



laboratory - preclinical studies



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ERA-ENVHEALTH

**BRIDGING THE GAP
BETWEEN
SCIENCE AND POLICY**













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**Improving Knowledge Transfer
A Checklist for Researchers**



ERA-ENVHEALTH (FP7-ENV-2007-CSA-1.2.3-01, Grant Agreement 219 337)



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A rectangular frame containing a high-speed photograph of a water splash. The water is captured mid-air, forming a crown-like shape with a central peak and a thin rim. The water is a vibrant blue color, and the background is white. The splash is centered within the frame.

Improving Knowledge Transfer A Checklist for Researchers



A checklist to enhance policy relevance of research

Where does the idea for a checklist come from?

„... the results of the many environment and health research projects funded under FP5, FP6 and FP7 and of other information gathering efforts could be better exploited at policy level. An efficient mechanism to ensure science-policy interface should be identified.” (EC 29/03/2010 SEC(2010)387 final: Progress Report on the implementation of the "European Environment and Health Action Plan 2004-2010": p. 15)

“The research was found to be relevant and there was a common frustration on the still existing research-policy gap.” (EC - DG Research and Innovation (2011): Study on the longer-term impact of European Union funding of research in the field of Environment and Health: p. 21)

This checklist has been elaborated within the European Research Area Network for Environment and Health (ERA-ENVHEALTH) in which 16 environment and health (E&H) funders from 10 countries have joined efforts and resources to help increase the relevance and efficiency of E&H research in Europe. One work package of the project investigated the link between research and policy. It was aimed at providing recommendations to improve the uptake of scientific results into policy-making.

Three subtasks of this work package contributed to this brochure:

1. The starting point was a literature review which identified various conceptual frameworks used to depict research utilisation in policy-making. Also, communication strategies of researchers, knowledge-brokers and policy-makers were evaluated.

2. In order to better understand knowledge transfer in practice, the project's research database, which comprises information on funded research in E&H in Europe, was analysed. The focus was laid on whether the final reports contained any policy recommendations and on how adapted they were in general to meet policy needs.
3. The third subtask aimed to identify useful and "pragmatic" lessons from real experiences of scientific knowledge production and use in policies. Very different case studies were analysed, identifying drivers and key factors for the uptake of scientific evidence.

This checklist is also a result of "lessons learnt" through the evaluation of transnational research projects. The ERA-ENVHEALTH network designed a transnational funding scheme and launched a first call in 2008. Its evaluation concluded that research projects should preferably from the beginning take into account in the design how to be more policy-oriented.



Purpose of this checklist

How can this brochure support you?

This brochure is designed to support researchers who wish to ensure the consideration of their work and enhance the uptake of their scientific findings into policy.

It is built as a checklist which provides ideas and recommendations. These may differ according to the research carried out and the policy context. Researchers who would like also to function as knowledge brokers¹ can find it very useful. It is thus a tool to prepare your research and present your results in a way that is particularly suitable for policy-makers.

Another tool to enhance the dissemination of results can be found online on the ERA-ENVHEALTH website: www.era-envhealth.eu. It is an interactive map presenting the most important European national public bodies involved in E&H and relevant publications (e.g. newsletters) as provided by each of our partner countries. You might consider publishing a summary of your results also in one of these publications as it will help to bring it closer to policy-makers.

¹ Definition of “knowledge broker”, please see p.15

Recommendations and ideas for a better transfer of scientific knowledge into policy



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1 Preparatory phase of research

☞ Ownership and policy context

- Can you **involve** and engage the most important **stakeholders**/end-users at the very beginning of the project, i.e. in the problem definition process?

To ensure end-users' needs are met, involvement and engagement of all the stakeholders should be done at the very beginning throughout the planning and execution stages of a research project. Our studies show that policy-makers would like to be more involved in the definition of a problem. Also stakeholders whose knowledge and perception are especially relevant should be involved in particular when the stakes for society are high. Ownership generally increases the effectiveness of the uptake of scientific information. It is vital that policy-makers, however, provide clear input and formulate proper research questions.

- Can you include **other aspects** in your study such as **social and/or economic aspects**?

The research must take into account contextual elements like socio-economic parameters. Other important aspects to be considered might be vulnerable or marginalised groups, etc. Furthermore, in order to engage policy-makers, the research results should be tested in “real world” contexts to check whether they are truly applicable. Therefore, it can also be useful to identify specific sub-groups as beneficiaries of the research results for tailored prevention, support or surveillance.

- Can you decide upfront to which of the following **phases of policy-making** your research would contribute best:
- 1) Policy agenda setting
 - 2) Policy formulation
 - 3) Policy implementation
 - 4) Policy evaluation

For each of the phases, knowledge of the context is relevant: it is important to understand the actors involved, the possibility to inform and influence them as well as the timing of actions.

- What is the **timing of your research**? Is it likely that the outcomes and results will be available at a “favorable” time for policy-makers?

The timing of the dissemination of your research results is a crucial issue. Emergencies or issues of high public concern demand immediate answers (even if there are only preliminary results). In general, the lack of information about risks (perceived or real) is often interpreted as proof of the existence of a true risk and of the severity of a problem. The ‘favorable’ time for policy-makers is a phase when they are still able to use and apply the research conclusions or recommendations, e.g. during the discussion stages for new legislation. However, results can often not be provided in time and the reasons for delays in the proliferation of clear research results are difficult to convey. Researchers should nevertheless be available for explaining the respective reasons.

- What is the context of your research? Try to **identify all the elements supportive** of your research that will help to define recommendations.

Is it possible to identify:

- the existence of a **political will** at the relevant level, and its quality and nature (identification of specific potential supporters)?
- the public administrations having the **prevention/protection mandate** and responsibility in this field?
- the **role of specific actors** relevant for economic power/political influence/vested interests? How strong is their lobby?

☞ **Multilevel /Long-term perspective**

- Is there national legislation or EU **legislation to support and/or justify** your research?
- Is it possible to establish a **multilevel research perspective** (national, EU, international, transnational)?
- Can you include also **potential long-term effects** in your research in order for policy-makers to be able to establish priorities for **legislative action**?
- Is an **integrated transdisciplinary** approach in your study possible?

Interdisciplinary and policy-orientated research introduces additional risks and difficulties in the research process as project participants take more time to coordinate and build their project, adapt their frames of reference, their methodological approaches as well as their technologies to other scientific fields. However, this is seen as a positive investment both for the scientific quality and the policy-relevance.

2 Final phase of research

☛ Content

- ☑ Did you focus on the **application of your outcomes** rather than on the theoretical aspects?
- ☑ Are there **potential solutions** to the problem? Are ideas that could solve the problem being presented?

Even if clear and recognised solutions cannot be presented, recommendations are needed to take decisions while being clear about inherent uncertainties and their causes. It is relevant to come up with future actions including needs for further research. To be valuable and successful, recommendations should be tested and/or discussed with stakeholders.

- ☑ Can you give **options and choices** for the implementation of the research outcomes and your recommendations?
- ☑ Do you have an **“escape” strategy** in mind for the policy-makers?

Not all policy recommendations may be successful if adopted. Thinking about how policy-makers could minimise the policy risks if the implementation is not successful would bring added-value.

- ☑ Did you embed you results in a **wider context**?
- ☑ Can you identify which **policy fields** or specific relevant sectors are **concerned** by your research and could you provide recommendations for them?

- Can you give a **clear message**?

Is it possible and necessary to explain the presence of **confounding factors**?

☞ **Risks associated with the environmental health threat**

- Can you integrate **decision criteria** (decision matrix with urgency, absolute and relative risk) in your recommendations?
- Are there **easy-to-understand indicators** that could illustrate and underline your results in order to facilitate understanding by non-specialists?

☞ **Costs / Cost perception**

- Can the **potential costs of action/inaction** be estimated?

To conceive policies, policy-makers would like to receive more information on costs and consequences of policy action and inaction. They appreciate reports and tools on cost-benefit-analyses (see chapter 4).

- Can you make concise **statements about** the costs of the impacts both in terms of health impacts, e.g. **impacted lives**, and in terms of **monetary costs**?

Concise statements about costs can infuse the political discussion with an objective picture of the magnitude of the problem, framing the trade-offs in a technical and straightforward way. One of the most important strategies for effectively conveying research evidence is delineating the effects for specific individuals or groups. This approach personalises the policy case, thereby making it easier for legislators and the public to relate to it.

- ☑ What is the **perception** of stakeholders and policy-makers of the potential costs (monetary and social)? Do they reflect a measurable cost-benefit analysis? Are there alternative analyses (other calculations or controversy on this issue)?

- ☑ **How costly** is the financing of **actions** likely to be?

☞ **Timing**

- ☑ Can you identify **long-term/strategic** and **short-term/operative** solutions?

It is essential to outline practical actions and their implications and to produce useful evidence that answers emerging policy questions. Try to sketch justified estimates regarding lives or monetary values, bring forward health arguments that assert particular benefits or harms, effects for specific individuals or groups, costs associated with policy inaction etc. Timing is also relevant for policy-makers for reasons of often limited mandates.

- ☑ **Where exactly** could your results help **in the policy-making process**?

It is important to double-check the context in which your research is set and compare it with the first examination of the situation (policy agenda setting, policy formulation, policy implementation, policy evaluation) at the beginning of the research. It is now time to opt for the best communication strategy including recommendations.

- Did you make statements about the **urgency** of the problem?

☞ Increase credibility

- How can you reduce the chance that stakeholders might argue that you have a **vested interest** in the outcome?
- Did you state the **funding source(s)** of your research?

While many officials consider the funding source for a study to be an important evaluative factor, few research databases routinely provide this information.

- Were you fully honest about underlying assumptions used in models and other methodologies, i.e. **not "selling"** outcomes and predictions as certain?
- Did you **point out weaknesses** to increase credibility?

☞ Usefulness of results

- Did you include some of the following **information**:
 - Types of consequence(s) plus timing of the impact(s)
 - Area and number of people affected/ Size of the problem
 - Consequences of action and inaction
 - Solutions and/or specific actions

-
- Can you formulate **guidelines** for local policy-makers?

The local level is often the most relevant in terms of prevention strategies and it is commonly responsible for health protection. Tailored scientific guidelines facilitate policy actions.

3 Communication strategy

☛ Targeted strategy for stakeholders

- ☑ Did you design a targeted, efficient and detailed **dissemination plan** from the start of the project that involves stakeholders?

Usually, a classical dissemination model, where researchers disseminate their research and encourage its application is used. For policy-oriented research, a more efficient approach is required respecting the needs of policy-makers. Communication tools adapted to the target community should be implemented (such as the dissemination of a 2-page policy-brief).

- ☑ Did you set up from the start a **separate budget line** dedicated to dissemination activities?

- ☑ Did you inform **policy-makers before the media and other stakeholders**?

- ☑ Is there a way to **institutionalise** collaborative relationships?

The lack of collaborative relationships was clearly identified as a barrier to the knowledge transfer process in our study. This should not be seen as becoming or acting as a lobbyist. Developing institutionalised collaborative relationships with policy-makers and the most important stakeholders must be seen as an opportunity for science to be better informed on the policy processes and on the needs to produce results useful for policy-making. It is also an opportunity for policy-makers to be "exposed" to science. It will help researchers to produce useful results and ensure that the stakeholders' needs are met (researchers' needs included).

Were you able to **evaluate** your communication strategy?

Unpredictable factors might strike at any time. This means that a communication and dissemination plan should evolve with the situation. It has to be monitored, planned and quickly changed if it does not seem to be efficient. However, an evaluation of the communication strategy at the end of a project is equally important.

Can you enhance the **role of knowledge brokers**?

Knowledge brokers are individuals or organisations who encourage and enhance knowledge transfer. They include administrative authorities, interfaces of recognised research institutes and universities, influence groups (lobbyist groups), media, professional bodies, project coordinators and project funders. Could the roles of knowledge brokers, their responsibilities and inputs throughout the process be defined? Nearly half of the knowledge brokers of our questionnaire stated that cooperation with researchers for elaborating policy implementation is inefficient.

Is it possible to organise **bridging programmes or events, face-to-face encounters or workshops** with policy-makers?

Nearly 60% of the policy-makers questioned by ERA-ENVHEALTH identified this kind of communication as the most efficient tool.

Is it possible to create an **incentive structure** for decision-makers to encourage their participation?

E.g.: Could you be available for expert discussions or presentations if the policy process demands it?

Do you have a **web interface**?

Our studies showed that a project website is a major information tool for policy-makers and knowledge brokers.

 Is your website designed in a way that allows policy-makers to find quickly the **information** relevant and **targeted to them**? Is it possible to produce **"camera ready content"** with the results?

The "camera ready content" step aims to clarify media preparedness. A checklist is useful when there is a need to build a rapid response to relevant media opportunities, but can also be used when communicating with policy-makers. A media ready checklist includes questions on organisational assessment (e.g.: Does your organisation have a media strategy?), organisational infrastructure (e.g.: Do you have a staff person who is responsible for carrying out the media plan and coordinating all the media efforts in your organisation? Do you have a planning calendar of key political events? Has your organisation identified its primary, formal spokespersons?), media system (e.g.: Are your media lists up-to-date?), etc.²

 How can you present results as especially **"news-worthy"**? Did you produce a **press release** and/or organise a press conference? What strategies do you have in place to **keep the interest** in the subject high?

² Hovland, Ingie (2005): Successful Communication: A toolkit for Researchers and Civil Society Organisations, Rapid Research and Policy Development: p.45.

Often it is only possible to get the attention of the media, the general public and policy-makers during and immediately after emergency periods. Therefore, you should maintain regular relationships with media representatives, constantly update them about your issue or related topics, involve other relevant people to support (all or specific) recommendations and/or actions as well as identify actions to raise attention.

- What **mediators/facilitators** could help your cause and might also be informed of the research results?
- Is there a **peer-to-peer network** that could help your message to be heard?
- Can you come up with a simple **slogan** or a catchy image to convey your message?

Experiences in risk communication have shown that easy-to-remember slogans work best even when the scientific background behind the slogan has long been forgotten.

☞ Language and layout

- Do you provide a **2-page executive summary** (and abstract) containing the important outcomes and recommendations which policy-makers preferably read?
- Did you use a **text layout** or a style of presentation that triggers interest?
- Is the vocabulary that is very specific to your field of expertise clearly explained? Are the findings "translated" into **plain language**?

☛ **Where to publish policy relevant results?**

There are two levels: publishing the actual data and results in a scientific journal versus publishing summaries of results and their implications in newsletters or reviews. Here we rather address the latter.

- Did you publish in journals or **publications that are user-friendly**?
- Did you **publish in journals read by ministers** and their state secretaries, and by relevant policy-makers?
- Is the presence of the issue in the **media** sufficient to raise the attention of policy-makers?

Are there any indicators that can give you an idea of the attention of policy-makers at the different levels (i.e. is it possible to define a number of media releases at the national level that would help raise the attention of Members of Parliament or modify policy agenda setting)?

☛ **Public perception of the problem**

Public concern as a policy interest

- Are the **people at risk** interested, informed, **supportive** or only concerned?

Interest and concern of people at risk are related to the quality and quantity of information and knowledge provided. Direct consultation is crucial. An in-depth study of the community is important to identify relevant mediators.

- ☑ Do **people at risk** consider they have a major **impact** through their personal actions and adjusted behaviour?

When you identify a problem try to show properly which sources are causing it instead of naming the one major source. People will be more likely to act if they believe that they possibly have an impact through their actions.

- ☑ Can you translate the problem of a specific or small part of population into an **issue of interest for all**? How can a "sense of community" be evoked?

To present the problem as being not only the problem of a small part of the population is a way to involve/commit all the population, to motivate to act upon the problem. The levers are rational (costs, future generations, ethical values, equity) and/or emotional (sense of duty, guilt, suffering people), and often depend on the context.

- ☑ Is the problem **perceived as a "luxury" problem**? If yes, with which arguments can you change that perception?

Several experiences demonstrate that some issues are perceived as not urgent, not important, not worth public funding in comparison with other closer or more tangible problems. To counter these perceptions, it is therefore important to translate a problem into measurable effects (health impacts of the problems, the costs of inaction, vulnerable people).

- ☑ How can you better **illustrate the need for action** regarding your issue?

- Can you facilitate the **self-identification of groups at risk** to put more pressure on policy-makers?

This can be done by interviewing affected communities, and possibly leaving open channels for maintaining communication (i.e. open but time-limited space on websites to provide ideas and make suggestions).

☞ Access to target groups

- Can you establish contact with high-level political representatives via **high ranking university/research institute representatives**?

Access to high-level officials in ministries can be facilitated by involving high ranking representatives in research institutions/universities (deans, vice-chancellors etc.).

- Did you intend to contact only policy-makers **who are directly involved** in the issue? Did you carefully choose your target group among policy-makers?
- Is the chosen **language** used to communicate results **adapted** to the target group?

☞ Long term communication strategy

- Can you build **partnerships** with like-minded scientists to create support for your ideas?

-
- Can you provide **on-going information**?

One crucial concern in scientific communication is to open a channel with the media, and to maintain a constant flow of information. It can help limit the negative effects of a certain kind (or type) of journalism based on sensationalism, and the discontinuous coverage of scientific issues.

- Do you have a comprehensive **dissemination list** for your fields of research?

- Can you think of a way that allows **establishing a sustained relationship** with policy-makers, independently from the frequent turnover in policy institutions?

4 Costs: Cost-benefit analysis

While it is virtually impossible to quantify all the potential costs and benefits in a timely manner, researchers should, however, strive to provide information that serves as a basis for such a calculation. In our study it was stated that the information mostly lacking in scientific publications are:

- total number of people affected
- total area affected by the problem
- concerned policy sectors
- time frame

The key problem is that costs and benefits often occur at different times and unequally impact different stakeholders.

- Can you give **ideas on how to be cost-efficient** when implementing actions?
- Can you **contribute to a proper cost-benefit analysis** by providing some of the following information, at least partly?
 - financial costs of action
 - financing duration of action
 - ideal source(s) of financing action
 - financial cost of inaction

- ☑ How else can you help to evaluate the **economic** dimension of action versus inaction?

- ☑ Is it possible to **link** the **social** dimension **with** the **economic** one?



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