered mostly to ministries.

In the science-for-policy ecosystem: Creates collaborative networks between GSE, Statistics Finland, VATT, universities, and ministries for comprehensive policy analysis.

125 Datahuone, n.d.

3.7 Non-Governmental Research Institutes

There are several non-governmental research institutes in the Finnish science-for-policy ecosystem. Their role varies slightly, but they tend to concentrate on specific thematic policy areas. They are also comparatively small to government research institutes (with staff ranging from 10 to 50). These institutes maintain strong collaborations with universities and one another, often sharing researchers through dual appointments. Examples of independent research institutes include BIOS,¹²⁶ E2 Research,¹²⁷ the Labour Institute for Economic Research (LABORE),¹²⁸ the Centre for Cultural Policy Research (Cupore),¹²⁹ and ETLA Economic Research.¹³⁰

Evaluation

A) Summary of previous evaluations

To our knowledge, there are no previous evaluations regarding the role of independent research institutes in the science-policy interface.

B) Main findings from our assessment

Strengths:

- 1. Non-governmental research institutes generate high-level academic research while also focusing on producing policy-relevant knowledge.
- 2. Non-governmental research institutes differentiate themselves, for example, from universities through their explicit policy-orientation and targeted **societal engagement**.
- 3. Non-governmental research institutes act as **knowledge brokers and communicate scientific knowledge** for policymakers in a relevant format. They provide solicited and unsolicited advice to ministries, political parties, and unions, offering formal bill statements, briefings, and consultations.

BIOS Research Unit, n.d.
E2 Research Unit, n.d.
Labore, n.d.
Uppore, n.d.
Etla, n.d.

Impact example: Ecological Reconstruction, BIOS

Function: Knowledge producer, knowledge broker

What: Ecological reconstructions is an initiative of BIOS research unit, which presents research-based solutions to radically reduce climate emission in Finland through ecological reconstruction. Founded in 2019.

Who: BIOS is an independent multidisciplinary research unit that examines the impact of environmental and resource use factors on Finnish society and develops the foresight capacities of citizens and decision-makers. It receives funding from the Kone Foundation.

How: The initiative was published as an interactive website providing popularised research-based knowledge. The initiative includes both the problem and solution, offering concrete policy recommendations.

In the science-for-policy ecosystem: BIOS' role in the ecosystem is to synthesise the latest research on global environmental and resource pressures and anticipate their impacts on Finnish society. They achieve this by producing and synthesising research knowledge, communicating complex societal challenges in accessible formats, and maintaining ongoing dialogue with diverse stakeholders including civil society, policymakers, and industry. The Ecological Reconstruction initiative is one example of their work.

3.8 Interim panels, working groups and task forces

Expert bodies such as working groups, interim panels and taskforces offer important advice to support policymaking. Their role varies slightly, but generally, they focus on thematic policy areas and gather inputs from a range of sources on the topic. For example, the Government Foresight Steering Group is a working group that advises on future-related issues and reports, such as the Government Report on the Future. Other similar working groups include behavioural foresight and knowledge in future administration,¹³¹ as well as a parliamentary working group on RDI, whose task was to develop a long-term strategy for R&D funding in Finland.¹³²

These groups typically combine diverse expertise from research, government, private sector, and civil society and operate on fixed-term appointment. For example, the Foresight Steering Group was first appointed by the Prime Minister's Office in 2015, and the appointment has been renewed 3 times since following the terms of office of the government (the first appointment was only for 2 years).¹³³

Evaluation

A) Summary of previous evaluations

To our knowledge, there are no previous evaluations of interim panels, working groups and task forces functioning in the science-policy interface.

B) Main findings from our assessment

Despite diverse structures and compositions making systematic evaluation challenging, working groups and taskforces play a significant role in providing expert policy advice.

Strength:

 At best, working groups serve as dynamic platforms for communicating research knowledge to policymakers and other stakeholders through constructive dialogue. They enable the synthesis of evidence-based and value-based perspectives, fostering a more comprehensive understanding of issues and reconciling diverse viewpoints.

Challenges:

- 1. Sometimes the working groups could be developed with a **more robust methodical** approach. Presently each working group's coordinating body (i.e. a ministry) critically shapes a working group's impact on policy advice, for example through organisational choices and atmosphere management. This leadership role is particularly important when members of the group have diverging interests.
- 2. Working groups face also other challenges, including resource limitations and slow response times in delivering policy advice.

131 Finnish Government, 2020
132 Finnish Government, 2022
133 Finnish Government, 2023

Impact example: The Finnish Behavioural Policy Team (FINBEPOL)

Function: knowledge broker, requested input, identify options

What: A behavioural advisory team appointed to develop and test in practice knowledge from behavioural sciences. The team was first appointed as a project related to COVID-19 governance in 2020. Since then the sphere of activity has expanded to other areas of governance.

Who: The advisory project was first set by the Prime Minister's Office and the FINBEPOL-team continues working under the it. The current team consists of government officials with a supporting group of scientists.

How: The FINBEPOL-team published memorandums¹³⁴ for effective governance, guidelines and check-lists for the communication of Covid-related restrictions. After the active phase of pandemic governance, the group continued to provide information on why and how the scientific knowledge of behavioural science can be utilised in policymaking. Currently the teams publishes research-based knowledge synthesis four times a year, synthesising knowledge of the latest research globally.

In the science-for-policy ecosystem: FINBEPOL-team works with the both sides of the science-policy interface acting as a link between academic actors and public governance.

134 See e.g., FINBEPOL, 2021; FINBEPOL, 2022

Commissions and Councils 3.9

Commissions and councils serve as advisory bodies that usually monitor, define and assess certain policy areas and provide continuous monitoring and assessment for specific policy areas. They synthesise knowledge, identify options, and provide long-term policy continuity through expert guidance. They are usually composed of high-level civil servants and researchers.

Examples of such committees include the Council for Choices in Health Care in Finland (COHERE Finland) and the Research and Innovation Council (RIC). For example, the COHERE Finland's¹³⁵ task is to issue recommendations on which examination, treatment and rehabilitation methods should be included in healthcare services, and to monitor and assess the range of public health services, among other things. It works in conjunction with the Ministry of Social Affairs and Health. It is chaired by the Permanent Secretary of the Ministry of Social Affairs and Health. The Council has a maximum of 15 members, each with a personal substitute.

Another example is the Research and Innovation Council¹³⁶, an advisory body led by the Prime Minister. Its goal is to develop a research and innovation policy that supports wellbeing, education and culture and promotes economically, socially and ecologically sustainable growth and competitiveness.

Commissions and councils are generally limited in their scope, mandate and duration. For example, the Research and Innovation Council is set for the duration of the government. Meanwhile, COHERE Finland is set for three-year terms.

Evaluation

A) Summary of previous evaluations

There have been some previous evaluations on specific councils. For example, a previous evaluation of the RIC¹³⁷ recognised several development needs for the Council and its operations, including making its activities more strategic in a way that draws systematically on foresight and assessments. This contributed to the revision of the Council in autumn 2023, which aims to improve the management and coordination of research and innovation policy, increasing its effectiveness and strengthening cross-sectoral governance. The revision also strengthened the role and resources of the Council, with the intent to increase the societal impact of the Council, and making it more active, diverse and visible.138

B) Main findings from our assessment

Strength:

1. High-ranking membership can enhance commission and councils' credibility and impact. COHERE Finland demonstrates this influence through healthcare service standardisation across regions, while RIC shapes the development and monitoring of national long-term research and innovation policy.

Challenge:

1. Government-term mandates limit councils' and commissions' long-term effectiveness. For example, in RIC regular membership changes and policy shifts have occurred following electoral cycles.

Choices in Health Care [Palveluvalikoima], n.d. Finnish Government, n.d. Pelkonen et al., 2014 Finnish Government, 2023b

136 137 138

Impact example: Research and Innovation Council

Function: requested input, implementing and monitoring

What: An advisory body aiming to develop research and innovation policy that supports wellbeing, education and culture and promotes economically, socially and ecologically sustainable growth and competitiveness. The council was appointed by the government in 2023 for the parliamentary turn.

Who: Led by the Prime Minister the Research and Innovation Council operates under the Prime Minister's Office. In addition to ministerial members, the Council members are representatives of different ministries and stakeholders.

How: The advisory board oversees the implementation of the Act on Research and Development Funding and the drafting and implementation of the multiannual plan for the use of R&D funding. In addition, it supports the overall working of the Government on issues related to R&D, for example by preparing and presenting initiatives.

In the science-for-policy ecosystem: The Council has members from stakeholders outside the government and thus enlarges the pool of opinions in the policymaking process. Among permanent experts and extended group there are representatives from Finnish Research Council, Business Finland, University of Helsinki, Confederation of Finnish Industries in addition to independent researchers and CEOs.

3.10 Science Panels

Science panels offer a multidisciplinary and independent science advice mechanism. They act mainly as knowledge synthesisers and knowledge brokers. The panel members are selected for a fixed-term position for 3 to 4 years.

Currently, there are four science panels: the Finnish Climate Change Panel, the Finnish Forest Bioeconomy Science Panel, the Finnish Nature Panel and the Finnish Expert Panel for Sustainable Development.¹³⁹ There also exists the Sámi Climate Council, appointed by the Government with a mandate to create a new knowledge base in support of the preparation of climate policy and give statements. It consists of a multidisciplinary group of researchers and holders of traditional knowledge.140

Each science panel has a specific mandate. For example, whereas the Climate Change Panel and the Nature Panel have legal positions, the Expert Panel on Sustainable Development is established by the government without a legal basis. Similarly, the Forest Bioeconomy Panel is established by two ministries (the Ministry of Agriculture and Forestry and the Ministry of Economic Affairs and Employment) without a legal basis.

All the panels have a position as an independent and multidisciplinary body of science advice. The panel members are selected for a fixed-term position for 3 to 4 years.

Table 10. Funding by scie	ence paneis in 20	Funding by science	
Science Panel	Funding in 2023 (in M €)	panels in 2023	
Climate Change Panel	0.8	Forest Bioeconomy Science Panel 0.6 M€	E
Forest Bioeconomy Science Panel	0.6	Expert Panel on	
Nature Panel	0.4	Sustainable Development 0.1	.M€
Expert Panel on Sustai- nable Development	0.1	Climate Change Panel	M£
		0.8 M€	ME

T I I 10 F 1- :- 2022141

Table 11.	Committee hearings by
science	panels in 2023

Science Panel	Number of Committee hearings in 2023
Climate Change Panel	212
Forest Bioeconomy Science Panel	10
Nature Panel	99
Expert Panel on Sustai- nable Development	17



It should be noted that there also exists Finnish Economic Policy Council, which functions as a science panel. It is, however, not described here in details as this paper follows the distinction of panels presented in the report by Backmann (2024). Ministry of Environment, 2023 Backman, 2024 139

140 141

Evaluation

A) Summary of previous evaluations

There have been two evaluations of the Finnish Climate Change Panel¹⁴² and one of the Finnish Nature Panel separately, which have highlighted the importance of science panels as independent and multidisciplinary science advice mechanisms.¹⁴³ Jouni Backman's (2024) report is the first of its kind in evaluating the overall function of the science panels. While it demonstrated the strenths of these panels particularly in synthesising and brokering knowledge, it also identified key developmental areas for science panels' future. These are: 1) specifying the roles of each panel, 2) improving impact particularly through participation at the earlier stages of policy-making, 3) establishing a clearer schedule for their work, 4) synchronising their appointment, 5) examining their overall structure, 6) ensuring independence and knowledge of processes, 7) increasing encounters with decision-makers, 8) harmonising resources, 9) increasing collaboration between panels, and 10) harmonising documentation and assessment practices.

B) Main findings from our assessment

Strengths:

- 1. Science panels excel at **knowledge synthesis and brokerage** by applying multidisciplinary approaches to complex challenges, bridging divides between academic disciplines and government departments.
- 2. Science panels have been quite effective in responding **rapidly to knowledge requests** and providing input on policy proposals.
- 3. Direct **policy connections** enable science panels to maintain continuous engagement while delivering rapid input when needed.

Challenge:

1. Science panels encounter at least three significant challenges: inadequate inter-panel coordination, excessive dependence on the personalities of chairs, and limited involvement with wider societal stakeholders.

Impact example: Justice in climate policy -Initiative¹⁴⁴

Function: Knowledge generation, knowledge brokering, unsolicited input

What: A research initiative aiming to understand what justice in the context of climate policy is. The project was active from 2021 to 2023.

Who: The initiative was carried out by the Finnish Climate Change Panel. The panel has a legislative task to recognise knowledge needs, compile scientific knowledge and provide recommendations to support climate policy planning and implementation. Their reports and advice are drawn up based on the Panel's scientific, interdisciplinary expertise. It receives funding from the Government.

How: During the initiative several stakeholder meetings were organised. The literary output includes multiple types of knowledge: a peer-reviewed article, popularised blog texts and policy recommendations.

In the science-for-policy ecosystem: The initiative was produced in collaboration with Aalto University, SYKE, the University of Oulu, the University of Turku and the University of Helsinki. Being perhaps the biggest national authority on climate changerelated issues, it is notable that in their knowledge generation, several points of view are included such as those of the Sámi.

144 ilmastopaneeli.fi/ilmastopolitiikan-oikeudenmukaisuus/

3.11 Learned Societies and Academies of Science

In Finland, learned societies and academies of science consist of a large number of different organisations, with varying degrees of involvement in the science-policy interface. In this section, we focused on the most active ones - the Federation of Finnish Learned Societies and the four academies of sciences.

The Federation of Finnish learned societies functions as a co-operative body of Finnish learned societies and academies of science. It has 298 member organisations, of which 294 are learned societies and four academies of science.¹⁴⁵ Compared to most of their international counterparts, Finnish learned societies are unique in being largely responsible for academic publishing in the Finnish language. They play a role in supporting scientific research and disseminating it to the larger public.

In Finland there are four academies of science: Finnish Academy of Science and Letters, the Finnish Academy of Technology, the Finnish Society of Sciences and Letters, and the Swedish Academy of Engineering Sciences in Finland. The academies are small internationally compared (with staff ranging from 1 to 20 employees). They are all part of the Council of Finnish Academies (COFA), which is a cooperative body between them. The role of academies in the science-for-policy ecosystem varies. Some take more active, knowledge brokering roles, whereas others focus on more on science education and science communication. The academies societies have recently collaborated on a three-year project called the Science Advice Initiative of Finland (2019-2021). The project was commissioned by the Ministry of Education and Culture, and it was coordinated by the Finnish Academy of Science and Letters.

Evaluation

A) Summary of previous evaluations

There are no external evaluations of the learned societies or their role in the science-for-policy ecosystem. However, previous assessment on learned societies concluded that they have an important role in the Finnish scientific community.¹⁴⁶ Science communication has a central role in their activities, which includes creating social media content, organising events for the public, and publishing policy statements. The societies also serve an advisory function by connecting experts with decision-making bodies. This includes proposing members to serve on research ethics advisory boards and participating in ministerial working groups. Through these activities, learned societies create direct channels between the scientific community and broader society, enabling both public engagement with science and expert input into policy processes.¹⁴⁷

B) Main findings from our assessment

Strength:

1. Learned societies leverage their prestigious position and extensive research networks to coordinate science-policy collaboration, increasingly extending their reach into decision-making. Due to this position, learned societies can take coordinating roles in broader science-policy development, as demonstrated by the Finnish Academy of Science and Letters' pioneering work in testing and developing new science-for-policy models.

Challenges:

- 1. Questions persist about learned societies' consistency in science-policy engagement, with their broad mandate presenting opportunities and limitations.
- 2. Organisations like the Federation of Finnish Learned Societies strengthen evidence-informed policymaking indirectly by promoting scientific values and ethics. While this advocacy enhances science's credibility, there is potential to expand for more direct engagement in policy processes.

Federation of Finnish Learned Societies, 2024a Korkeamäki et al., 2019 Korkeamäki et al., 2019

Impact example: The Science Forum (Tieteen päivät)

Function: Capacity builder, knowledge brokering

What: Biennial science festival taking place in multiple Finnish cities.

Who: The festival is co-organised by the Federation of Finnish Learned Societies, the Finnish Cultural Foundation, the Finnish Academy of Science and Letters, the Finnish Society of Sciences and Letters, the Finnish Academy of Technical Sciences, and the Swedish Academy of Engineering Sciences. In addition, it is supported by the Kone Foundation and the University of Helsinki.

How: The five-day free festival introduces the latest research to the public. Events include seminars, debates and exhibitions.

In the science-for-policy ecosystem: The Finnish science community has for long had the shared ethos of bildung (suom. sivistys). It is represented in the university law as the requirement to educate the public and in the strategies of many organisations as a goal to offer scientific available to the public. ¹⁴⁸ The festival adds to capacity building on both sides; the organisers and the audience, by increasing knowledge on what scientific knowledge is and how it should be communicated. This is part of a broader aim to build and maintain a civilised nation which also embraces evidence-informed policymaking.

148 see e.g., Strategy of the Federation of Finnish Learned Societies, 2024b; or values of the University of Helsinki, n.d., c

3.12 Foundations

Foundations act as major research funders in the Finnish science-for-policy ecosystem. Hence, their participation acts as an enabler in the ecosystem. However, some foundations have increasingly started to explore other ways of contributing to science-for-policy.

According to the Association of Finnish Foundations 295.2 million euros was granted for science by different foundations in Finland in 2022. The association has collected data since 2018. The amount of funding for science has since increased with 2 to 3 million euros yearly, apart from 2021 where funding for science by foundations decreased.¹⁴⁹



Table 12. Funding by foundations of scientific research in Finland in 2023¹⁵⁰

Evaluation

A) Summary of previous evaluations

To our knowledge, there are no previous evaluations made of foundations focusing on their sciencefor-policy activities.

B) Main findings from our assessment

Strengths:

- 1. Foundations strengthen research's societal impact by directing funds toward high-impact research areas. Their targeted funding strategies encourage researchers and institutions to actively engage with societal challenges.
- 2. Foundations have been strengthening their importance in the science-for-policy ecosystem, by expanding beyond traditional research funding to actively support science-policy engagement initiatives. Notably, organisations like the Jane and Aatos Erkko Foundation have invested in innovative knowledge brokering models.151
- 3. Foundations have also started to provide capacity-building to researchers, offering trainings in research impact, media communication. Additionally, they provide co-working spaces, and opportunities to network with fellow researchers.
- 4. In recent years, foundations have demonstrated their agility in responding to societal crises and emerging challenges. For example, many foundations quickly allocated targeted funding in response to the COVID-19 pandemic and the Russian invation of Ukraine, illustrating their flexibility and commitment to addressing urgent societal needs.

Raivio et al., 2023 Adapted from Säätiöt ja rahastot ry, 2024 Jane and Aatos Erkko Foundation have supported the Phenomenon Maps project at the Finnish Academy of Science and Letters. This funding has also made the writing of this report possible.

Impact example: Puistokatu 4: A Space for Science and Hope

Function: Enabler

What: Facilities reserved for solution-oriented building of an ecologically sustainable future. Puistokatu 4 was established in 2022. Co-working and networking facilities for individual researchers and organisations. Accessible and free "living room" for the citizens. The facilities can be booked for events related to the cause.

Who: The Puistokatu 4 is a collaboration between the TAH Foundation and the Maj and Tor Nessling Foundation.

How: The goal of the space is to facilitate cooperation by breaking silos in environmental discussions. According to the strategies of both foundations, they believe that facilitating and supporting research and providing places of collaboration are important means to increase the impact of research in policymaking.

In the science-for-policy ecosystem: Puistokatu 4 serves as a hub for science-policy dialogue, for example hosting in its space the Forum for Environmental Information, which supports evidence-informed environmental policymaking. It also hosts various events organised by diverse stakeholders.

3.13 Knowledge brokering organisations

There is no single blueprint for organising knowledge brokering at the national level. Knowledge brokers can be independent organisations or individuals, or knowledge users or producers can also act as knowledge brokers. One common approach involves boundary organisations, which serve as intermediaries between science and policy by providing functions such as "disseminating, translating, synthesising, and communicating research for policy; managing requests for evidence; facilitating access to research; training researchers and decision-makers for evidence-informed policymaking; building partnerships; rewarding policy impact; and creating processes and posts for science for policy".¹⁵²

The Finnish science-for-policy ecosystem also has boundary organisations that provide insights (such as summaries, reports etc.) to support policymaking. They also provide platforms for science-policy dialogue and collaboration, and facilitate these dialogues as intermediaries. Examples of such boundary organisations include the Forum for Environmental Information (FEI),¹⁵³ the Finnish Academy of Science and Letters,¹⁵⁴ and the Urban Policy Council.¹⁵⁵

Evaluation

A) Summary of previous evaluations

Some previous evaluations have been conducted on specific networks within the system. In the 2018 assessment of the FEI, both knowledge generators and policymakers expressed a need for more intermediary actors. Dedicated knowledge brokers are essential for sustaining ongoing decision-making processes, facilitating meetings, and ensuring effective communication.¹⁵⁶ In response to national and global calls for more intermediary actors, several non-governmental organisations have begun establishing knowledge brokering practices within the Finnish science-for-policy interface. This developmental work has attracted global attention.¹⁵⁷

B) Main findings from our assessment

Strength:

1. The positioning of many knowledge brokering organisations as independent boundary organisations gives them opportunity to actively try out new models and methods to facilitate science-policy collaborations and interactions.

Challenges:

- Brokering has not been recognised extensively as a science-for-policy expertise. 1.
- There is still no wide and well-connected community of practice among brokers. 2.

European Commission, 2022 FEI, n.d.

¹⁵² 153 154 FEI, nd. While the Finnish Academy of Science and Letters traditionally fits the category of Learned Societies, its active role in the science-policy interface aligns with knowledge brokering organisations, and its partners increasingly recognise it as such (see e.g., FEI, 2024). Therefore, we have categorised here amongst the knowledge brokering organisations. The Urban Policy Council is an independent academic actor. It is financed by the cities of the Helsinki Metropolitan Region, Espoo, Helsinki and Vantaa, in cooperation with Aalto University and the University of Helsinki (Aalto University, 2025). Silfverberg et al., 2018 European Commission, 2022; Pearson, 2024 155

¹⁵⁶ 157

Impact example: Knowledge brokering network (Tiedevälittäjien verkosto)

Function: Capacity builder

What: A loose network of self-identified knowledge brokers who gather twice a year to discuss and share ideas and experiences. The first meeting of the Knowledge brokering network was in 2022.

Who: The Network is maintained by the science and policy experts of the Finnish Academy of Science and Letters.

How: By meeting regularly with other knowledge brokers, the emerging profession stabilises and evolves on a national level. Sharing experiences and best practices in a casual, collegial environment increases learning and leads to better knowledge brokering practices.

In the science-for-policy ecosystem: Knowledge brokers facilitate science-policy interactions, acting as intermediaries between actors who normally might have a hard time interacting.

3.14 Interest groups and trade unions

Some organisations that may be categorised as interest groups also engage in the science-policy interface. Their primary role is to advocate for the significance of science and research in society, but they also advocate for science-for-policy. Examples of such organisations include the Finnish Union of University Researchers and Teachers (FUURT)¹⁵⁸ and the Council of Rectors of Finnish Universities.¹⁵⁹

Some of these organisations could be better categorised as trade unions, and they also play a role in enhancing the impact of research. For example, FUURT is an active trade union that represents all those working in science, research, and higher education. It positions itself as an advocate of scientific research and aims to increase the impact of science in society.

Evaluation

A) Summary of previous evaluations

To our knowledge, there are no previous evaluations made of interest groups and trade unions in connection to science-for-policy.

B) Main findings from our assessment

While our analysis of interest groups remains limited, organisations like FUURT and the Council of Rectors of Finnish Universities emerge as significant actors in the science-for-policy ecosystem.

Strength:

1. Key interest groups strengthen the science-for-policy ecosystem through different channels: some, like the Council of Rectors, focus on **capacity building**, while others, such as FUURT, promote the status of scientific research and evidence-informed policymaking, particularly through **science communication**.

Challenge:

1. Interest groups could strengthen their science-policy influence through more **proactive advocacy and public engagement** campaigns.

Impact example: Handbook for the negotiations on the Government Programme 2023¹⁶⁰

Function: Unsolicited input

What: A handbook on political issues on education political issues meant for that negotiation on Finland's Government Programme in 2023.

Who: The handbook is created by The Council of Rectors of Finnish Universities (Unifi).¹⁶¹ Unifi is an interest organisation and collective forum of all Finnish universities.

How: In the handbook, there are 12 policy proposals for the benefit of universities and research and development. Each proposal is justified through international comparison and statistics.

In the science-for-policy ecosystem: Unifi works closely with other interest organisations in the academic field such as The Rectors' Conference of Finnish Universities of Applied Sciences (Arene) and Confederation of Unions for Professional and Managerial Staff in Finland (Akava).

160 Unifi, 2023 161 Unifi, n.d.

3.15 Other intermediaries

Besides the more clearly defined actors, some other expert organisations and bodies play an important role in the Finnish science-for-policy ecosystem. This includes networks, such as the Knowledge Management Network ry,162 think tanks and other expert organisations, such as the Finnish Medical Society Duodecim.¹⁶³

The Finnish science-for-policy ecosystem includes various think tanks operating with distinct models: from party-affiliated organisations to independent institutes like Demos Helsinki and Sitra.¹⁶⁴While their diverse approaches make generalisations difficult, they share common functions as knowledge synthesisers and intermediaries between research and policymaking. Party-affiliated think tanks serve specific stakeholder interests, while independent ones have greater flexibility to shape policy agendas and engage broader stakeholder groups. Sometimes they also facilitate science-policy dialogues, particularly when active in the SRC's research projects.

Examples of think tanks include Demos Helsinki,165 MDI,166 Safer Globe,167 Gaia,168 Magma169 and Nordic West Office,¹⁷⁰ Kaskas,¹⁷¹ and the Finnish Centre for New Economic Analysis (UTAK).¹⁷²

Evaluation

A) Summary of previous evaluations

To our knowledge, there are no previous evaluations made these types of expert organisations and bodies regarding science-policy interface.

B) Main findings from our assessment

It is difficult to make generalisations about the role of different expert organisations in the Finnish science-for-policy ecosystem. Each expert organisation has its role that is related to its expertise and organisation type. For example, the Knowledge Management Network ry is seen as important in advancing cross-sectoral collaboration at the science-policy interface on knowledge management issues. Equally, Duodecim is Finland's largest scientific association that among other things develops Current Care Guidelines and Smart to Avoid Recommendations to support the work of physicians and other care professionals in making care decisions.¹⁷³

Then again, think tanks serve as bridges between research and policy by transforming complex scientific findings into accessible, actionable insights for decision-makers. They excel at rapid knowledge production and adapt effectively to short-term project cycles, making them more responsive to policy timelines than traditional research institutions. However, on the flip side, it seems that there is a need to clarify the role of think tanks in the science-for-policy ecocystem. In particular, there seems to be to be a need to clarify their distinct contributions and relationships with other actors engaging at the ecosystem. Interestingly, some experts consulted in this process also called for independent institutions like Sitra to take a more active role in experimenting with innovative approaches to support science advice.

Own translation from Tietojohtamisen Verkosto ry, n.d. Duodecim, n.d. Originally established in 1967 as a gift from Parliament to mark Finland's 50th anniversary, Sitra holds a unique position by reporting directly to the Finnish Parliament. Demos Helsinki, n.d. MDI, n.d. SaferGlobe, n.d. Since the writing of this report has merged to Sweco (Gaia, 2024). Magma, n.d. Nordic West Office, n.d. Kaskas, n.d. UTAK, n.d. UTAK, n.d. Current Care Guidelines [Käypähoitosuositus], 2025 162 163 164

¹⁶⁵ 166 167 168 169 170 171 172 173

Impact example: The Finnish Centre for New Economic Analysis (UTAK)

Function: Knowledge broker, identifying options

What: Public policy think tank-making analysis, public commentary and research in the field of economics, building on the intellectual foundations of Keynesian economics. UTAK was established in 2023.

Who: A public good association Uuden talousajattelun keskus ry answers for the operation of UTAK. Basic funding for the think tank comes from Dezernat Zukunft, a German non-partisan policy institute.

How: Through expert statements, UTAK aims to affect policy decisions in the field of economics. In addition to giving experts statements to Government proposals, it publishes argumentative blogposts. UTAK organises panel discussions and lectures.

In the science-for-policy ecosystem: In addition to the providing expert statements and being conluted in parliamentary committees, UTAK works together with international researchers and in collaboration with the European Macro Policy Network.

3.16 Conclusion

This chapter has offered a broad overview of Finland's science-for-policy ecosystem by examining its key actors. Admittedly, these descriptions and assessments only scratch the surface of a complicated, multilayered network of organisations, institutions, and instruments. While a deeper understanding could be gained by delving into the substantial body of existing evaluations, that approach would detract from this paper's ecosystem-wide perspective. Nevertheless, we encourage everyone to look deeper into the existing assessments, as they constitute valuable materials for better understanding the individual actors and their interrelations.

4. Development Needs in the Science-for-Policy Ecosystem

This chapter builds upon the analysis from the previous chapter and extends the evaluative lens to encompass the broader ecosystem. Considering the entirety of individual actors and their primary challenges, what can be concluded about the ecosystem as a collective? What are the primary development needs in the larger context? This section summarises various challenges faced by the Finnish science-for-policy ecosystem that were highlighted in the previous chapter. The analysis builds also on the in-depth interviews, roundtable discussions, and open-ended survey responses, in which we specifically requested the experts to evaluate the actors as a collective. The consulted experts identified several overarching challenges in the ecosystem, which were categorised into four main themes: interaction and communication, knowledge brokering, structures, and culture.

4.1 Interaction and communication



Despite the increasing recognition of the need for continuous interaction, science-for-policy practices remain excessively anchored in the traditional linear model of communication. The linear model is based on the notion of two distinct communities—knowledge users and knowledge producers—divided by a gap.¹⁷⁴ In practice, this model often manifests in reactive, question-and-answer approaches, where decision-makers pose questions and researchers provide answers. Another form it frequently takes is unsolicited communications of research output.

Many experts argue that the two communities model no longer reflects reality, nor does it align with the direction in which the ecosystem should evolve (see also Chapter 4.4). Establishing channels of continuous interaction for researchers and policymakers remains a challenge. While the findings here do not fully support the dire assessment of Finnish Innovation Fund Sitra's 2017 report, which described science-policy interaction as "broken",¹⁷⁵ there is considerable room for improvement. **A key obstacle is the project-based nature of collaborations**. Several experts in this assessment noted that short-term projects hinder sustained engagement, with one stating

174 SOFI, 2021 175 Hellström & Ikäheimo, 2017 that "the project-based nature of collaboration is a challenge, given its short-term nature and short-sightedness, which makes maintaining continuous collaboration difficult."

It was also emphasised that **currently researchers' impact on policymaking relies heavily on sporadic science communication**. While engaging policymakers through platforms like social media provides a low-barrier entry point for researchers into science-for-policy activities, this approach presents challenges. First, placing the primary responsibility for communication on individual researchers can lead to reactive engagement by emphasising research dissemination only in the later stages of projects, such as upon publication of results. As one expert noted, "science communication focuses too much on received funding and, on the other hand, presenting final results." Second, **science communication is often discipline-specific**. Addressing complex societal challenges requires synthesising multidisciplinary knowledge. Therefore, a more collaborative and continuous approach to science communication is essential for increasing researchers' impact to policymaking.

Long-term planning and **anticipating knowledge needs emerged as an important challenge**. This was considered to be linked to the lack of continuous interaction. This issue affects decisions about when and how to facilitate science-policy collaboration, including when statements are requested from researchers. Researchers criticised the short-notice requests made through Lausuntopalvelu.fi, which leave little time to provide meaningful input.

There are also difficulties in defining knowledge needs collaboratively. Several experts noted that science-policy collaboration is difficult and even demotivating when there is no shared understanding of what the knowledge needs are. For researchers, it can be demotivating to have unclear descriptions of the knowledge need, while policymakers can be frustrated by the need to identify more concrete requirements. In some cases, these misalignments may reflect deeper differences in how urgency is perceived and how critical it is to anticipate future knowledge needs.

Challenges Identified:

- 1. Science-for-policy practices remain excessively anchored in the traditional linear model of communication.
- 2. Science-policy interaction excessively built around ad hoc projects instead of more permanent institutional arrangements.
- 3. Current efforts to enhance research's impact on policymaking rely heavily on sporadic science communication
- 4. Participation and input from researchers are often requested at very short notice.
- 5. There are difficulties in the collaborative establishment of knowledge needs.

4.2 **Knowledge brokering**



To move away from the traditional linear model of science advice, many experts consulted for this paper emphasised the importance of strengthening knowledge-brokering capacities at the science-policy interface. Experts also highlighted the need for more professional development opportunities for science communicators and knowledge brokers to refine their specialised skills.

Additionally, many experts underscored the need for better recognition of knowledge brokering as a specialised field. Knowledge brokering is essential for supporting evidence-informed policy by translating scientific findings into actionable insights for decision-makers.¹⁷⁶ As key intermediaries, knowledge brokers play a critical role at the science-policy interface by presenting research evidence to policymakers, offering insights that inform policy options without dictating policy outcomes.¹⁷⁷ This requires a specific set of skills and competencies, which Turnhout et al. categorise into supplying, bridging, and facilitating.¹⁷⁸

Although awareness of the importance of knowledge brokering is gradually growing, institutional structures to support brokering activities remain weak. Experts also reported tension between the imperative to remain independent and the challenge of securing sustainable funding, and some criticised funding models that rely solely on project-based impact work (see previous section).

Challenges identified:

- 1. Knowledge brokering as an expertise is insufficiently recognised both within organisations and, more broadly, in the ecosystem.
- There is a lack of professional development opportunities for science communicators and 2. knowledge brokers to enhance their specialised skills.
- 3. Knowledge brokering lacks institutional arrangements and relies significantly on project-based impact work.

Juhola et al., 2024 Gluckman et al., 2021 Turnhout et al., 2013



The wide range of stakeholders in Finland's science-for-policy ecosystem have the potential to foster partnerships. However, as one expert noted, "dialogue sometimes works well, but it is not systematic and rather depends on individuals. It is difficult to transfer to an organisational level." This issue is amplified by the fact that **there is no central coordination mechanism for scien-ce-for-policy ecosystem** in Finland. This, in addition to creating challenges for strategic long-term collaboration, complicates efforts to coordinate exchanges during rapidly evolving situations.

A recurring theme in this assessment is governance systems' capacity to respond effectively to complex, uncertain challenges. Multiple experts emphasised that **building systematic anti-cipatory capacity requires institutionalising processes to collect and integrate diverse forms of evidence** (including foresight studies, stakeholder perspectives, and traditional evidence syntheses). However, as previously highlighted¹⁷⁹, traditional governance structures are typically designed for well-defined, sequential issues rather than the interconnected challenges characterising modern policymaking.

Institutional tensions also arise between academic excellence and policy impact. **Researchers are reluctant to engage in science-policy work, viewing it as competing with academic priori-ties** – particularly given merit systems that prioritise academic achievement.

Finally, although many actors are involved in science-for-policy work, experts consistently pointed to **limited strategic coordination and communication among these actors, especially when designing instruments and institutions**.

Challenges Identified:

- 1. There is no central coordination mechanism for science-for-policy
- 2. There is a gap in arrangements addressing rapid knowledge needs while simultaneously maintaining a forward-looking perspective.
- 3. Due to the tension between academic excellence and policy impact, many researchers hesitate to engage in impact work.
- 4. There is limited strategic coordination and communication among relevant stakeholders in designing new programmes, instruments and institutions.

¹⁷⁹ OECD, 2022



Collaboration between research and policy communities continues to be hampered by cultural and conceptual barriers, limiting the creation of effective, long-term partnerships. A key obstacle lies in the lack of consistent terminology around science advice in Finland. Terms such as science advice (tiedeneuvonta) and knowledge brokering (tiedevälittäminen) are often used interchangeably, with little acknowledgement of their distinct meanings. Additionally, the use of labels like knowledge user, knowledge producer, and knowledge broker is controversial. Some argue these labels create artificial boundaries that reinforce silos at the science-policy interface. In practice, many researchers and civil servants perform brokering roles without neatly fitting into "producer" or "user" categories.

Despite efforts to move beyond a simple "knowledge producers vs. knowledge users" dichotomy, research and policy communities remain disconnected from each other's working realities. Greater alignment is essential – both through stronger science education and literacy within policy institutions, and through immersive initiatives such as job mobility programs. For instance, the PostDocs for Government program has aimed to demonstrate how shared experiences in each other's work environments could potentially foster the cultural shifts needed for more robust science-policy collaboration.

The dominance of Finnish language in the science-policy interface also remains a key challenge. This excludes the country's growing body of international researchers, over 19,000 as of 2023.¹⁸⁰ Their expertise remains underused, particularly in fast-paced situations where there is little time for translation tools and services.

There also remain **gaps in competencies and culture for evidence-informed policymaking inside the government**. Evidence is not always used consistently or systematically, and political decision-makers apply it instrumentally to justify predetermined positions. While some experts view this as unavoidable – given that research is meant to inform rather than prescribe policy—researchers can become frustrated when their contributions appear undervalued. Consequently, experts emphasise the need for cultural and institutional reforms to incorporate evidence more systematically in legislative processes, including strengthening the knowledge base used in critical events like Government Formation Talks.

¹⁸⁰ Vipunen, 2023. The number includes all international university teaching and research staff from the 13 Universities, including doctoral students, postdoctoral researchers, university lecturers, professors, part-time teachers.

Challenges identified:

- 1. There is a lack of harmonisation of science advice terminology in Finland.
- 2. Research and policy communities remain disconnected from each other's working realities.
- 3. Language barriers hamper the participation of international researchers
- 4. There remain gaps in competencies and culture for evidence-informed policymaking inside the government.

Challenges in the science-for-policy ecosystem			
Interaction and communication	Knowledge brokering		
 Science-for-policy practices remain excessively anchored in the traditional linear model of communication. Science-policy interaction excessively built around ad hoc projects instead of more permanent institutional arrangements. Current efforts to enhance research's impact on policymaking rely heavily on sporadic science communication. Participation and input from researchers are often requested at very short notice. There are difficulties in the collaborative establishment of knowledge needs. 	 Knowledge brokering as an expertise is insufficiently recognised both within organisations and, more broadly, in the ecosystem. There is a lack of professional development opportunities for science communicators and knowledge brokers to enhance their specialised skills. Knowledge brokering lacks institutional arrangements and relies significantly on project-based impact work. 		
Structures	Culture		
 There is no central coordination mechanism for science-for-policy There is a gap in arrangements addressing rapid knowledge needs while simultaneously maintaining a forward-looking perspective. Due to the tension between academic excellence and policy impact, many researchers hesi- tate to engage in impact work. There is limited strategic coordination and communication among relevant stakeholders in designing new programmes, instruments and institutions. 	 There is a lack of harmonisation of science advice terminology in Finland. Research and policy communi- ties remain disconnected from each other's working realities. Language barriers hamper the partici- pation of international researchers. There remain gaps in competencies and culture for evidence-informed policymaking inside the government. 		

Table 13. Summary of the challenges in the Finnish science-for-policy ecosystem

5. Conclusion: Three Messages on the Future of the Ecosystem

This discussion paper has explored the Finnish science-for-policy ecosystem, including its actors and structures. With the paper we hope to inspire future conversations on the best ways to improve the ecosystem. To facilitate these discussions, we conclude with three messages for the science-policy community.

1. Knowledge brokering remains underutilised, yet it could significantly reshape the science-for-policy landscape.

Knowledge brokering offers an accessible but potentially transformative means of driving systemic change in the science-for-policy ecosystem. Global recognition of its importance as a bridging capability is also presently growing. The fact that many individuals perform brokering functions without being explicitly identified as knowledge brokers has so far hindered collective learning and the formation of robust expert networks. It is a positive signal, however, that in recent years a loose network of brokers has started to emerge in Finland as a community of practice.

Formally recognising and building a community of brokers represents an important step toward developing a more integrated and effectively functioning ecosystem. By strengthening knowledge brokering capacities within organisations, it becomes possible to bridge the traditional divide between producers and users of knowledge. This, in turn, helps to cultivate a more collaborative culture of evidence-informed policymaking, where the boundaries between research and policy become increasingly permeable.

2. Research community's approach to influencing policymaking must become more proactive, collaborative, and phenomenon-based.

The research community's approach to policy impact should be fundamentally rethought. There is a clear need to move away from traditional, one-directional science communication practices, which rely significantly on individual researchers and research projects. There is a need for more collaborative and proactive engagement, which steers away from the dissemination of individual researchers' output and rather engages with political decision-making in a phenomenon-based manner. While initiatives like the Strategic Research Council demonstrate progress toward co-productive models, the majority of science-policy activities still follow a linear model that curtails continuous dialogue, collective proactive action, and mutual learning.

This transformation requires developing new frameworks that recognise the complementary nature of scientific rigour and policy relevance, supporting highquality research and effective communication in policy contexts. It also requires new forms of impact training and support for researchers. Utilising knowledge brokers would be an option to facilitate change, as it would also take away pressure from individual researchers to expert knowledge brokers who could guide researchers in their impact work.

3. Large-scale structural changes in the science-policy interface are overdue.

Finland's science-for-policy ecosystem is constantly evolving, with various actors actively shaping the practices and processes for science-policy collaboration. The previous analysis of the interface reveals several areas requiring significant improvements. The scale of these areas of improvement is such that they cannot be addressed through incremental adjustments alone or by single actors in the ecosystem. They require deliberate collective action and structural changes in how science-policy engagement is organised.

Furthermore, ongoing technological changes, especially developments in AI, will significantly and inevitably lead to the reorganisation of the science-policy interface. Ignoring this in the design of new instruments and institutions will, without a doubt, lead to outdated science advice and knowledge brokering models. Conversely, embracing and strategically steering technological innovation presents significant opportunities.

Currently, efforts to improve the Finnish science-for-policy ecosystem are largely uncoordinated and, in many respects, miniscule by their scale. While the Research, Development, and Innovation (RDI) sector has taken important steps toward collaborative strategic development of the ecosystem, there is a notable absence of comparable discussions on shaping the future of Finland's science-for-policy ecosystem. There is an urgent need for a collective dialogue to establish a shared vision for the ecosystem's strategic direction. Such a unified approach would help stakeholders identify systemic bottlenecks and implement necessary measures in a coordinated manner.

6. Appendices

6.1 Appendix 1: The Science-for-Policy Ecosystem in Finland: Mapping Survey

In this survey, we map the science-for-policy ecosystem in Finland. By this, we mean a system of evidence-informed decision-making where different actors, such as users of knowledge, producers of information, and knowledge brokers, interact with each other.

In the survey, we use some key concepts generally to describe the following: By **decision-makers**, we refer to both political decision-makers (members of parliament, regional and municipal councilors) and civil servants.

By **supporting evidence-informed decision-making**, we refer to the transmission of researched knowledge to support decision-makers. This can happen for example through science advice, science communication, or knowledge brokering that emphasizes dialogue.

Background Information Name: Title: Organisation:

General

In this section, by the word "actor" **we mean groups, networks, and organizations**. Examples of such actors are individual networks, knowledge broker organizations, science panels, faculties, funding instruments, programs, and independent units.

- What, in your opinion, are the key actors that promote evidence-informed decision-making nationally?
- 2. Next, from the actors you mentioned, name three which you consider the most central in promoting the transmission of researched knowledge to decision-making.

Actor 1 Actor 2 Actor 3

Next, we ask you to assess more closely the position of each actor you named in Finland's evidence-informed decision-making ecosystem.

Actor 1

- 3. By what means does Actor 1 support evidence-informed decision-making?
- 4. Roles, tasks, and operating methods of the actor in supporting evidence-informed decision-making: Next, evaluate the roles, tasks, and approaches of Actor 1 in supporting evidence-informed decision-making using the table below on a scale of 1 to 7 (1 = describes the actor's role/tasks/operating methods very poorly, 7 = describes the actor's role/tasks/operating methods very well). A detailed explanation of the roles, tasks, and operating methods selected for the table can be found at the end of this page.
- Using your own words, how would you evaluate the actions of Actor 1 in supporting evidence-informed decision-making?
- 6. What challenges do you identify in the methods used by **Actor 1**? How could the effectiveness of these methods be improved?
- Do you have anything additional to add about Actor 1?
- 8. How would you generally describe the functionality of the science-policy ecosystem in your field?
- 9. To what extent do different actors in your field complement each other, for example, do the actors collaborate? And to what extent could the activities of the actors be coordinated, for example, through a common network?
- 10. What do you think is missing from the Finnish science-policy ecosystem? Why?
- 11. How do you think the transmission of researched knowledge to decision-making could be strengthened at the national level?
- Is there anything you would like to add? Did we miss any key perspectives in our questions that you would like to highlight?

Thank you very much for your time!

6.2 Appendix 2: List of reports and evaluations recognised in the desk study

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6.3 Appendix 3: Methodology of converting the survey responses to the semiquantitative scale

First, the numerical Likert-scale (0-7) responses were normalised within each respondent's answers using the formula

score - min(score)

normalised score =

max(score) - min(score)

This puts all scores on a 0-1 scale while preserving relative differences in how each respondent used the scale.

Secondly, the normalised scores were then grouped by organization category and the median value within each group is calculated.

Finally, the median normalised scores were converted to the +/++/+++ scale using these thresholds

- +++ median normalised score = 1 ++ 1 > median normalised score ≥ 0.5 + 0.5 > median normalised score > 0
- (empty) median normalised score = 0

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List of abbreviations

SPI	Science-policy interface
SAM	Scientific Advice Mechanism
Akava	Confederation of Unions for Professional and Managerial Staff in Finland
Arene	Rectors' Conference of Finnish Universities of Applied Sciences
COHERE	Council for Choices in Health Care
COFA	Council of Finnish Academies
Cupore	Centre for Cultural Policy Research
Etla	Etla Economic Research
EU	European Union
FEI	Forum for Environmental Information
FFRC	Finland Futures Research Centre
FINBEPOL	Finnish Behavioural Policy Team
FINEEC	Finnish Education Evaluation Centre
FIRI	Finnish Research Infrastructure
FUURT	Finnish Union of University Researchers and Teachers
GSE	Graduate School of Economics
HELSUS	Helsinki Institute of Sustainability Science
INEQ	Helsinki Inequality Initiative
JRC	Joint Research Centre
Labore	Labour Institute for Economic Research
LLM	Large language model
Luke	Natural Resources Institute Finland
NLS	National Land Survey of Finland
OECD	Organisation for Economic Co-operation and Development
PROFI	Profiling Initiative of the Finnish Research Council
RDI	Research, Development and Innovation
RIC	Research and Innovation Council
R&D	Research and Development
SAM	Scientific Advice Mechanism of the European Commission
SOFI	Science Advice of Finland -project
SPI	Science-Policy Interface
SRC	Strategic Research Council
SYKE	Finnish Environment Institute
THL	Finnish Institute for Health and Welfare
UAS	Universities of Applied Sciences
UNIFI	Council of Rectors of Finnish Universities
UTAK	Finnish Centre for New Economic Analysis
VATT	VATT Institute for Economic Research
VN Teas	Government's Analysis, Assessment and Research Activities
VTT	VTT Technical Research Centre of Finland

List of tables and figures

TABLES:

Table 1.	Typology of advisory functions
Table 2.	Number of Expert Statements by Field of Science (2015-2023)
Table 3.	The top 5 experts classified as researchers, by number of state-
	ments given to parliamentary committees (2015-2023)
Table 4.	The top 20 experts classified as researchers (excluding Law), by number of statements given to parliamentary committees (2015-2023)
Table 5.	Number of expert statements given in 2015-2024, classi-
	fied by the type of organisation the expert represents
Table 7.	Universities' Research Funding in 2023
Table 8.	Universities of Applied Sciences' Research Funding in 2023
Table 9.	Funding by the Strategic Research Council by
	research field in the years of 2020-2024
Table 10.	Funding by science panels in 2023
Table 11.	Committee hearings by science panels in 2023
Table 12.	Funding of scientific research by foundations in 2023
Table 13.	Summary of the challenges in the Finnish science-for-policy ecosystem

FIGURES:

Figure 1.	Number of government proposals (orange) and expert statements (green)
	provided to parliamentary committees per year from 2015-2023.
Figure 2.	Number of expert statements by field of science (2015-2023)

Figure 3. Funding of the Finnish Government Research Institutes.



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