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Pathways to Impact:

Researcher's Handbook on Science-for-Policy

Pathways to Impact: Researcher's Handbook on Science-for-Policy
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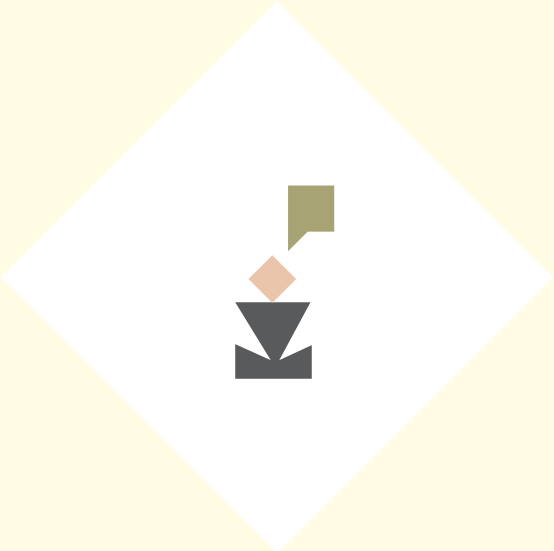
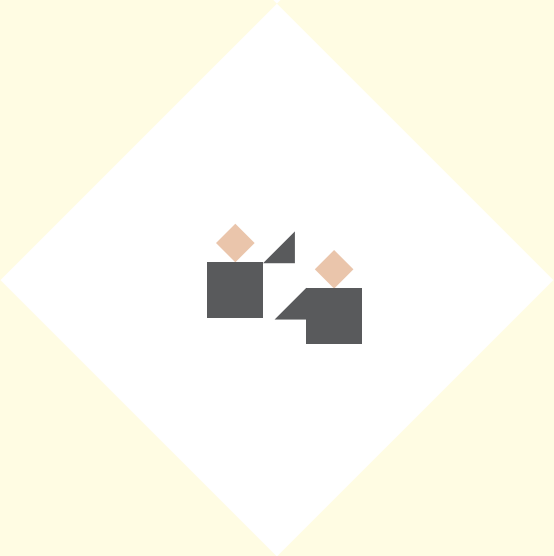
Terminology

Policy-making is an activity aimed at achieving value-based objectives. In a representative democracy, the essence of political decision-making entails the design of policies by a government, which is constituted by members of parliament elected through democratic processes.



Policy is a system of principles, guidelines, and actions adopted by a government to address public issues and allocate public resources. Policies are formulated through legislative, executive, or administrative processes and they aim to achieve specific goals reflecting the government's priorities and values. The term is often used to describe e.g., a government's laws, regulations, roadmaps, and strategies.



Policy process describes the sequence of actions and decisions that guide the development, implementation, and evaluation of public policies. This process involves stakeholders including interest groups, scientists, and the public, and is characterised by negotiation, analysis, and adaptation.

Science communication involves the communication of scientific knowledge to broader audiences, aiming to make complex concepts accessible and engaging. It contributes to scientific literacy, encourages public engagement with science, and facilitates evidence-informed decision-making. It encompasses diverse formats, from media articles to public lectures.

Policy for science involves the creation and implementation of policies that support and govern the scientific research ecosystem. It aims to drive innovation, ensure ethical standards, and allocate resources effectively to advance knowledge and technology.

Science for policy refers to the systematic use of scientific knowledge and methods to inform and guide public policy decisions. It aims to ensure that policy development and implementation are grounded in reliable evidence and rigorous analysis.

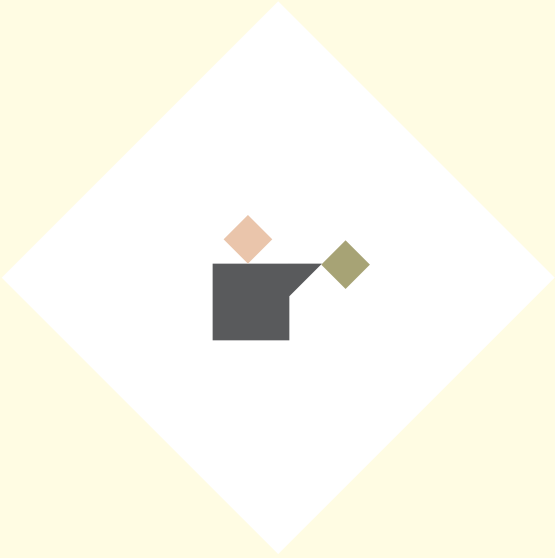
Knowledge producers are individuals or entities engaged in generating new insights, information, or understandings through research, analysis, or creative efforts. They encompass researchers, academics, industry experts, and practitioners across various fields, contributing to the expansion of the knowledge base.

Knowledge users refer to public administration bodies involved in making, drafting, or otherwise contributing to political decisions.

Knowledge brokers are intermediaries who facilitate the transfer and translation of knowledge between producers (such as researchers) and users (such as policy-makers or practitioners). They play a crucial role in synthesising, interpreting, and communicating complex knowledge to make it accessible and actionable for decision-making processes.

Evidence-informed policy-making is the process of integrating empirical evidence and research findings into the policy-making process. It aims to ensure that decisions are based on the best available knowledge, balancing expert judgment, stakeholder inputs, and contextual considerations.

Knowledge synthesis is the systematic combination and analysis of knowledge from diverse sources to generate a coherent understanding of a topic.



1

Science has a Crucial Role in Solving Complex Societal Problems

The challenges faced by societies today are both vast and complex. In response to this, the science-policy interface is also evolving. Coupled with the proliferation of information, including various forms of misinformation and disinformation, the demand for trustworthy, high-quality research knowledge has never been more acute.

Addressing global challenges demands not only swift actions but also a comprehensive understanding of the issues' nature and origins. High-quality, multidisciplinary research knowledge is vital for policy-makers to navigate this maze of interconnected societal challenges.

There is an abundance of research knowledge available to evidence-informed decision-making in circumstances of uncertainty and complexity. However, the sheer volume of this information can become overwhelming, complicating its uptake.

Traditionally, the dissemination of research knowledge has followed a linear path, operating on a question-and-answer basis, such as in commissioned research projects where researchers address specific queries from policy-makers. While this model has its upsides, as such it is insufficient for tackling complex societal issues.

As a result, there is a pressing need for novel approaches to convey research knowledge. More dynamic models of knowledge brokering have emerged alongside traditional linear methods, emphasising new forms of collaboration between policy-makers and researchers and fostering long-term interactions.

This handbook provides strategic tools for strengthening the impact of research in policy-making. Intended for researchers curious about evidence-informed policy-making, the handbook explores different forms of engagement and introduces roles researchers can have in their engagement with policy-makers. It also outlines various engagement strategies.

The handbook provides resources for those new to the field. Its insights can hopefully also stimulate reflection among more seasoned researchers and others interested in leveraging research for policy impact.

The examples featured in the handbook originate from the Finnish national policy-making context. However, the methodologies discussed are, at least to a certain degree, applicable across various levels and spheres of policy-making.

This handbook advocates for a strategic approach towards impact work. Our intention is to convey that researchers need not shoulder the burden of impact work alone, nor should they feel undue pressure concerning their contributions.

The life of a researcher is inherently challenging, with considerable pressures stemming from the pursuit of an academic career. Amidst these pressures, contemplating the societal impact of their research and contributing to policy-making might seem overwhelming and burdensome. It is important to also underscore that there is no one-size-fits-all model for

impact work; some researchers may (justifiably!) opt to concentrate exclusively on their primary responsibilities of academic research and teaching.

Nonetheless, this guide aims to assist researchers eager to excel in their impact work. It provides an accessible breakdown of what engaging with policy-making entails. The handbook also equips readers with the means to identify their unique strengths, interests, and aspirations.

We will showcase examples of stakeholders with whom collaboration can make impact work more effective. Additionally, a variety of interaction techniques will be introduced, enabling readers to select those most aligned with their professional background and personal preferences.

Reflections encourage readers to consider the issues explored within the text from their viewpoint. This section offers guiding questions to facilitate reflection and provides space for personal notes.

Tools offer practical tips for experimenting with, practising, and applying the contents of the handbook.

Advanced sections delve further into topics discussed earlier in the handbook, allowing readers to deepen their understanding of the theme. Here, readers can expand their knowledge or discover new perspectives on impact work.

Examples introduce real-world cases of impact work undertaken by researchers or ministry experts in collaboration with researchers.

Image 1. The comprehensive framework used in the handbook

The handbook is structured around a comprehensive framework detailing competencies required for impactful work. This framework is divided into three dimensions: expertise, understanding, and good practices. We have organised the handbook according to these dimensions, with the content progressing from expertise to understanding, and culminating in good practices.

It is important to note that this handbook does not provide an exhaustive overview of the field of impact work. Instead, it offers introductory insights and showcases a set of tools available for researchers. We hope that this handbook will help researchers to reflect upon their individual contributions to societal impact.

The insights shared within this handbook are predominantly drawn from scholarly literature and the insights of knowledge brokering experts, including our own experiences at the Finnish Academy of Science and Letters.

Our ambition is to position Finland as the global leader in evidence-informed policy-making. We warmly invite you to join us in this endeavour and encourage you to stay in touch with us!

With warm regards,
The science-policy team at the Finnish Academy of Science and Letters

2

Main Principles of Impact Work: Success Requires Planning

Societal interaction is often perceived as an integral component of a researcher's role. Yet, balancing the demands of societal engagement with the pressures of scientific research presents its own set of challenges. Researchers may find themselves at a loss for how to effectively identify and utilise channels in their impact work. Even for those acquainted with available channels, navigating the nuances of engagement can be daunting.

It is important to emphasise that researchers are not expected to undertake their impact journey alone. In this chapter, we explore strategies for fostering impact collaboratively.

In the handbook, we consider impact work to encompass more than traditional science communication, i.e., it covers a broad range of dynamic exchanges between various stakeholders interacting in the frame of evidence-informed policy-making.

By adopting **a strategic approach to impact work** (Image 2), we refer to researchers' endeavour to identify methods of engagement that are both personally meaningful and effective. Acknowledging the need for persistence in making a tangible impact is essential.[1] Ultimately, finding the right avenues can make impact work exceptionally rewarding.

Image 2. Strategic approach to making an impact

1 Weiss, 1980; Penfield et al., 2014; Muhonen, Benneworth & Olmos-Penuela, 2020

A strategic approach encompasses a variety of methods and means, including:

1. Identifying your expertise and finding approaches to impact work that resonate with you,
2. Collaborating with others, engaging in networks, and leveraging existing platforms,
3. Establishing objectives and choosing methods of influence that yield successful results.

2.1 Identifying Your Own Expertise and Effective Means of Impact

A practical first step in planning your impact work is to acknowledge the scope of activities you are already involved in. Simultaneously, it is beneficial to assess your strengths and consider the themes, questions, and stakeholders that your research and expertise connect with.

The following exercise is designed to stimulate reflection on your current position within the domain of impact work. Start by evaluating your current situation and expertise. Then, contemplate your aspirations and where you envision yourself in the future.

TOOL

Identify your strengths and interests

The purpose of the next exercise is to facilitate a deeper understanding of your expertise and to help you recognise the resources, skills, and networks available to you.

Present situation
Begin by considering the following questions:

- What societal themes, questions, and entities are linked to your research and expertise?
- What types of interaction skills do you have?
- Which networks or groups do you participate in?

You can write your observations in the top section of the table on the next page.

The future
Once you have established the current situation, shift your focus towards the future. Where would you wish to be in the coming years? What expertise or resources would you like to acquire? Which networks do you aspire to be part of, and how might you be able to connect with these communities? Write your observations into the lower part of the table.

You can lay out your future timeline with a perspective of two, three, or five years ahead.

	Resources	Expertise	Interaction skills
Present situation: Where are you now?			
Future: How would you like to develop?			

Networks

2.2 Impact is Created Together

Traditionally, the drive for societal impact in the scientific community has been predominantly centred around science communication and individual researcher's efforts. For instance, universities typically expect researchers to (more or less) independently disseminate their findings upon the completion of their research. Yet, the journey to societal impact should not be seen as a solitary endeavour of individual researchers. Ultimately, every researcher is part of a broader ecosystem that contributes to societal impact.

Within these ecosystems, a diverse range of stakeholders operate: researchers, universities, research institutions, knowledge brokers, policy-makers, and businesses. These entities are loosely interconnected, and they instil interaction between research knowledge and policy-making in various ways.

Researchers, for example, are often called upon by ministries and the parliament to offer their insights on policy matters in expert hearings. Knowledge brokers also play a key role in the ecosystem by organising events, involving researchers in the creation of knowledge syntheses, training researchers on impact-related topics, and fostering dialogues.

Making use of networks

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Embarking on your impact journey may initially seem daunting or complex. Nevertheless, there is no necessity to shoulder every aspect of the effort alone; leveraging your existing networks and communities can improve the effectiveness of your impact work and make the journey more enjoyable.

Potentially useful collaborative networks for researchers include:

- Multidisciplinary institutes and the wider networks within your research organisation (e.g., the Helsinki Institute of Sustainability Science (HELSUS)).
- Thematic networks and events or the scientific community (e.g., the Network of Environmental Culture, the Sociological Conference)
- Societal entities with convergences to your research theme (e.g., the Urban Academy)
- Stakeholders specialising in knowledge brokering (e.g., the Finnish Academy of Science and Letters)
- Networks established through research funding instruments (e.g., projects funded by the Strategic Research Council).

Successful impact is often created collaboratively

In its most immediate form, successful impact entails that research knowledge influences policy decisions. Broadening this view, success may also manifest as understanding among stakeholders within the policy-making process, even if the research does not directly influence decisions. Similarly, increased interaction and new collaborative opportunities can, as such, be considered as successes.

The essence of success in impact work lies in collaboration. The nature of collaboration can vary across contexts for researchers. Those within the same discipline may find support in joint impact efforts. Collaboration might also extend to research groups or consortiums. As researchers' time is a scarce commodity, shared effort and allocation of responsibilities can make the pursuit of impact both more manageable and more potent.

The collective insights of several researchers or a knowledge synthesis of the best available research often carry more weight in decision-making than the research findings of a single researcher.

The view of several researchers or a summary that crystallises the results of the best available studies can be a more impressive tool of influence than a message based on the research results of a single researcher.

2.3 Setting Goals Helps to Prioritise Methods of Impact

Goals in impact work can include:

- Raising awareness (e.g., politicians' understanding of quantum technology)
- Building new professional networks (e.g., creating stronger links with civil servants in the Ministry of the Environment).
- Developing personal expertise (e.g., gaining experience in organising round table discussions between researchers and third-sector stakeholders).

Timeframes for reaching these goals can vary; some may be short-term, others long-term.

Establishing clear goals assists in selecting the most appropriate methods of interaction from the array of options. A more in-depth discussion of these methods is featured in Chapter 5.

2.4 Long-Term Nature of Impact Work

Demonstrating the results of impact work can at times be difficult. As well, impacts may at times occur with significant delay. Studies on the subject demonstrate that influencing policy is often a long-term endeavour. [2]

One factor here is the topicality of the knowledge: a research subject can be particularly interesting and useful from the perspective of policy-making at the moment when decisions related to the subject are being processed. You should keep this in mind when planning your own impact work and thinking about its potential results.

The policy relevance of research findings is a critical part of impact work; the interest of policy-makers peaks when certain themes become 'politically active'. This should be kept in mind when strategising your engagement.

It is also crucial to acknowledge that policy-makers — politicians and civil servants — ultimately wield decision-making authority. They determine the degree and manner in which research is taken into account in policy-making. This dynamic will be further explored in Chapter 4.

Research knowledge can have an impact on policy-makers' views of the world

The impacts of the knowledge conveyed by researchers are largely based on changes in the perceptions of decision-makers.[3] These changes may concern a specific topic under consideration in decision-making or they may relate to science more generally, such as the practices of producing scientific knowledge and the data used. Such conceptual impact can manifest quickly and directly during engagement, producing a new understanding of the nature of societal problems or potential solutions.

By impacting policy-makers' views of the world, research knowledge can also lead to concrete impact e.g., in legislative drafting.[4] The impact may in such cases be observed in legislative proposal documents and in the contents of enacted laws. This type of impact may be easier to verify than conceptual impact, as it involves visible changes.

Research knowledge or expert views communicated at a certain stage of decision-making may also be useful to decision-makers in future policy actions.[5] For instance, knowledge communicated by a researcher during impact assessment of an implemented policy may be valuable in future agenda setting (see Chapter 4). Likewise, a general overview based on

2 Nutley, Walter & Davies, 2009; Sarkki et al., 2015; SAM, 2019

3 Weiss, 1979; Nutley, Walter & Davies, 2009

4 Weiss, 1979; Boswell & Smith, 2017

5 Cariney, 2016: 16–18

research literature commissioned during the preparation stage may be utilised later, for example, as the basis for future preparations.

Research can also have indirect effects on policy-making; it might first influence the practices of companies or NGOs, and only later influence policy-makers' perceptions.[6] Furthermore, the contributions of research to policy-making may not always be explicitly documented. In Finland, for instance, there is no mandatory recording of how researchers influence drafting documents. This means that despite participating in workgroups, planning sessions, or hearings, researchers may not be able to directly attribute the effects of their contributions to the final formulation of a policy.

Research knowledge can have many impacts, some of which may not be clearly visible

Changes in the perceptions and skills of decision-makers are not necessary to have an impact.[7] Indeed, it is important to recognise, that research can be utilised selectively in policy-making. In such instances, research can get recognition based on how well it validates a particular political viewpoint. The engagement with research can also be symbolic instead of genuine from the side of policy-makers. In such instances, policy-makers' positions are 'locked' from the start, and the engagement is primarily done for performative purposes.

Sometimes, research knowledge that is communicated to policy-makers may appear directly in the documents related to the policy-making process, even if the communicated research has not been referenced in the document. In Finland, it is uncommon for ministries to record how a certain piece of research knowledge has shaped the policy process. In practice, this means that it may not be possible to observe the concrete output of knowledge brokering activities, despite researchers' active involvement in the planning, and preparation phases of the policy-making.

6 Weiss, 1980
7 Daviter, 2015

Impact work is long-term but rewarding

As a researcher, I have been especially interested in urban segregation and schools, i.e., the effects of societal and regional segregation on learning and the educational paths of children. In the early stages of my research career, I noticed that research knowledge must be brought into societal discourse and decision-making to change the world. Hence, I collaborated quite extensively with municipalities, when working at the University of Helsinki. In particular, I have worked with municipalities in the Helsinki metropolitan area on issues such as the formulation of research data and results, research questions, and research understanding. Thus, the collaboration has not only enriched and deepened the orientation of research questions but also the interpretation of research results.

The cooperation has been extremely motivating. I have been able to communicate research knowledge in a way that has supported educational equality and positive prospects for children and young people. One of the fruits of this cooperation is a calculation model for the equality funding model of schools that is used by the City of Helsinki to help support schools operating in challenging neighbourhoods. In this way, the research results are not just available for the research community but can instead benefit society.

I feel this work has given and taught me a great deal. The most important lesson has been that in reality there are no shortcuts to making an impact. Instead, achieving an impact means oftentimes continuous work of getting to know people, being helpful, asking for help, and having a sincere desire to collaborate toward societal solutions. Furthermore, not all cooperation is organised via official routes. Hence, it is crucial to meet people on different networks, for example, during a coffee break at a seminar – or by responding to a knowledge need of a city councillor on social media.

I have also learned that to make an impact you must be able to communicate your research to different audiences in an understandable way.

Instead of "informing", making an impact means having a genuine dialogue where the participants strive to identify different ways of knowing. For example, academic research knowledge and the practical experience of an expert often complement each other in important ways once the right concepts for the discussion have been found. On the one hand, I have learned to approach my expertise humbly and respect its limits. On the other hand, I have dared to venture into discussions where I have had to let go of my most stringent reservations as a researcher and limit myself to the content of my research. Solving societal issues often requires the courage to speculate together.

Persistent networking, supporting the work of others, and staying in touch with civil servants, policy-makers, and experts have yielded many kinds of fruitful results. I consider the greatest of these to be bringing the discourse on school and neighbourhood segregation into public awareness in municipalities and the national media. Many of my research results have also directly fed into interventions such as school support schemes and developing the planning of neighbourhoods.

Venla Bernelius

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3

The Roles of a Researcher

Researchers engage with policy-makers in various distinguishable roles.[8]

The roles described in this chapter can be useful in understanding the diversity of interaction modes available for you in the science-policy interface. Reflecting on these roles vis-à-vis your work can also provide new perspectives for impact planning.

3.1 Three Researcher Roles: Synthesiser, Commentator, and Advocate

Researchers primarily engage with policy-makers through three avenues:

- Communicating research findings,
- Applying research findings and providing expert opinions, or
- Utilising research in issue advocacy

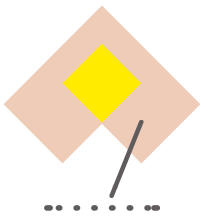
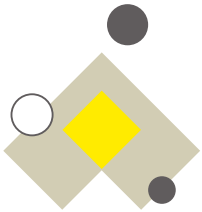
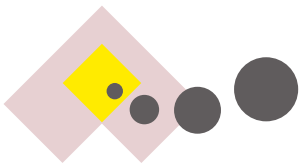
The roles discussed below (refer to Table 1), illustrate how researchers' connection to research knowledge can differ depending on the context of engagement.

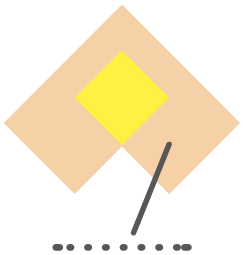
The roles outlined here are generalisations, and in practice, the distinctions are not as clear-cut. Also, researchers may not always align neatly with a single role; in fact, they may take up different roles in different contexts. This depends, among other things, on the knowledge needs of policy-makers as well as the adopted impact strategy of a researcher.

For instance, a researcher may initially share findings at a project's closing seminar (as a Synthesiser), later make policy recommendations (as a Commentator), or even champion a particular cause (as an Advocate).

8 Turnhout et al.., 2013; Bandola-Gill, 2019

Table 1. Roles of a researcher in supporting policy-making

Synthesiser	Commentator	Advocate
		
Synthesiser communicates research results, i.e., the latest research findings and perspectives. This approach is particularly useful when research knowledge is available to meet a pre-identified knowledge need.	Commentator applies research results, i.e., presents expert views derived from research knowledge. This approach is particularly useful when policy-makers have needs that cannot be directly addressed with the existing research knowledge.	Advocate promotes a specific cause using research knowledge. For example, an advocate can seek to promote policy-making on climate change while supporting their arguments with research knowledge. This approach is particularly useful when research has recognised an important objective and impactful policy measures that the research knowledge supports.
Synthesiser summarises and compiles research findings, for example, to blog posts, press releases, and commissioned research reports. For example, the Finnish Behavioural Policy Team working at the Prime Minister's Office produces research reviews to support the Government's policy-making.	Commentator interprets studies in the context of different countries, and provides recommendations in statements, workshops, or policy brief documents. The Finnish Expert Panel for Sustainable Development is an example of a body where experts comment on the Government's Programme and respond to statement requests from the administration. The researchers who participate in the workshops of the Finnish Academy of Science and Letters also apply their understanding in discussions with civil servants from ministries.	Advocate utilises research in public appearances and statements, for example, to promote a certain goal or adoption of a certain policy measure. For example, the Scientist Rebellion is a movement of scientists calling for policy-makers to tackle climate change and environmental degradation. They aim to raise awareness of the urgency of the situation and use methods such as civil disobedience to further their cause.



3.1.1 Synthesiser Communicates Research Findings

Researchers act as **Synthesisers** when they focus their engagement with policy-makers on sharing research findings. This role is particularly suitable when policy-relevant knowledge exists and when research findings are as such applicable in policy-making or public discussions. In such instances, researchers can communicate the results in a form that is accessible to policy-makers or a wider audience. The Synthesiser's role may also involve providing detailed accounts of research data and methods.

Synthesisers can engage with policy-makers e.g., in legislative processes by compiling overviews of relevant research literature. They can also engage in public discussions outside the formal channels of a policy process.

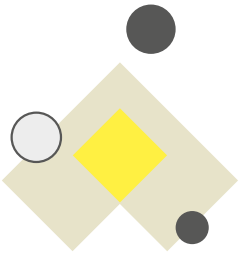
When new topics emerge in societal debates, researchers can evaluate the accuracy of public claims from the perspective of scientific knowledge, and they can enrich the debates with conceptual input. Outlets for the researchers' input can include news outlets, social media, or blogs.

Synthesiser's role is related, for example, to situations where:

- Results from commissioned research are communicated in an easily digestible format.
- There is a need to communicate research findings in a scientifically accurate manner.
- The policy process is in its early stages.
- A new topic enters political or societal discussions.

On the role of the Synthesiser, note the following potential limitations:

- Researchers are often expected to provide input on topics where research does not offer direct answers. This usually involves tailoring research findings to some extent.
- For instance, during committee hearings, researchers might need to adjust the presentation of their findings to address the committee members' inquiries effectively.



3.1.2 Commentator Applies Research Results and Presents Expert Views

Researchers act as **Commentators** when they present expert views to policy-makers. As a Commentator, researchers employ their expertise to make informed interpretations of research knowledge and apply these interpretations to policy issues. This expertise encompasses their familiarity with research literature and the broader scientific field, allowing them to offer insightful policy-relevant commentary. Their knowledge of the research production system from which the knowledge originates is also valuable in this role.

Expert views from researchers become valuable in situations where there is a lack of peer-reviewed research available to inform policy decisions. In such situations, policy-makers may request research-informed analyses to support their decision-making.

In practice, these analyses may take e.g., the form of comparative evaluation of policy alternatives or impact assessment. Researchers might also make expert assessments and forecasts on trends relevant to policy-making.

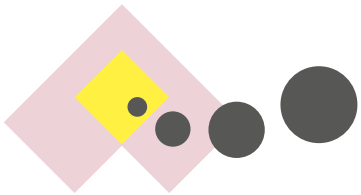
Commentator's expertise is especially valuable during hearings where applied knowledge is of the essence. At times, the only available research on a topic under scrutiny may derive from a different context (e.g., another country). Here, Commentators can help policy-makers in understanding the nature of the findings and its potential applications as well as limits to the present policy context.

Commentator's role is related, for example, to situations where:

- Shared understanding of a topic is pursued through dialogue and iterative queries (such as in hearings and workshops).
- Evaluations of alternative policy measures are taking place (e.g., during the impact assessment of a draft legislation).
- Research findings are applied from different contexts to the present policy-making environment.

On the role of the Commentator, note the following potential limitations:

- Clearly articulate the rationale behind your expert views and any associated uncertainties to ensure transparency and understanding (further discussed in Chapter 6.2).



3.1.3 Advocate Promotes a Cause Using Research

Researchers may adopt the role of an **Advocate** when they communicate recommendations on policy matters aligned with a cause they support. This role typically emerges when a researcher endorses a specific cause and contributes to public discourse. An Advocate is someone with a clear vision for societal progress, and they are prepared to actively champion a societal goal with research findings.

Advocator's role is related, for example, to situations where:

- there is a clear societal development need for which a researcher has a vision or a proposal for solving.

Regarding the role of the Advocate, note the following potential limitations:

- It is crucial for researchers to openly identify and distinguish their personal views from the content of research knowledge. Transparency about these distinctions enhances the credibility of the researcher.
- Openness both improves the quality of dialogues and promotes trustworthiness.

3.2 Factors Influencing a Researcher's Role

A particular role adopted by a researcher is related to various factors, including the context in which they engage, their personal interests, and the needs of the knowledge recipients. Knowledge brokering organisations may also play a part in defining a researcher's role.

In certain settings, **a researcher's role might be predefined**, such as in committee hearings or specific commissioned research. It can also be shaped by the type of knowledge that policy-makers, civil servants, knowledge brokers, or other stakeholders need during the policy-making process. Hence, the role of a researcher is influenced by the knowledge need to which a researcher is responding and what messages are emphasised to policy-makers.[9]

In other settings, **researchers may have more autonomy to choose their role**, for example when independently crafting policy recommendations or summaries from their research. In these instances, careful consideration of the intended impact, methods, and objectives is advisable.

Open discussions can also help to clarify a researcher's role. This is particularly the case when researchers and policy-makers collaborate, as in workshops or joint research projects.

9 Turnhout et al., 2010; Sucha & Sienkiewicz, 2020; Ojanen et al., 2021

REFLECTION

Which researcher's roles appeal to you?

What roles come naturally to you as a researcher? Where could you develop further?

Here are some questions to help you think about the roles:

- How do your personal values shape your professional activities?
- Can you identify instances within your research activities where you have naturally adopted any of these roles?
- Which role do you gravitate towards the most?
- Which role feels less comfortable?

Remember, the role of a researcher is not static; it can change depending on the context. To pinpoint the most suitable roles for a specific situation, ask yourself:

- Are you tasked with collating research findings to meet the knowledge needs identified by policy-makers?
- Are you engaged in providing advice, such as policy recommendations?
- Do you find yourself advocating for issues, guided by your research, to influence policy deliberations?

TOOL

Tips from the Prime Minister's Office for responding to knowledge requests

The Prime Minister's Office commissions researchers to provide evidence to inform policy-making. To respond to such a knowledge request successfully, the researcher needs to be as familiar as possible with the objectives and understand the scope of the request.

Following is a list of crucial matters that you should keep in mind when planning and working on such a request.

1. Ensure that there is a shared understanding of the content, goals, and scope of the knowledge request

Before you begin to work on the request you must have a clear understanding of its content and goals. Usually, this means having an open discussion with the knowledge user about the type of questions you are expected to answer and how.

When you are given a knowledge request, you have the opportunity to discuss it with the knowledge user and proactively influence the content of the request. In these discussions, it is also important to clarify what type of knowledge is needed (more details in section 2).

Once a shared understanding of the content and goals is formed, it is crucial to specify the scope of the work, i.e., how extensive background on the research knowledge should be given. At the same time, it is also wise to discuss the context in which knowledge is utilised.

Usually, you should provide as little general overall background information as possible. Therefore, it is advisable to provide only as much background as is necessary to respond to the knowledge request. Knowledge is needed on the limited topic of knowledge need or the specific question posed by the knowledge user.

2. Agree on the types of knowledge to be included and referencing

Responding successfully to a knowledge request requires that both the knowledge producer and user have a shared understanding of the types of knowledge to be included. This includes also clarifying how the sources should be cited.

The researcher responding to the knowledge request should have a clear understanding of whether the knowledge user needs evidence from peer-reviewed research or whether they are expected

to apply research knowledge and provide an expert evaluation on a topic on which no peer-reviewed research is available. This includes information on whether the knowledge user wants to have statistical data on the nature of the phenomenon or apply an international example to a national context.

Sometimes the researcher might also be expected to provide specific recommendations for policy measures. In such cases, it is especially important to ask the knowledge user the type of recommendations needed. Is the researcher expected to provide several alternative measures or prioritise them in light of research knowledge?

Providing recommendations can be difficult for a researcher as recommendations often involve multifaceted ethical questions. Creating a shared understanding on the nature of the request between the knowledge user and the researcher increases the probability of both parties ending up happy with the result.

3. Write clearly and in a popularised form

The end users of knowledge compiled by researchers navigate in a vast flood of information, consisting of different reports, research knowledge and media contents.

To ensure that the knowledge presented in a knowledge synthesis will be understood and utilised in the best possible way, its content must be as easily understandable as possible. The main points are important to present very clearly, and the finalised synthesis needs to be of the agreed-upon length. Researchers' conclusions and policy recommendations should also be separated from the rest of the content.

The researcher should include a separate one-page summary at the beginning of the synthesis. The summary should provide a concise answer to the question posed in the knowledge request. If the knowledge synthesis contains visual elements, it is important to ensure that they are understandable and unambiguous at a first glance.

4. Ask for feedback

Once the process is complete, it might be interesting to know its exact impact on the policy-making process. However, it is important to note that these impacts are often only visible after a long time.

You may ask for feedback on the success of responding to the knowledge request. However, keep in mind that the collaboration can in itself be a success.

AN EXAMPLE OF A KNOWLEDGE REQUEST: A knowledge request from the Prime Minister's Office

The following example is a fictional ideal scenario, despite being based in reality. In real life knowledge needs, situations, and people involved in them, as well as the time pressures of completing a knowledge request, influence the process and the final synthesis, in different ways.

Building shared understanding: the content and the extent of the knowledge request

The Russian invasion of Ukraine in the spring of 2022 resulted in a need to understand the impact of the invasion on Finnish society. Based on this knowledge need, a project was launched to bring together the views of several researchers on the situation in a short timeframe. The Prime Minister's Office put together a multidisciplinary group of researchers. The knowledge need was discussed together with the researched in meetings, during which the knowledge users had a rather clear understanding of the type of knowledge that is needed and its intended use. The actual knowledge request was framed as a question: What kind of decision-making pressures have resulted in Finnish social policy from the Russian invasion of Ukraine? Additionally, the knowledge user had identified the academic disciplines to be included. Each researcher responded to the knowledge need based on their expertise.

The researchers were informed about the time pressures of the knowledge request, and as such to focus only on the issues that are likely to face decision-making pressures in the near future. It was not possible to determine the exact use of the final synthesis, but one of its main goals was to serve as a background material for the forthcoming government formation talks.

Together with researchers, it was noted that at the time there was no peer-reviewed research on the effects of the invasion. Therefore, researchers were requested to provide assessments and forecasts on trends relevant to policy-making. Additionally, the researchers were asked to only provide a short background to the topic, narrowing it down to only matters that are relevant to policy-making. Hence, they were asked to present expert views on the issues to be prioritised.

Types of knowledge and referencing

Together with the researchers, it was agreed that in the final synthesis, a distinction would be made between different types of knowledge, including facts, such as existing statistics or other verified data, and evaluative knowledge based on expert views. Indeed, the final synthesis was structured in a way that distinguished factual situational pictures and researchers' assessments of future trends.

A third element to be included in the final synthesis was a section on "must-win battles", which included the researcher's assessments of the issues of urgent national preparedness.

Written content
Each researcher worked on a section to be included in the final synthesis, based on their expertise (max three pages).

Additionally, researchers were requested to provide a cover page presenting the main points of the content in five bullet points and a short one-paragraph summary. The intention was that the cover page could be used as a self-explanatory synthesis.

The Prime Minister's Office took responsibility for consolidating the content of each researcher.

The successes in responding to the knowledge request
The synthesis was delivered to the knowledge user in a joint meeting, where the content of the knowledge synthesis was discussed.

The feedback was positive. Researchers had responded to the request accurately: the cover page summarised the content effectively into one page, and the summaries were presented in an easily digestible format, which is essential for a busy decision-maker.

The final knowledge synthesis was to support the government formation talks.

4

The Field of Policy-Making in Finland: How to Identify Opportunities for Impact

Understanding the practices, stages, and stakeholders involved in a policy process, along with the role of research knowledge within it, equips researchers with key insights needed to identify opportunities for policy impact.

Scientific knowledge is only one of the things that is considered in the policy-making processes. Along with it, policy-making is influenced by other sources of knowledge and inputs from various stakeholders. Similarly, policy-makers' roles and objectives influence how they use, process, and need scientific advice and knowledge.[10]

Identifying the specific characteristics of policy-makers is therefore important when considering how and when to influence policy-making processes.

This chapter focuses on describing the policy-making process at the national level. The process discussed here, however, can also help understand and navigate policy-making at municipal and regional levels.

4.1 Stages of Policy Process

A policy process can originate from various sources, including the parliament, government, or individual ministries.[11] The reasons for the initiation of a policy process include political programmes, citizen initiatives, interest group lobbying, or research knowledge. These elements, with varying degrees of influence, determine the agenda and set the overarching themes and objectives of a policy process.

The policy process consists of multiple stages and usually involves policy-makers in different positions from politicians to civil servants as well as stakeholder groups, such as representatives from companies, civil society organisations and researchers.

Ultimately research knowledge represents only one of many inputs influencing policy-making. Nonetheless, its importance to political decision-making is significant, as scientific methodologies underpin the reliability of the knowledge provided.

The values and goals of the currently serving government, as well as the diverse perspectives of political parties on societal advancement strategies and methodologies, ultimately guide the political process. Throughout this process, stakeholder groups can have multiple opportunities to participate and exert influence. For instance, during the initial stages of legislative drafting, both company representatives and academic researchers may be consulted to discuss the necessity and potential ways of implementing a proposed legislation.[12] Through the engagement of stakeholders and policy-makers, various forms of knowledge — including research findings, statistical data, registry information, forecasts, experiential insights, and traditional wisdom — can be integrated into the policy-making process.

10 Daviter, 2015; Head 2015; Newman & Head, 2015
11 Prime Minister's Office, 2009
12 Finlex-publications, no date.

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Stages of political decision-making in state administration

Understanding the different stages of political decision-making can be helpful for researchers aiming to influence policy effectively. The policy-making process can generally be divided into four main stages: setting the agenda, planning and preparation, implementation, and monitoring and evaluation.

Setting the agenda: This initial stage involves recognising the need to address a new issue (e.g., criteria for voluntary ecological compensation) or revisit an existing issue (e.g., updating the Environmental Protection Act). These needs are generally identified in the government programme. New themes or persistent issues may also emerge through public discourse or through the efforts of stakeholder groups.

Planning and preparation: Typically carried out within ministries, this stage involves civil servants forming preparatory working groups to draft proposals and alternatives for new policies, such as a revamped Environmental Protection Act or strategic initiatives for fossil-free transportation. This preparatory phase culminates in the government's draft proposal, which is then forwarded to the parliament for deliberation. Following this, parliamentary committees review the draft, conduct discussions, and generate reports on its content.[13] Then the draft is taken to a plenary session of the parliament, where the legislation is decided on. In the case of the reformation of the Environmental Protection Act, for example, the draft was discussed in the Committees for Constitutional Law, Environment, Administration, Legal Affairs, Agriculture and Forestry, and Commerce.[14]

Implementation: Once the legislation is ratified by the parliament, its enactment becomes the responsibility of the relevant parties (e.g., ministries and other public sector bodies). These parties are jointly tasked with putting the policy into action.

Monitoring and evaluation: The parties responsible oversee the monitoring and evaluation of the enacted policies. For instance, the Ministry of the Environment, in collaboration with other relevant authorities like Metsähallitus and the Centres for Economic Development, Transport and the Environment (ELY Centres), would oversee the implementation and monitoring of the Environmental Protection Act.[15]

Researchers should note that in practice the path of political decision-making is not always straightforward and linear.[16] The process may cycle back from planning to agenda setting, or it may advance swiftly to late stages of preparation before retracting back for additional evaluation data. This non-linear progression underscores the importance of strategic planning and timing of impact work.

13 Backman, 2023
14 Parliament, HE 76/2022 vp
15 Environmental Protection Act 9/2023 § 9
16 Lindblom, 1959; Parsons, 2002; Cairney, 2016: 13–19

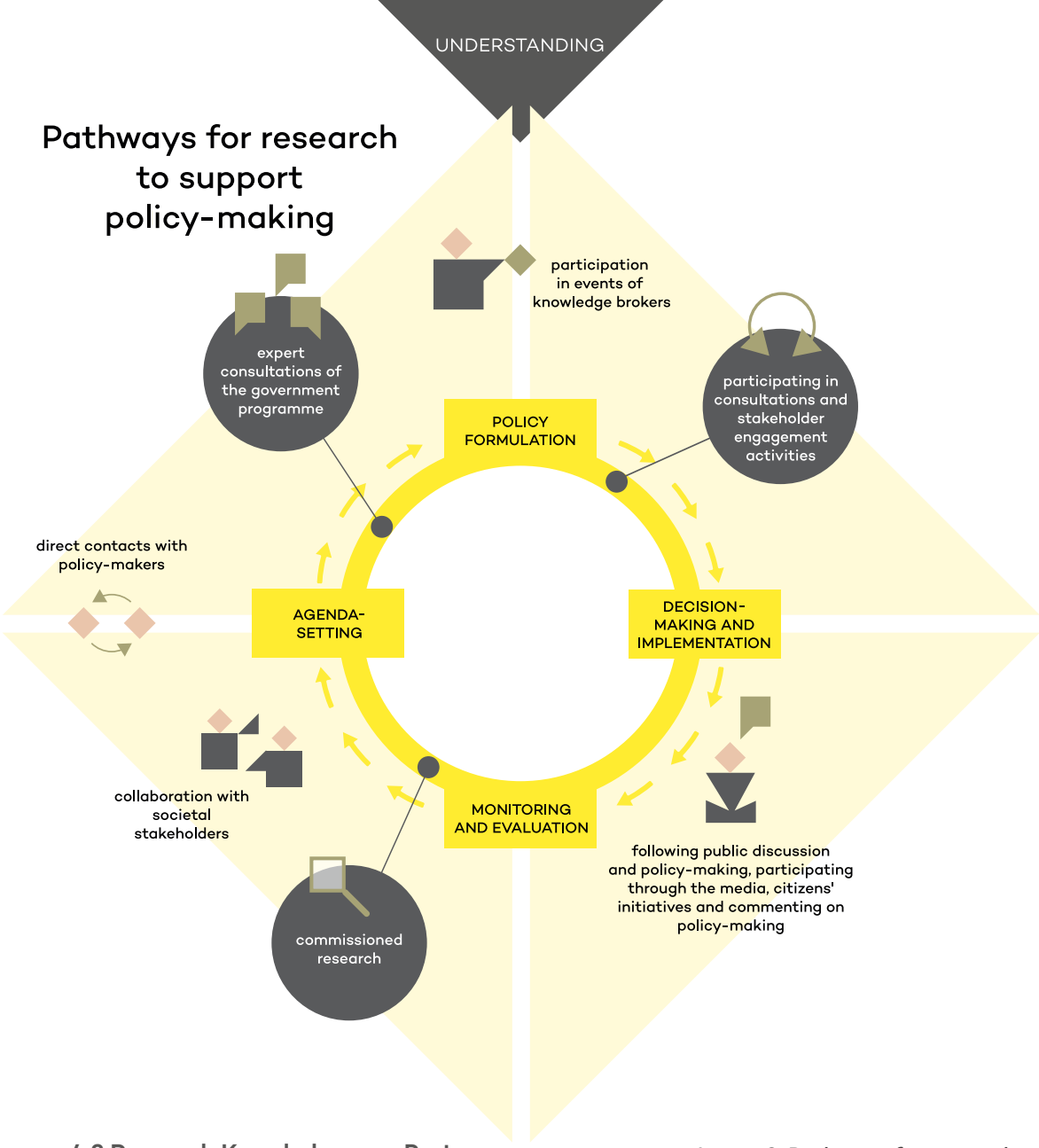

Image 3. Pathways for research to support policy-making

4.2 Research Knowledge as a Part of Political Consideration

Research knowledge plays a crucial role in informing policy decisions, offering insights into the themes under discussion, along with potential causes, effects, and associated uncertainties. Altogether, it can provide a reliable foundation for deliberations and decision-making. Yet, research knowledge does not dictate values that underpin political choices, nor can it prescribe specific decisions to policy-makers.[17]

17 Pfisterer & Paschke, 2019

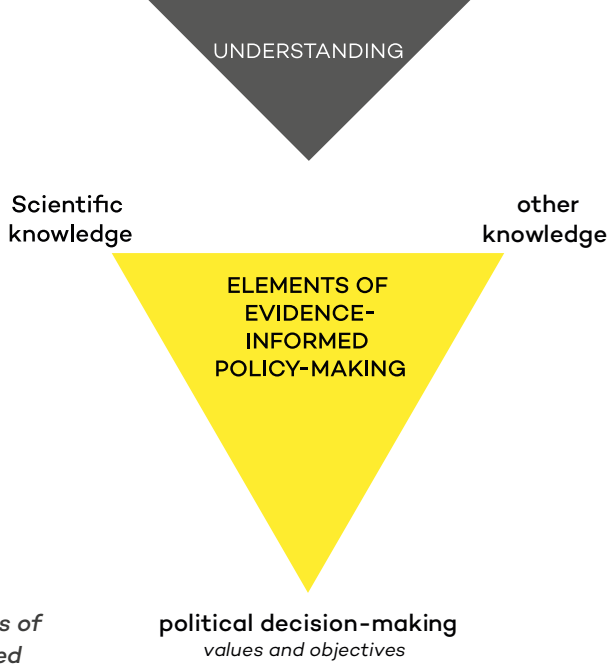

Image 5. Elements of evidence-informed policy-making

In practice, evidence-informed policy-making involves a combination of research knowledge, other forms of knowledge and political goals (Image 5).

Even if research knowledge and other knowledge are systematically considered in a policy process, research knowledge is not prescriptive in defining outcomes of policy processes. Instead, it is only a part of political consideration.[18]

In other words, policy-making is essentially a complex interplay of diverse knowledge sources, varied interests of stakeholders and communities, and political ideologies. This dynamic is further influenced by the interconnections between international politics and national policy frameworks, which can both enable and constrain present and future policy decisions.

ETH Zürich's[19] workbook on evidence-informed policy-making highlights several key factors that shape the policy-making process: [20]

- **Resource limitations:** Given the finite nature of resources, policies inherently involve cost-benefit analyses and trade-offs.
- **Tacit knowledge and human capital:** The implicit knowledge, experiences, and expertise of societal actors play a crucial role in informing policy at various stages.
- **Values and interests of stakeholder groups:** The priorities and objectives of different groups influence which issues are brought to the forefront of policy discussions. The lobbying efforts and advocacy of these groups also play a significant role in shaping policy outcomes.
- **Cultural and social norms:** The prevailing cultural and social norms influence how policies are formulated and implemented.
- **Parliamentary practices:** The established procedures within parliamentary systems determine how and when research knowledge can be introduced and utilised within the policy-making cycle.

18 Sofi, 2021
19 ETH Zürich eli Eidgenössische Technische Hochschule Zürich on Sveitsin valtiollinen teknillinen korkeakoulu Zürichissä.
20 Pfisterer & Paschke, 2019: 36

Why does not research knowledge directly translate into political decisions?

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Impact work can often feel frustrating, and for a good reason: despite intense efforts research knowledge can appear to have minimal influence on policy-making. Researchers may alert policy-makers to new phenomena, thereby making these potential targets for policy intervention. Yet, researchers' findings may not ultimately lead to any changes in political agenda or changes in policies.

This discrepancy can partly be attributed to the nature of political decision-makers' work. Policy-makers hold the authority and responsibility to decide on policy programmes, strategies, and decrees affecting Finland. This requires consideration of the different political parties, stakeholders, and sectors within society. Moreover, elected parliamentarians reflect their constituents' interests in their work. Meanwhile, civil servants, despite being under political leadership, should (and to a degree do), maintain impartiality and independence in their work.[21]

Understanding that research knowledge alone is not sufficient for policy-making can mitigate this frustration. This limitation stems from the inherently descriptive nature of research knowledge. As David Hume pointed out, actionable prescriptive knowledge cannot be deduced from descriptive knowledge (the "no ought from is" principle).[22] Research can demonstrate, for example, how mental health issues affect employment capacity. Policy-makers can then use these descriptive insights to inform particular value-driven objectives, such as improving employment rates with preventive mental health policies.

In summary, research knowledge is inherently descriptive by nature. In policy-making this knowledge is utilised in the pursuit of value-driven objectives. Although descriptive knowledge informs policy-makers' conclusions, as such it does not provide guidance on how policies ought to be formulated.

21 Suomi.fi (no date)
22 Hume, 1896: 469–470

4.3 Differences Between Politicians and Civil Servants as Policy-Makers

There are different kinds of policy-makers, and policy decisions are made from a wide range of vantage points. Politicians and civil servants have distinct roles, leading to differences in their responsibilities, objectives, and the way they utilise knowledge. Hence, the extent to which research knowledge influences policy varies significantly depending on the policy-maker's role and position within the policy-making framework.[23]

Researchers should aim to understand the distinct responsibilities and guiding principles of different policy-makers. This chapter is designed to help researchers with this.

Politicians consider the interests of their voters

Politicians, facing the constraints of their terms, generally view the world through upcoming elections and their potential re-election. Unlike civil servants, politicians prioritise the interests of specific segments of the population—primarily their voters. This priority also shapes how they employ research knowledge in their work.

Politicians can possess a broad understanding of societal issues. They may also utilise research findings in their committee work at national or municipal levels. It is also common for politicians, including MPs and MEPs, to rely heavily on special advisers who are tasked to provide them with knowledge supporting their work.

Civil servants engage with research knowledge in different ways

The roles of civil servants vary widely, also concerning research knowledge. This is important for researchers to keep in mind when aiming to influence policy through ministry channels.

Ministry specialists or leading experts may have strategic roles or be key players in drafting legislation. In these types of senior roles, there may be more space for the uptake of research knowledge than, for example, in junior civil servant roles with a more limited mandate.

Some civil servants also work closely with research knowledge. They may be tasked with following the latest research in their area of expertise, and they are actively involved in the synthesis and analysis of research findings. These civil servants are specialists in their respective fields.

23 Jacobson, 2007; Newman & Head, 2015; Newman, Cherney & Head, 2015

Division of legislative drafting duties in state administration

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In democratic systems, elected officials set legislative objectives through political oversight and guide the drafting of legislation. Legislative drafting is then carried out by civil servants. This drafting aims to devise in concrete terms the means to achieve politically established objectives.

The division of labour related to legislative drafting can be roughly outlined as follows:[24]

- Ministers determine the political agenda in their respective policy domains based on the government programme.
- The most senior civil servants in the ministries, namely the permanent secretaries, oversee the legislative drafting process. They further facilitate the coordination of the drafting process with other ministries.
- Acting on behalf of their ministers, special advisers manage the political steering of individual projects, liaising with civil servants and representatives from other political factions, including different parties within the government coalition.
- Civil servants engaged in legislative drafting work on the content of the legislative proposal, guided by the political objectives.

24 Backman, 2023: 20

Stakeholder mapping[25] as a tool for identifying audiences for impact initiatives

TOOL

Stakeholder mapping can be an effective strategy for identifying and engaging with relevant parties within your field of research. These can include policy-makers, as well as potential collaborators like research groups, organisations, or companies.

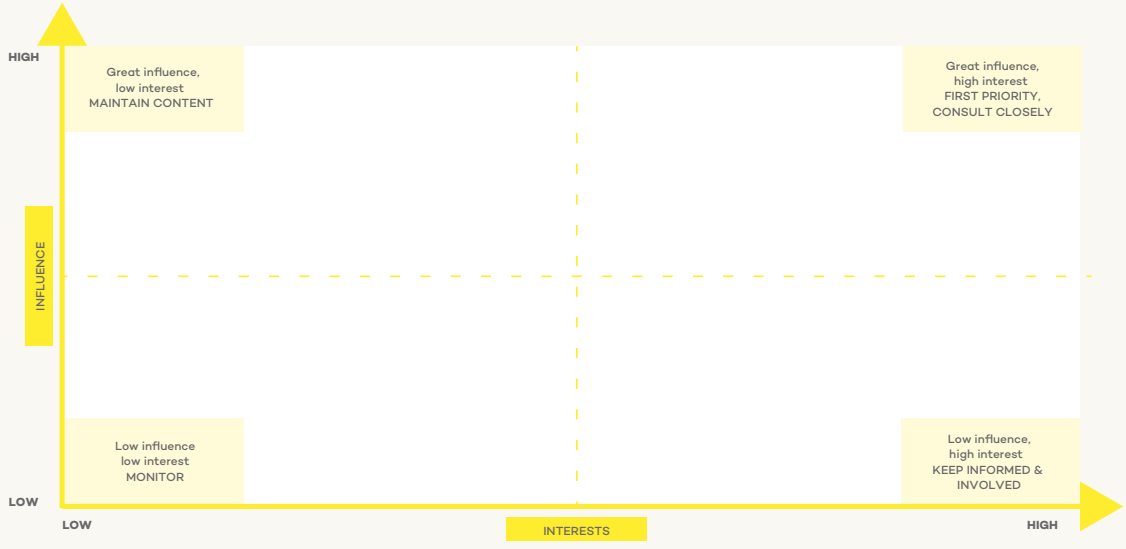
Consider the stakeholder groups significant to your research and write them in the table below:

Position the parties with the most collaborative potential in the high-priority section located at the **top right corner**. These parties have considerable influence over specific issues, and they have high stakes in policy outcomes.

For instance, if a researcher aims to influence how grocery stores nudge consumers towards more sustainable choices, engaging not only with policy-makers but also with key players in the food industry, e.g., food lobbying groups, is essential They wield significant influence in this area and can have high stakes in the outcomes.

Similarly, if the goal is to affect the development of services for the elderly, placing NGOs working in this sector in the **bottom right corner** would be strategic. While they may have limited influence, their high level of commitment to the cause means that collaboration and networking with these organisations could be useful.

Stakeholder mapping



25 Hemmati, 2020: 36

4.4 When to Engage in a Policy Process?

Understanding the knowledge needs at different stages of a policy process is essential for researchers aiming to influence policy. Acknowledging these variances can help in impact strategising and recognising opportunities for impact.

There can be good opportunities for the uptake of research knowledge during the agenda-setting, planning and preparation, and monitoring and evaluation phases (refer to Table 2). One proven method for effective knowledge dissemination involves repeatedly sharing consistent messages and findings with various stakeholders throughout the policy development process.

A historical example illustrating the significance of research knowledge in agenda-setting is the discovery of the detrimental effects of chlorofluorocarbon (Freon) emissions on the ozone layer, which negatively impacts human health. This research prompted the inclusion of the issue in the international policy agenda, culminating in the enactment of the Montreal Protocol in 1989 and the subsequent ban on these compounds.[26]

Ultimately, however, even with proactive engagement in the policy-making process and efforts to influence it at multiple stages, the outcomes are influenced by a complex array of factors beyond researchers' contributions. Thus, the exact impact of research knowledge is often unpredictable and may not always be immediately evident.

Next, we will explore in more detail the nuances of impact work throughout the various stages of policy process. More broadly, however, it is important to recognise that ongoing engagement with policy-makers is beneficial for researchers. Persistence in these efforts is valuable; regular interactions foster long-term relationships and lead to easier exchanges in the future.

4.4.1 Early Stages of Policy-Making and the Importance of Researcher's Communication

Observations from knowledge brokering organisations and studies suggest that the potential impact of researcher-disseminated knowledge is most significant in the initial stages of policy-making.[27] Early communication of scientific findings allows this knowledge to be utilised in political discourse, and this may further influence subsequent discussions and drafting.

Efforts to leverage research knowledge during the agenda-setting stage often involve active science communication and impact work at a more general level.[28] The target audiences in such cases include citizens, members of parliament, organisations, or companies, among others.

Researchers have a range of methods at their disposal for influencing policy at the agenda-setting stage. These include writing opinion pieces, offering policy recommendations, and sharing expert insights or research findings on social media platforms. Additionally, requested written statements, committee hearings, and networks with close ties to the policy-making process provide vital entry points to the policy process.[29]

26 UNEP, 2021

27 Hyytinen & Toivanen, 2010; Jussila, 2012; Keinänen & Halonen, 2017; Holli & Turkka, 2020; Finlex-publications, no date.
28 Hickman, 2014
29 Pielke, 2007: Finlex-publications, no date

4.4.2 Expert Hearings in the Policy Drafting Stage

During the planning and drafting stages, researchers may have an opportunity to engage in the process directly and officially. This engagement can involve the dissemination of research knowledge within working groups or parliamentary committees.[30]

As policies are drafted, various working groups are convened, expert hearings are conducted, and requests for statements and knowledge syntheses are made (see Table 2). These activities provide researchers with avenues to impact policy. The planning and drafting stages may also be influenced indirectly, such as through the media or professional networks.

4.4.3 The Role of a Researcher in Ex-Post Policy Evaluation

During the monitoring and evaluation stage, researchers can have an opportunity to engage in ex-post assessment of policy implementation. For instance, a ministry may commission a study to assess the societal impacts of a specific policy initiative.

Additionally, researchers may try to exert influence on future policy-making by conducting and presenting their independent studies on policy impact.[32] Insights from these studies could attract the attention of the ministry overseeing the policy, stakeholders, or media. It is also important to note that in Finland legislative processes include a preliminary assessment of policy impacts during the drafting stage.

TOOL

Expert hearings' procedures[31]

Parliamentary committees may conduct expert hearings while preparing reports on government proposals. Although these hearings are not open to the public, the statements made during committee sessions are published on the committee's website.

Before a hearing, experts are advised to prepare a written statement and submit it electronically to the address specified in the invitation. This ensures the statement can be reviewed by committee members before the session.

An expert attending a committee meeting is expected to deliver a concise presentation summarising the key points of their statement. Following the presentations, committee members can ask questions of the experts, who may also comment on one another's contributions.

When preparing for a committee hearing, you should keep in mind that several topics may be discussed during the meeting, and the schedule may fluctuate if examination of these issues necessitates it.

30 Hyytinen & Toivanen, 2010; Jussila, 2012; Keinänen & Halonen, 2017; Holli & Turkka, 2020; Finlex-publications, no date
31 Parliament, 2015
32 Prime Minister's Office, 2009; Nieminen ym., 2019

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Useful sources for influencing the planning stages of policy-making

Legislative Drafting Process Guide:
The guide allows you to delve into how legislative drafting process, and understand when and how stake-holders, such as researchers, can officially participate in it.

Ota kantaa service:
The [Take a position] service provides an opportunity to follow citizen's initiatives and regional policy-making as well as voice your opinion on the different projects. The service is currently only available in Finnish and Swedish.

Government's preparation of legislation and development projects:
Contains information on how the different ministries implement the Government Programme, draft legislation and other acts of legislation, as well as advance reforms in various projects, working groups and institutions. Presents all the ongoing and upcoming projects of the current administration.

Have your say service:
The platform is for public consultations and feedback. Through it, citizens and businesses can share their views on new EU policies and existing laws.

Public consultation service:
The public consultation service [Lausuntopalvelu] is a platform to follow ongoing policy-making processes and submit statements on different drafts. The service is currently avail-able only in Finnish and Swedish.

Table 2. Stages of policy-making as opportunities for making an impact[33]

Stage	What kind of knowledge is needed?	What kind of questions are relevant for policy-makers?	Researcher's ways of making an impact	Examples of methods that researchers can use to make an impact
Setting the agenda	Systems knowledge about a societal phenomenon, its causes and what the problem is.	What kind of phenomenon is it? What is the problem? What do we know about the problem?	Researchers inform policy-makers about the phenomena, perspectives, causal relationships, as well as relevant stakeholders.	Offering opinion pieces to the media, giving interviews on topics related to one's expertise, and participating in public discourse on social media. Contributing to the implementation of the Government's Programme by commenting on draft legislation during public consultations.
Planning and preparation	Targeted knowledge of alternative solutions, scenarios and modelling.	What should change?	The researcher highlights what is known and what is unknown about the matter being drafted. The researcher helps to chart alternatives and evaluate the impacts of the measure at hand. Research knowledge enables an informed assessment of the necessity of the drafted measure.	Influencing the strategies, programmes and road maps of ministries in hearings and working groups and with statements. Impacting drafts of legislation: • during preliminary drafting (surveying of knowledge) • during primary drafting (impact evaluation and commenting on drafts) • during the circulation procedure (written statements of complete proposals) • during the parliamentary process (committee hearings)
Monitoring and evaluation	Evaluative knowledge and understanding of evaluations to measure the success of policies with the help of systematic data collection, for example.	Are the policies effective? How could they be improved?	Researchers contribute to a multi-faceted understanding of the consequences of policies.	Supporting the understanding of ministries, for example, by participating in commissioned reports that analyse the impacts of policies.

33 Pfisterer & Paschke, 2019: 32 (where applicable)

REFLECTION

Identifying opportunities for making an impact

Prepare for impact work by thinking about your research and goals and where they might be located in the field of policy-making. The following questions can help you to identify the right places for you to make an impact:

- At which stage of policy-making do you wish to act? What is characteristic of this stage of policy-making?
- What kind of knowledge is expected from you at this stage?
- From the perspective of a researcher, what are the challenges and opportunities in influencing this stage of policy-making?
- What comes after this stage of policy-making?
- What kind of impact are you striving to achieve?
- What are your values and how do they manifest in your impact work?

Matters of conscience and unwanted consequences of impact work

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When planning your impact work, it is important to also consider some of the possible unwanted consequences. Examples of unwanted consequences include the following:

- The knowledge you have disseminated does not have an apparent impact on the decisions.
- Your research results are utilised in the policy-making process partially or tactically to advance certain political goals.
- The expert evaluation you have made is used in a distorted way, e.g., by taking it out of context.

You can prepare for unwanted consequences in advance by preparing a plan of action in case such a consequence occurs.

The misuse of knowledge may feel paralysing or unmotivating. It is important to strive to correct erroneous claims. It might be beneficial to also seek support from a communication expert, e.g., at your university or research institute.

Evaluating progress towards the Sustainable Development Goals

I find sustainable development indicators interesting as they can be used to transfer research knowledge into policy-making. The purpose of these indicators is to highlight the relevant trends in a large mass of data and summarise information into a form that is interesting and readily understandable. Typical indicators combine quantitative statistical data with qualitative interpretations. The development of greenhouse gas emissions, for example, is indicative of whether climate policy has been effective enough.

Different indicators also offer different opportunities for disseminating research knowledge. Some 240 indicators are used to monitor progress on the UN's Sustainable Development Goals for the year 2030. No country has yet succeeded in collecting reliable data on all these indicators, but they help paint an overall picture of global developments. Importantly, knowledge of the lack of data also supports the development of better monitoring methods.

However, simply producing knowledge is not enough. Research is needed to ensure that the indicators are not misunderstood by accident or on purpose. As the world changes, there is also a need to develop new indicators to describe these changes. Ecological footprint is a good example of an indicator developed by researchers that provides an alternative perspective to, for example, the GDP growth rate as a measure of progress.

In my experience, feeding research knowledge into policy-making works best when knowledge users are part of the process of selecting and formulating the indicators. In this way, the suggested indicators serve as a starting point for constructive discussion even on the more difficult questions.

Jari Lyytimäki

The writer is a Leading researcher at the Finnish Environment Institute. He has participated in the development of indicators of sustainable development since the early 2000s.

5

There Are Numerous Ways to Impact – Find the Ones Most Suitable for You

In this Chapter, we explore the various methods researchers can employ to improve the impact of their research. We will introduce concrete implementation tools for these methods.

Methods for research impact include:[34]

- **Popularising research and collaborating** with diverse stakeholders through science communication initiatives.
- **Generating knowledge** useful for policy-making and increasing policy-makers' understanding with the help of **knowledge syntheses**. Knowledge syntheses are various kinds of summaries and compilations ranging from rapid reviews and policy briefs to meta-analyses and systematic reviews.
- Organising and participating in **open and closed dialogues.**

5.1 Popularisation of Research and Collaboration with Stakeholders

Science communication entails the dissemination of research findings to the broader public or specific audiences, such as legislators, local government officials, or industry leaders.

There are various channels for science communication:

- **Blogs and social media** platforms provide spaces for researchers to popularise their findings, albeit with the potential for exhaustive engagement and the risk of not achieving desired visibility.
- **Interviews, op-eds, and media appearances** ensure widespread dissemination of research findings and expert views. However, writing for publications or securing media interviews requires significant time and effort, and is not guaranteed for all researchers.

Science communication as low threshold impact work

The usefulness of science communication lies in enabling researchers to leverage their expertise for knowledge dissemination on their own terms. Science communication serves as a low-threshold method to broaden the impact of research, allowing researchers to highlight issues of importance and foster public discourse on them.

The individualistic challenge of science communication

Efforts centred on science communication can often remain isolated and intermittent, especially when the primary responsibilities for its execution are on individual researchers. Furthermore, science communication efforts focusing on specific topics may be disregarded if they do not align with the policy-makers' core knowledge needs.

Pedagogical science communication provides tools for making research understandable.

Pedagogical methods of science communication enable the broad dissemination of research findings to a wide audience in an accessible manner, such as through popularised content on YouTube (see the enclosed example). This form of communication can e.g., serve as a user-friendly method to support science education in schools.

34 Wyborn et al., 2018; Muhonen, Benneworth & Olmos-Penuela, 2020; Sofi, 2021

A RESEARCHER'S PERSPECTIVE

Samu's Science Channel

www.youtube.com/@Samuntiedekanava

I began Samu's Science Channel on YouTube in 2017. The spark came from my passion to communicate the fascination of mathematics and natural science in an easily understandable way and Finnish. I chose YouTube as my channel, as friends had told me that today's kids and youth do not read that many books but watch videos instead.

After six years I have gained over 341 000 views and my channel has over 8 000 subscribers. The videos are widely used to support school teaching. They are quite widespread as passers-by in the street sometimes stop me to thank me for doing them.

The video format suits me well as my mathematical thinking and narration style are quite visual. My long-time hobby photography also helps. I have also organised a science video training at the University of Helsinki and learned new things in the process.

Through Samu's Science Channel, I have learned to simplify scientific issues and make them interesting. From a purely technical perspective, I have improved my skills in script writing, video editing, camera work and the visualisation of mathematics. It has also been fun to notice that the scientific community both at home and abroad is tremendously supportive of these efforts.

Professor Samuli Siltanen

Mathematics,
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5.2 Knowledge Syntheses Compile Research for Efficient Utilisation

Although the concept of knowledge syntheses is not novel, their demand and application in policy-making have surged in the new millennium due to the exponential growth of available information.[35]

The increasing complexity of issues addressed in policy-making has heightened the demand for multidisciplinary knowledge syntheses. Knowledge syntheses are one way of coping with information overload, as they can compile a wide range of research knowledge. For example, the synthesis reports of the Intergovernmental Panel on Climate Change (IPCC) regularly compile research knowledge on climate change to support policy-making both at the international and national levels.

A knowledge synthesis might compile selected individual studies, aiming to generate a comprehensive or in-depth

35 Chalmers, Hedges & Cooper, 2002; White, 2019

understanding of a policy topic. Beyond research findings or peer-reviewed scientific papers, knowledge syntheses may also incorporate data from surveys, interviews, statistics, and expert evaluations.

Knowledge syntheses offer a versatile means to improve research impact across various policy-making stages, from agenda setting to ex-post evaluation of implemented policies.[36] They can inform parliamentary debates, provide ministries with a comprehensive overview of policy-relevant phenomena, or they can address specific queries regarding the potential impacts of policies.

5.2.1 On Whose Initiative and on What Terms? There Are Many Ways to Compile Knowledge Syntheses

Knowledge syntheses can be categorised, based on their origin, as either producer-centred, where they support the views of the researchers, or demand-centred, such as in commissioned research projects aimed at meeting policy-makers' needs.

Researchers choose the subject and methodology of a producer-centred knowledge synthesis

A producer-centred knowledge synthesis is created from researchers' own premises. The effectiveness of a producer-centred synthesis in reaching policy-makers depends, to a degree, on researchers' motivation and skills in synthesising knowledge. It also depends on their understanding of the policy-making landscape, such as knowing the appropriate recipients and the right policy-making phase for its uptake.

Producer-centred syntheses have the advantage of highlighting topics or perspectives that researchers deem vital, potentially bringing overlooked issues to the fore in policy discussions and public debate. A key challenge with such synthesis is that there is a higher degree of uncertainty for its uptake compared to a demand-centred synthesis.

The scope and recipient of a demand-centred knowledge synthesis are defined in advance

Demand-centred knowledge synthesis responds to a precise need of policy-makers. The knowledge users are therefore known from the start. A ministry may commission a synthesis on a specific topic and related knowledge gaps during a legislative drafting process.

If a demand-centred knowledge synthesis effectively meets policy-makers' needs, its insights may be utilised extensively.[37] However, a significant challenge with such synthesis is that researchers have limited control over the questions addressed and the perspective taken. This can be problematic for example when existing research does not adequately answer the questions raised by the commissioning body.

36 Lomas & Brown, 2009; Gough, Oliver & Thomas, 2013

37 Moore et al., 2018

EXAMPLE

Research projects produce producer-centred recommendations

Many research projects publish syntheses of their results and the resulting policy recommendations. Such knowledge syntheses can be considered producer-centred.

Examples:

Policy recommendations of the Strategic Research Council's projects

Research summaries of the Institute of Urban and Regional Studies

Studies commissioned by ministries are demand-centred knowledge syntheses

Ministries utilise research knowledge in their legislative drafting via commissioned studies, for example. Commissioned studies are demand-centred as they have defined knowledge users, and their topics are clearly defined by the ministry.

Examples:

Archaeological studies commissioned by the Finnish Heritage Agency

Co-production of knowledge syntheses increases researcher-policy-maker dialogue

Co-production of a knowledge synthesis involves leveraging existing research while aiming to ensure that the output meets the actual knowledge needs.[38] It is essentially a collaborative effort from the outset between researchers and policy-makers or other stakeholders, ideally spanning also multiple administrative domains.

Co-production methods foster dialogue[39] and, when effective, build mutual trust between researchers and policy-makers.[40] Diverse co-production practices typically involve joint efforts to determine the synthesis's scope, perspective, and framework. Deliberations during the synthesis process encompass the most appropriate methodologies, and the contributions of all participants are considered in the process.

5.2.2 Knowledge Synthesis Methods: From Traditional Literature Reviews to Policy Recommendations

Overall, the field lacks standardised concepts and methodologies for creating knowledge syntheses, with various organisations and disciplines developing approaches that suit their specific needs and viewpoints.[41] However, a distinction exists between systematic and non-systematic knowledge syntheses,[42] both of which can incorporate quantitative and qualitative research.[43]

A systematic knowledge synthesis is produced according to a precise protocol

Systematic knowledge syntheses adhere to a clearly defined and transparent methodology. Researchers identify and analyse all significant studies on a topic to create a comprehensive synthesis. The advantages of systematic syntheses include their accuracy, reliability of the knowledge provided, and reproducibility of methodology.[44]

A non-systematic knowledge synthesis is swift to produce

Non-systematic knowledge synthesis offers the benefits of speed and flexibility, allowing for quicker production as it does not require an exhaustive literature review or detailed comparative analysis of the methods and materials across studies.

Table 3 showcases some examples of typical knowledge syntheses (refer to page 57). While this table is not exhaustive, it nevertheless illustrates the variety of knowledge syntheses available, including those used in legislative drafting.

38 Wyborn et al., 2018
39 Wyborn et al., 2018
40 SAM, 2019; Sucha & Sienkiewicz, 2020
41 Grant & Booth, 2009; Campbell et al.., 2011; Gough, Thomas & Oliver, 2012
42 Gough, Oliver & Thomas, 2013
43 Tricco et al., 2011; Sutton et al., 2019
44 Gough, Oliver & Thomas, 2013; Sutton et al., 2019

Table 3. Different types of knowledge synthesis

Knowledge synthesis	Description
Literature review (non-systematic)	General synthesis of research knowledge[45] • Highlights selected observations made in studies (non-systematic). • Several forms that serve different purposes. The review can be a part of a research or an independent study. • Mainly used to support an argument or to support a hypothesis.
Rapid review (non-systematic)	Knowledge synthesis that is produced quickly[46] • Highlights selected observations made in studies, surveys and/or evaluations. Hence, it can draw on more than just research results. • Often related to a certain practical theme or purpose. • Faster to produce than regular literature reviews.
Scoping review (systematic or non-systematic)	Knowledge synthesis that extensively maps a topic[47] • Focuses on the most central observations in studies, knowledge gaps, concepts, and methods, i.e., offers a general overview of the research literature on the topic. • The speed of production varies – these kinds of syntheses can be either systematic or non-systematic reviews.
Meta-analysis (systematic)	Systematic and generalising knowledge synthesis[48] • Maps observations made in quantitative studies and strives to present a generalising description of the interlinkages between phenomena, such as correlations and causal relationships. • Based on a precise sampling and analysis method and meticulous reporting protocol. • Slower to produce than other syntheses due to the production criteria.
Policy briefs (non-systematic)	Knowledge synthesis emphasising the potential for use[49] • Presents observations made in studies or other knowledge synthesis and strives to present them in a format that best suits the needs of knowledge users. In other words, the aim is to make the content of the synthesis as usable as possible. • Descriptive policy papers present research results and conclusions drawn from them in a concise format. In addition to summarising research knowledge, prescriptive policy papers present recommendations for or evaluations of alternative policies.

46 Grant & Booth, 2009
47 Khangura et al., 2012; Tricco ym., 2015
48 Munn et al., 2018; Peters et al., 2017
49 Gurevitch et al., 2018
50 Balian et al., 2016; Dagenais & Ridde, 2018

Perspectives on the planning and drafting of a knowledge synthesis

TOOL

Have you thought about producing a knowledge synthesis? The following questions can help you conceptualise the perspectives relevant to the preparation and production of a knowledge synthesis.

What is the starting point of a knowledge synthesis?
A knowledge synthesis can be based on the views of either researchers or decision-makers on a particular phenomenon. Then again, it may also be a result of a collaboration between researchers and policy-makers.

What is the purpose of a knowledge synthesis?
Knowledge syntheses can be created as a quick preliminary mapping of a certain phenomenon (e.g., rapid reviews or mapping reviews) or more thoroughly to support the planning of policy measures (e.g., meta-analysis).

How quickly is a knowledge synthesis needed?
Knowledge syntheses are produced both during crises as well as to support longer-term policy planning. The timespan related to the knowledge need can vary from hours and days (e.g., in conjunction with the Fukushima disaster) to years (e.g., the IPCC produces an extensive synthesis report once every five years).

What type of questions does a knowledge synthesis strive to answer?
Questions dealing with extensive and complex themes require knowledge from several different disciplines and responding to them requires different methods compared to narrow, clearly defined questions.

How many resources do you have?
The funding and available human resources inevitably affect the type of syntheses you can produce.

Where is the knowledge sourced and synthesised from?
The scope of the literature search, the criteria used to select the data, the methodology and the systematic nature of the overall process determine the type of knowledge that a knowledge synthesis offers and how reliable it is.

In addition to the perspectives presented above you should also consider the following when planning your knowledge synthesis:

- How are policy-makers considered in the selection of the type, perspective and research questions of the knowledge synthesis?
- What are the key issues in the design and production of the knowledge synthesis which you should discuss with relevant policy-makers (e.g., the most appropriate synthesis type and a data collection method, or the most typical challenges with this kind of knowledge)?
- Which stage of policy-making is the synthesis useful for? What is the purpose of the synthesis in the policy-making process?

5.2.3 Choosing the Appropriate Knowledge Synthesis

The purpose of a knowledge synthesis and the aims set for it often necessitate compromises in terms of its production timeline and content.[50]

When choosing a knowledge synthesis type you should consider both the context of its utilisation and the desired timeframe for its creation. Is the synthesis aimed at contributing to current discussions or drafting processes quickly, or is it intended to gather information on a future policy topic or another significant subject?[51] At this time, a choice is also made between systematic and non-systematic knowledge synthesis, as the process of producing systemic knowledge synthesis is slower.

Decisions on language and length are also important. Knowledge syntheses can use scientific language, characterised by technical precision, detailed methodology, and acknowledgement of the complexities and uncertainties inherent in the subject matter. These types of knowledge syntheses tend to be more extensive.

In addition, syntheses can be crafted in a more accessible, summarised form, aiming for brevity and clarity to emphasise research findings and key messages. Here, detailed scientific description is less of a priority, and the underlying knowledge base and perspectives may not be comprehensively presented.

5.3 Dialogues Foster Shared Understanding

Dialogues are one way of promoting the impact of research knowledge. These generally involve exchanges at events where participants share and listen to different viewpoints and are open to changing their perspectives.[52] 'Dialogue' can be understood as a 'discussion' with certain qualitative components. In essence, it describes 'an ideal' where the participants broaden their understanding and remain open to new viewpoints.

The effectiveness of dialogue in strengthening the science-policy interaction largely depends on the objectives and motivations of those involved.[53] The dynamics and outcomes of a dialogue can be significantly improved with careful planning and skilled facilitation.

Participants also contribute to the dialogue and its outcomes by bringing their interests, understanding, insights and expertise to the interaction.[54]

In addition to researchers and policy-makers, other stakeholders, including knowledge brokers, NGOs, and industry representatives, may also engage in a dialogue. This combination of diverse interests and viewpoints necessitates that researchers engaged in such discussions comprehend the various types of knowledge influencing policy-making, and they can communicate their research in a manner accessible to all participants.

Dialogues can lead to the co-production of new knowledge

Science-policy dialogue can unveil opportunities for co-production. In knowledge co-production by researchers and policy-makers, the recognition and incorporation of different sources and types of knowledge is essential.[55] This entails a collaborative effort where all parties contribute their expertise, rather than one-sided guidance.

50 Sarkki et al., 2014
51 Sarkki et al., 2014
52 Foucalt, 1984
53 Davies et al., 2009; Scholten et al., 2015: 3–5
54 compare Maas, Pauwelussen & Turnhout, 2022
55 Sucha & Sienkiewicz, 2020; Wyborn et al., 2018

An instance of co-production might involve collaboration between researchers and policy-makers aimed at achieving a common objective, like establishing a more solid knowledge basis for policy-making.[56] In more practical terms, co-production might take the form of a panel jointly organised by researchers and policy-makers with a specific objective, such as evaluating certain policy initiatives or exploring potential further actions. At its most effective, co-production can lead to closer and continuous collaboration and interaction, as well as the development of new, dialogue-based working methods.[57]

Dialogues increase understanding

Facilitated exchanges between researchers and policy-makers may not only broaden the former's insight into policy-making but also the latter's understanding of scientific research. Consequently, dialogues have the potential to build trust in the science-policy interface.[58]

However, it is important to acknowledge that facilitated dialogues are not a panacea for future interactions or stronger trust. Dialogues require time and resources from both researchers and policy-makers, along with a willingness to embrace new ideas, effective communication skills, and an appreciation of the value of knowledge brokering.[59]

Networks and familiarity with key stakeholders create opportunities for dialogue

Researchers can independently organise events like panels and seminars that allow for the discussion of research findings with policy-makers. Researchers can also take part in events organised by others, such as hearings and workshops associated with legislative drafting. In both scenarios, possessing a network and an understanding of the policy-making landscape enhances researchers' ability to connect with key policy-makers related to their research area. This, in turn, increases the likelihood of being invited to notable events by policy-makers.

Facilitated dialogues can help to identify interconnections between themes

Facilitated discussions are especially useful in situations that also call for broader expertise of researchers beyond mere scientific knowledge. At times researchers can be expected to be adept at interpreting research findings and conveying generalised understandings of the research literature and knowledge production methodologies.

In dealing with broad and systematic drafting themes, dialogues aid in uncovering relationships among them. To facilitate such discussions, knowledge syntheses are commonly employed to build a unified knowledge foundation or to establish consensus on discussion points.

56 van der Molen, 2018; Sucha & Sienkiewicz, 2020
57 Bracken, Bulkeley & Whitman, 2015; Adelle et al., 2021
58 Mitton et al., 2007; Oliver & Cairney, 2019; Sucha & Sienkiewicz, 2020: 106–116
59 Wenger, 2010; Oliver, Kothari & Mays, 2019; Adelle et al., 2020

In which situations is a planned science-policy dialogue especially useful?

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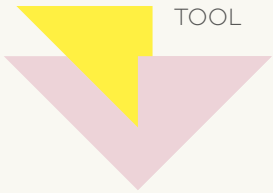
Similarly to knowledge syntheses, facilitated dialogue between policy-makers and researchers can be utilised at different stages of the policy-making process. Dialogue can be useful in the following situations, for example:[60]

- **Identifying policy gaps:** Are there any overlooked issues or policy gaps in tackling a particular phenomenon that could be identified as a result of a dialogue between researchers and policy-makers?
- **Identifying uncertainties in knowledge:** What kind of uncertainties are there in the scientific knowledge related to a certain policy process? What criteria have been used to assess its reliability, and how conflicts of interest have been addressed?
- **Interpreting scientific disagreements:** How should knowledge that seems contradictory be interpreted in policy development processes?
- **Evaluating policy alternatives:** What does scientific knowledge say about the different policy alternatives that strive toward the same goal?
- **Justifying policy recommendations:** What kind of scientific knowledge are policy recommendations based on?

60 SAM, 2019: 26–27

Perspectives on the planning and organising a science-policy dialogue



Would you be interested in participating in a dialogue between researchers and policy-makers? Have you ever thought about how to organise a science-policy dialogue? The following perspectives may help you to understand what is needed to prepare and organise such a dialogue.

Defining knowledge needs
The preparation of a dialogue usually begins by defining the knowledge needs and goals for the dialogue. It is important to think in advance about the type of issues that will be addressed in the dialogue, and which materials could be used as a basis for the discussion. Similarly, what is the most suitable scope and timing for the dialogue?

Selecting participants
It is recommended to invite a diverse and multidisciplinary group of researchers to participate. Researchers can be invited, for example, by using a snowball method. This means that an invitation is first sent to a few researchers, who then recommend others to be invited.

The identification of suitable policy-makers should begin with the mapping of a few key figures. Such a key figure could be a leading civil servant in a relevant ministry, who works on the topic of the dialogue. Such a person is probably interested in promoting a science-policy dialogue or to participate in it themselves.

Drafting background documents for steering the discussion
It might be useful to build a dialogue around certain background documents that can help to anchor the discussion. Written background materials help to keep attention and discussion on the issue. Commenting on written materials is also a practice that researchers are already familiar with.

NOTE! If you have an opportunity to take part in a science-policy dialogue, you should remember that negotiating skills, understanding of policy-making processes and expertise related to synthesising knowledge develop gradually. As you accumulate experience you also develop your expertise as a researcher.

EXAMPLE

Science sparring in supporting legislative drafting at ministries – experiences from civil servants

Science sparring[61] is a customisable model for organising a dialogue that is based on the co-production of knowledge. The model has been used, particularly, in the preparation of large-scale, systemic issues in ministries. To respond to these issues, sporadic engagement is usually inadequate and there may not be readily applicable research knowledge to begin with. Science sparring emphasises an atmosphere of trust and open dialogue. The perspectives presented here have been compiled by interviewing persons involved in the drafting work at ministries.

Opportunities and advantages

- It is a useful model especially for setting goals or evaluating impacts.
- Useful at the stage where projects are being defined, whether they concern identifying the impacts of a law or the goals of a national strategy.
- Legislative drafting is typically characterised by hurry and the need to quickly gather knowledge to support the drafting processes. One advantage of science sparring is that it can quickly produce wide-ranging knowledge that policy-makers might otherwise have no access to.
- The advantage of science sparring is its nature as a dialogue. This provides an opportunity for real-time dialogue between researchers and policy-makers, leaving room for follow-up questions. It facilitates opportunities for knowledge co-production.
- Science sparring aims to strengthen and widen the knowledge base and gain support for policies from the scientific community. Multidisciplinary support is required for legislative drafting.
- The dialogue format increases parties' understanding of each other's realities. As a result, researchers may have a better understanding of why research results do not directly translate into policies, and policy-makers may develop a deeper understanding of how research is done.
- Interaction strengthens trust in each other's expertise between the participants.

Challenges

- Not necessarily the best method for precise impact evaluations, for example in situations where there is a need to know the exact impact (measured in euros) of policies.

Role in law drafting

- Acts as a reinforcement of certain solutions.
- Supports the work of civil servants in situations where they are faced with a tremendous amount of information from stakeholder hearings, discussions, and expert presentations.
- When successful, a science sparring can reinforce some of the questions identified by civil servants on the knowledge needs.
- Could support the work done in research and performance evaluations.

Notes on the end product

- The output of science sparring depends on the situation and the civil servants' knowledge needs. It may take the form of a detailed report, a less stringent written paper or a discussion memo, for example.
- To ensure that the sparring focuses on the actual needs you should agree on the output in advance with the civil servants engaged in the drafting work.

61 SOFI, 2020

5.4 Capacity-Building Beyond This Handbook

In this chapter, we have detailed a range of methods researchers can employ in their impact work. Altogether, the methods presented here are only a part of the big picture; numerous methods to enhance research impact exist, with novel ones emerging constantly.

Many noteworthy methods were not included in this guide:

- Initiatives fostering collaboration between science and the arts, which allow for the dissemination of research findings through creative means,
- Forecasting techniques and future knowledge,[62] and
- The use of AI-based methods in comprehending rapidly evolving situations.[63]

Opportunities and routes by which a researcher can influence policy-making are diverse, and it is worthwhile to contemplate them from fresh perspectives. Identifying your strengths and selecting personally appealing methods are crucial steps in devising your strategy for policy impact.

REFLECTION

Identifying methods that suit you

This Chapter has focused on various methods of making an impact. Next, consider which of these methods could be interesting to you. The following questions can help you:

- In what way would you like to impact policy-making?
- What are your strengths and how do they apply to the various means of making an impact?
- What kind of skills should you perhaps develop to make a better use of the various means of making an impact?

62 e.g., Sarvaranta et al., 2023
63 e.g., Tyler et al., 2023

Menneisyyden Jäljillä -podcast

The idea for a history-themed Menneisyyden jäljillä [On the Trail of the Past] podcast was born in the autumn of 2018 at the University of Copenhagen where I was a trainee helping a researcher to set up their podcast. I had already fallen in love with the podcast as a medium as it allows people to speak in their voice and talk about various subjects in their own words. Podcasts reach a wide variety of people in very different situations: people listen to them while on a walk, on a run, while cleaning or at night when going to bed. However, it is important to recognise that there are accessibility issues in podcasts as well. To address these issues, it is possible to offer transcribed versions of the episodes or turn them into blogs. Currently, I have enough resources for the latter.

I have worked as a freelance journalist for a long time. Hence, alongside my identity as a researcher, I have always considered it important to think about ways to communicate even the more difficult issues to as wide an audience as possible in an understandable manner. I have always enjoyed writing, but I wanted to challenge myself and try to talk into a microphone on a podcast. The first episode of the podcast was published in January 2020.

The best moments of the podcast are those where the conversation with the expert guest whisks me away and I learn something new. I believe that the listeners can also sense that, and I hope that the episodes will open new perspectives not only on the past but also on the present.

After two years of producing the podcast regularly, I noticed that I was no longer as anxious about giving speeches or making presentations. These situations have started to feel natural. I also value the technical skills related to the production of podcasts and content creation as well as the opportunities for creativity and ideation that come with the planning of an episode. I have also learned that there is a vast amount of history-related expertise in Finland. I am delighted to provide an easily accessible platform to showcase this expertise. Researchers and experts get an opportunity to talk about their research topics and areas of expertise, and podcast listeners get an opportunity to listen and learn.

First, the podcast was praised especially among my colleagues at the university. Since then, I have also heard that episodes of the podcast have been used as teaching materials at universities and upper secondary schools. Lately, more and more listeners have been contacting me to give me feedback, thanks, and requests for new episodes. The best feedback for me is when a listener had not thought of being interested in history but changed their mind having listened to Menneisyyden jäljillä.

Doctoral researcher Lotta Vuorio

(University of Helsinki), podcast producer

6

Good Practices of Impact Work

What are the good practices of disseminating research knowledge and what should researchers know about their own responsibilities in impact work?

In this Chapter, we will be discussing the good practices of impact work that a researcher should be mindful of when engaging in impact work. Commitment to good practices contributes to the credibility of your impact work.

From the perspective of a researcher, good practices include:[64]

- identifying and communicating one's potential conflicts of interest,
- clearly expressing uncertainties and quality-related issues,
- transparency about the processes of societal interaction, and
- transparency related to one's expert view, i.e., whether the view draws upon the consensus of the broader scientific community, research findings of a single study, or the researcher's personal opinion.

6.1 Trustworthiness in Impact Work Builds on Transparency

"Conflicts of interest" in a researcher's impact work can emerge from their relationships to particular communities, organisations, or individuals. In essence, conflict of interest is a matter of defining how research integrity is maintained, as it is challenging to completely avoid all biases. The sharing of research knowledge invariably involves discussions about acceptable levels of biases, and which factors indicate sufficient levels of objectivity or separation from political influence.

Conflicts of interest are evaluated on a case-by-case basis

Ties of a researcher can produce conflicts of interest, as they can contain the risk that the researcher's promotion of their personal interests or the interests of their immediate circle affect research findings, expert insights, and policy recommendations. Expressing one's ties openly is of central importance. This transparency helps the involved parties to form judgments about the reliability of presented knowledge and to assess potential biases in knowledge framings.

The case-by-case assessment of conflicts of interest may reveal that a researcher's ties are excessively strong concerning a particular theme or policy-making process. A researcher can be rejected from participation if they, or someone in their immediate circle, have a personal financial interest tied to the policy issue under consideration. The same researcher might, however, be deemed free of conflict of interest – or sufficiently distant from any potential conflict – and be eligible to contribute under different circumstances and different policy issues.

Some background organisations involved in policy-making scrutinise conflicts of interest more closely than others. Researchers may be requested to provide official statements or to enter into agreements concerning conflicts of interest. In selecting researchers, some entities rely on the judgement of knowledge brokers or the researchers themselves.[65]

64 Government Office for Science, 2010; SAM, 2019

65 Mitton et al., 2007; Government Office for Science, 2010; OECD, 2015; SAM, 2019; Pedersen & Hvidtfeldt, 2021

REFLECTION

Conflicts of interest: where is the line?

As mentioned above, conflicts of interest in researchers' impact work leave plenty of room for interpretation.

Below is a list of questions that allow you to think about the theme more deeply. Not always there are clear-cut answers to these questions. You can use the questions as a reflective tool on your own or together with your peers.

- What exactly constitutes external political guidance?
- Given that co-production is a balancing act between the views and interests of various stakeholders, could it be perceived as a form of political guidance? How might one recognise any political influence in the interactions between researchers and policy-makers?
- In what ways do your personal values, beliefs, and perspectives (e.g., those concerning a scientific worldview, biodiversity conservation, or advocating for disadvantaged societal groups) influence your research knowledge production and engagement with policy-makers?
- Do the values and beliefs underlying your thinking render your impact work unpersuasive or affect your credibility?
- How do your previous activities (such as electoral candidacy), past career, current employer, or financial commitments, like research funding, affect your conflict of interest?

Transparency is the cornerstone of knowledge brokering

Early decisions and clarity on the exact roles and responsibilities of participants (researchers and/or policy-makers) improve the quality of interaction.[66]

This helps in building a shared understanding of the objectives, the nature of research knowledge, and the motivations of the parties utilising knowledge. Open and transparent planning also establishes a framework for the management of conflicts of interest and the principles of collaboration.

Managing conflicts of interest is a key consideration when choosing researchers to participate in knowledge co-production and dialogues. Some organisers, such as brokering organisations, may reach out to researchers who

66 SAM, 2019: 8–9

REFLECTION

What kind of conflicts of interest do I have?

As a researcher, you must reflect on your conflicts of interest and communicate about them as clearly and transparently as possible. Having conflicts of interest does not mean you cannot participate in science-policy interaction. Nevertheless, it is important to identify potential conflicts of interest and openly communicate about them.

For example, when preparing for a science-policy interaction, you may reflect on how your work duties and financial situation affect your impartiality on a given societal topic. The following list provides some questions to help you reflect on your conflicts of interest:

- What organisation do you work for and what is your position in it?
- Who funds your research?
- Does your job description or funding involve contracts or requirements that restrict your activities in some way?
- Do these factors affect the kind of knowledge or messages you will communicate to policy-makers if asked to do so?
- Do these factors affect your credibility from the perspective of policy-makers?

are suitable for the event theme and the applied method of interaction.

Researchers also have the right to know how their conflict of interests may influence their participation in the science-policy interface. Typically, researchers' conflicts of interest are linked to their expert status or the funding of their work.[67] Sometimes, the conflict could be with a researcher's employer, whose principles, and objectives the researcher is obliged to uphold.

Researchers are ethically obligated to disclose their conflicts of interests

The obligation for researchers to disclose their conflicts of interest is outlined in the guidelines for good scientific practice by the Finnish National Board on Research Integrity (TENK).[68] When invited to contribute for example to events, researchers should assess any potential conflicts and discuss with the organisers how these could affect their credibility.

67 Louhiala, 2018

68 TENK, 2012

In adherence to good scientific practice, researchers ought to transparently declare their research funders, any donations received, and their current expert roles e.g., in their CV or more informally in other situations. For the sake of transparency, it is also prudent to declare any affiliations to groups, organisations, and networks that might present a conflict of interest.

6.2 Communicating the Quality of Knowledge Is a Fundamental Aspect of Transparent Impact Work

Research is often expected to provide definitive answers by policy-makers. Scientific knowledge is, however, often uncertain and context-specific. Particularly regarding the effects of specific policy measures, peer-reviewed research may be scarce or non-existent.

The policy-makers comprise ministry experts, politicians, and their advisors, all of whom may possess significant knowledge in their respective domains as well as a broad understanding of societal issues. Nonetheless, they may lack understanding about the nature and generation of scientific knowledge.

Consequently, communication concerning the quality of knowledge and uncertainties of knowledge should be given particular attention at all stages of the policy process.

Transparent and concise communication facilitates knowledge utilisation

When a researcher communicates knowledge to policy-makers, it is important to communicate clearly and understandably about the uncertainties and quality of the knowledge - no matter what expectations are placed on the knowledge.[69]

Communicating about the **quality of knowledge** means, for example, explaining whether it is supported by peer-reviewed research, whether it applies research findings or whether it is an expert opinion based more loosely on research findings.

Uncertainties in knowledge refer to the fact that disagreements and converting perspectives are in the nature of scientific knowledge. To achieve transparency about the uncertainties in knowledge, it is good for the researcher to communicate openly in discussions with policy-makers, for example, about possible disagreements within a certain field of science.

Expert organisations in knowledge brokering, such as OECD and SAM, highlight that communicating about divergent perspectives can happen clearly and constructively.[70] Research findings that differ from the consensus, or in the absence of consensus, different perspectives and their weaknesses and strengths can be openly expressed. At the same time, the reasons for disagreements in the literature and among researchers can be concisely explained.

For policy-makers potentially conflicting research findings and disagreements in perspectives are communicated concisely, they can be useful. Transparent, clear, and concise communication has been found to promote knowledge utilisation.[71]

69 e.g., Kuikka, 2019

70 OECD, 2015; SAM, 2019

71 Oliver & Cairney, 2019

6.3 Building Trust in Knowledge Brokering Collaboratively

Researchers, policy-makers, and knowledge broker organisations collectively have the responsibility to ensure that the research knowledge utilised in policy-making is, as much as possible, free from conflicts of interest. Transparency and openness allow external observers to independently assess the management of conflicts of interest and the integrity of knowledge brokering.

Additionally, transparency aids the broader research community in evaluating the knowledge that informs policy decisions. It can further contribute to the wider public's confidence in research knowledge. Citizens and interest groups across various sectors can be direct contributors to or the eventual recipients of the outcomes of policy-related interactions. Effective transparency, which considers society more broadly, goes beyond just openly detailing the interactions between researchers and policy-makers; it also involves communicating the shared knowledge in an accessible manner and the wider dissemination and simplification of research findings for public consumption.[72]

72 Resnik, 1996; TJNK, 2018; Resnik, 2020

Ethical considerations in impact work

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The transparent articulation and advocacy for openness necessitate proactive contemplation and a nuanced grasp of the impact domain by researchers.

Acquainting oneself with the various modes of interaction, the stages of the policy-making process, the stakeholders involved, and the various roles in which a researcher may engage, equips the researcher to articulate the processes involved in impact work and to deliberate on its ethical dimensions.

Ethical deliberation in impact work can be guided by pondering questions such as:

- What actions should you take if you find yourself surpassing the boundaries of your expertise during knowledge brokering activities?
- Are you the most appropriate individual to address a knowledge request from a ministry, or might there be another researcher better suited to respond to the queries posed?
- Would you direct a journalist you know to another researcher who may possess more in-depth knowledge on the subject of the journalist's report?

7

The Skills and Understanding of Impact Work Grow Gradually: Tools for Developing Your Expertise

> In this handbook, we have delved into the field of making a societal impact and presented various methods, routes, and tools for interaction.

In conclusion, we would like to state that participation in impact work is a long-term effort where a curious attitude and the desire to develop one's expertise will be of use.

This final Chapter includes some tools that might help you develop your skills in impact work.

7.1 Competence Framework 'Science for Policy'

The Joint Research Centre of the European Commission has developed a competency framework for researchers operating in the science-policy interface. This 'Science4Policy' competency framework is a useful tool for verbalising your expertise and identifying possible areas for development. Take a look at the Smart4Policy Competency Framework here:

7.2. Interaction Plan of the Finnish Academy of Science and Letters

The interaction plan is a tool that helps researchers conceptualise goals for their impact work in the planning and preliminary stages of a research project and encourages societal interaction throughout the project. The interaction plan can also help you to reflect and select the methods of interaction that suit you the most. The plan can be drafted from the perspective of your research or the perspective of your research group.

Create your personal interaction plan here:

7.3 ETH Zürich's Workbooks for Participating in Science-Policy Dialogue

ETH Zürich's workbooks analyse the role of researchers in the science-policy dialogue. The workbooks are aimed at doctoral students and other interested readers.

Familiarise yourself with ETH Zürich's workbooks here:

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SUOMALAINEN TIEDEAKATEMIA
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MY SOCIETAL INTERACTION PLAN

(Name:)

1. MY RESEARCH

Which societal themes are relevant for my research and expertise? Which societal stakeholders are relevant for my research? And to which policy-making levels (ministry, municipality etc.) are they connected?

2. MY GOALS

I aim to contribute to the following things:

… and have the following impacts on them:

3. MY NETWORK

I'm part of the following networks and communities (for instance research groups, scientific societies)?

Are there other networks or communities, which I should join?

4. TO ACHIEVE MY GOALS…

… with whom could I cooperate with (e.g. close colleagues, scientific societies, cross-sectoral consortia)?

… to whom should I try to have an impact on

… which of the following interaction practices are important for achieving my goals?

5. MEANS OF INTERACTION

Which means of societal interaction have I already used?

Dialogue practices

- seminar or panel with policymakers ☐
- workshop or round table with policymakers ☐
- training professionals and teaching students ☐
- expert hearing ☐
- direct contact with policymakers ☐
- communicating with stakeholders outside of policymaking ☐

Written or media based practices

- policy recommendations ☐
- popular book ☐
- opinion piece for news media ☐
- social media content and blog post ☐
- exhibition, show or concert ☐
- guideline to support professionals ☐
- IT product (code, algorithm, program, device) ☐
- appearance in radio or tv show ☐

(Mark the practices you've already taken part in.
If a practice is not listed here, add it to the empty slots.)

It would be especially interesting to develop my skills related to the following interaction practices:

6. MY ROLE(S) AS A RESEARCHER

Which researcher role (synthesiser, commentator, advocate) do I find the most suitable or comfortable, and why?

Which role feels most uncomfortable, and why?

7. MY NEXT STEPS

During the next months I will (e.g. find out about on-going policy-making, join a network connected to my research topic, locate new key stakeholders, organise a workshop).

In the more distant future, I would like to try out.

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