

## EPA RESOURCE KIT: BRIDGING THE GAP BETWEEN SCIENCE AND POLICY

Resource 1 – BRIDGE: Tools for  
science-policy communication

## EPA RESEARCH Report Series No. 131

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## BRIDGE: Tools for science-policy communication

Planning tools

Networking and collaboration tools

Content creation tools

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EPA Research addresses the need for research in Ireland to inform policymakers and other stakeholders on a range of questions in relation to environmental protection. These reports are intended as contributions to the necessary debate on the protection of the environment.

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# **1. About BRIDGE**

## **What is BRIDGE?**

BRIDGE is the product of an EPA-funded research project designed to enhance and improve communication between policy makers, scientists and other stakeholders involved in discussions about environmental policy in Ireland. BRIDGE is a suite of tools in the form of exercises, techniques and resources designed to be used by all those who wish to engage productively with each other in order to integrate environmental science into environmental policy. The aim is to foster communication between these groups so that environmental research and expertise can be used to make better environmental policy. Though based on research in biodiversity, climate change and water policy sectors, the BRIDGE tools can be applied to all environmental policy sectors.

## **How can BRIDGE help integrate science into policy?**

A significant amount of time, money and intellectual effort is spent each year in Ireland on environmental science research. However, integrating the results of this research into policies to protect people and planet can be challenging. Part of the problem is that policy makers, scientists and other interested stakeholders often find it difficult to connect and understand one another. It is as if they are speaking different languages. The BRIDGE toolkit offers a suite of tools to aid translation and bridge that communication gap.

## **How was the BRIDGE toolkit designed?**

BRIDGE combines international good practice in science-policy communication with original research on science-policy communication. An essential feature of this toolkit is that it has been co-produced in collaboration with those working in environmental policy sectors in Ireland. BRIDGE engages with key issues of science-policy communication to ensure that it is practical, relevant and useful. The tools are designed to tackle barriers to good science-policy communication experienced by stakeholders, to address their communication needs and to work to the strengths of each key policy sectors. The constituent tools have been carefully chosen and adapted to allow researchers, policy makers and other stakeholders to optimise the planning, execution and evaluation of their science communication efforts. The idea is to provide a range of tools that can be combined by the user to suit their particular science-policy communication needs at a particular time.

## **How does BRIDGE work?**

BRIDGE has three main sections. The first section sets out the overarching principles of good science-policy communication and explains the main barriers that hinder good science-policy communication in environmental policy in Ireland. Grasping the concepts set out in this section is a prerequisite for successful use of the toolkit and users are advised to read these. The second section directs the user to the tools that are most appropriate for his or her communication needs. The third section contains the suite of tools. Step-by-step instructions

are given for each tool as well as tips, suggestions and further resources to help the user employ the tools proficiently in a short space of time.

## 2. About science-policy communication

### What is science-policy communication?

Science-policy communication is a positive two-way process which allows the exchange of knowledge and views between science researchers, policy makers and other interested stakeholders. Its principle function is to facilitate the integration of research findings into public policy and to inform researchers about the types of information required to make future policies.

### What is the science-policy communication interface?

The science-policy interface (SPI) describes the interaction and intersection between science, policy and interested stakeholders, particularly in relation to policy formulation and implementation and to research agendas.

### Who are the actors operating in the science-policy interface?

The actors operating in the science-policy interface are policy makers, scientists and those in-between such as non-governmental organisations (NGOs), media and so on. These actor groups are not mutually exclusive and often overlap, but can be broadly defined here. ***Policy-makers*** are those directly involved in policy decision making, such as politicians and government department officials. ***Scientists or researchers*** are those conducting environmental science research including university researchers, environmental consultancy or independent researchers, government and industry scientists as well as environmental non-governmental organisations (ENGOS). ***Intermediaries and knowledge brokers*** are those individuals or organisations who act as translators, conduits of information or facilitators of communication between scientists and policy makers. Intermediaries may include those operating within science or policy environments and whose jobs involve these tasks, such as policy analysts or researchers, communication consultants, science journalists, research communication officers as well as those operating outside of the science or policy environments, such as NGOs, business representatives and community organisations.



### **3. Good science-policy communication**

Recently, the need to develop and improve communication across the science-policy interface has been increasingly articulated in environmental science and policy discussions and fora. Consequently, a slew of papers and reports from academic researchers and science-policy practitioners have been produced, detailing a range of recommendations for making science-policy communication work. The advice from these diverse sources tends to focus on a number of basic principles for good science-policy communication. These are described here.

#### **Institutional support**

Science-policy communication must be considered a priority at the highest levels of the institutions involved, including government departments, government agencies, research funding bodies and research institutions. Science-policy communication requires resources, decisions and actions that are generally controlled by those in powerful positions within an organisation. Actions that institutions can take to facilitate the integration of environmental science into environmental policy include providing communication and policy training as continuing professional development (CPD) for actors in the science-policy interface or setting science-policy communication requirements for funding.

#### **Two-way flow of information**

Good science-policy communication consists of two-way positive communication between scientists, policy makers and intermediaries. While tools allowing one-way communication can form part of a successful science-policy strategy, on their own they are not enough. Science-policy communication is a network activity and investing in developing working relationships, whether formal or informal, between the various actors and interested parties, is an integral part of facilitating productive science-policy communication. Such relationships form the basis of fostering mutual understanding between the professional groups involved

#### **Involving research users in designing research**

Research findings are much more likely to be integrated into policy if the research is designed to address the needs of research users in the first place. Involving the correct policy makers and intermediaries in the design and planning of research agendas and projects from the beginning helps achieve this aim. Not only will the policy context and relevance of the research be clear from the start, but policy makers who have a personal investment in the research are much more likely to factor the findings into policy decisions.

## **Science-policy communication as a core research activity**

To be most effective, science-policy communication needs to occur throughout the research cycle rather than just being an add-on activity. Often the presentation of research results is conducted in the final stages of the project. However, treating science-policy communication as an on-going activity which occurs throughout the project increases the chances of successfully engaging decision makers and decision influencers, thereby making them more open to using the research findings in policy making.

## **Co-operation and mutual understanding**

Coming together with other stakeholders in the SPI should be approached in a spirit of co-operation. While there might be conflicts between the parties, those engaging in science-policy communication must work to understand the nature and work practices of the other groups. For example, policy makers need to understand that there cannot always be certainty and that they need to find ways to deal with scientific uncertainty within policy. Equally, scientists need to frame their communications in terms of what their findings mean for the research users, rather than leading with theoretical explanations.

## **Creating common vocabularies**

Reflecting on the language used in environmental policy discussions is crucial. Both scientists and policy makers have their own technical terms that may be either unintelligible or (perhaps even worse) be misunderstood by the ‘other’ group. Actors in the science-policy interface should work to produce sharply focused, plain language science-policy communications.

## **The role of intermediaries**

Intermediaries are key knowledge brokers within the SPI. They act as translators between scientists and policy makers. They normally have a good grasp of the working practices and communication needs of both communities. Intermediaries are often ideally situated to tend to the ‘social capital’ of science-policy collaboration, taking a central role in driving networks of scientists and policy makers and organising training or information events, such as seminars and workshops.

## **Science-policy communication and the public**

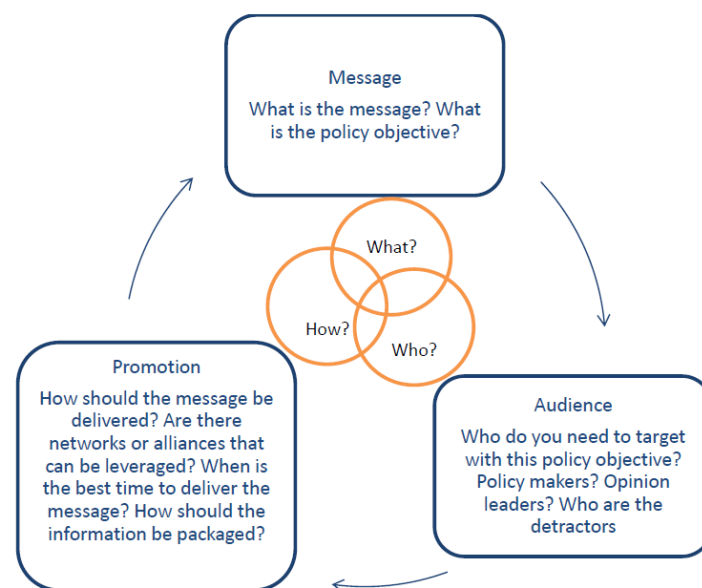
Policy making, particularly in democratic societies, does not exist in a vacuum. Public awareness creates public pressure, which in turn can be a powerful influencer of policy

decisions. Therefore, indirect communications between scientists and policy makers also deserves attention. Mass media, both traditional and digital, is a major source of information about environmental matters for the general public. While politicians and other policy makers generally have some experience with the media as well as professional press officers and public relations people at their disposal, scientists are generally not as media savvy. Preparing a press release or explaining a scientific concept or position in a print or broadcast interview are central aspects of participating in policy discussion and developing these skills is becoming increasingly important for scientists.

## Planning science-policy communication

As a dynamic and two-way process, science-policy communication requires evaluation and review so that adaption can take place as circumstances and contexts change. The science-policy communication planning cycle, shown in Figure 1 below, provides a good overview of the communication process and provides a basis for a comprehensive science-communication plan.

**Figure 1: The science-policy communication cycle**



Good science-policy communication is a cyclical, rather than a linear, process. It can be thought of as having three main components; the message (what?), the audience (who?) and the promotion of the message (how?). The first step is identifying how scientific evidence would affect or change a policy. This is the message. The second step is determining the audience for the message and step three involves the best ways to package and deliver the message. BRIDGE includes a version of this cycle as a tool to guide users through this planning process.

## **4. Environmental science-policy interfaces in Ireland**

The research work carried out while preparing to build this toolkit offers a number of useful insights into environmental science-policy interfaces in Ireland. This information helps us to understand the main barriers to environmental science-policy communication in Ireland as well as the roles, responsibilities and communication needs of the various actors involved. Understanding these dynamics will help users of this toolkit to pitch their communications more finely to the audiences within the SPI.

### **Roles and responsibilities of actors in the environmental SPI in Ireland**

Scientists, policy makers and intermediaries see themselves as having quite distinct roles and responsibilities in relation to science-policy communication. Scientists perceive their role to be the distillation of key issues for policy, helping to set the policy agenda, offering policy options and communicating scientific uncertainty to policy makers. Policy makers consider themselves as acting primarily as funders and directors of research. They also believe that it is their role to seek out the science on which policy decisions can be based. All these tasks fall under their high level responsibility to ensure the wellbeing of the citizenry. Policy makers say that the economic difficulties of the country mean that blue skies research has taken a back seat to policy-related research.

Intermediaries make up the most diverse of the three professional groups and so definitions of the science-communication roles and responsibilities for this group differ considerably. ENGOs tend to see their responsibility as translating environmental science to their target audiences including their own members, policy makers, and the general public and facilitating a two-way dialogue between science and policy. An ENGO may perceive itself as a policy platform, providing public education and promoting awareness of environmental issues to the public. Journalists view their responsibilities in the SPI as making environmental issues accessible to the public, accessing information from key people and changing the mind-sets of policy makers. Other intermediaries, such as science communication consultants see their roles as helping scientists build their communication skills and providing science data for policy implementation.

### **Barriers to science-policy communication in Ireland**

Those examining science-policy interactions in different parts of the world and in different policy sectors have found broadly similar challenges. These include differences in timeframes between policy cycles and research agendas, different vocabularies and different ways of working. Scientists think in terms of problems, while politicians want to know what works. Policy makers may not have the time or expertise to decipher scientific research findings, while scientists may not have the skills to impart their knowledge to a non-scientific audience. There may not be dedicated funding or support available to scientists to undertake

policy work and where they do take the time to engage in policy discussions, this is unlikely to be of value to their career. In addition to all these issues, different scientific disciplines may offer different advice to policy makers and policy makers find uncertainty, which is a common feature of environmental science, difficult to incorporate into legislation and policy.

The most important science-policy communication barriers mentioned by those operating in environmental SPIs in Ireland are given below. This is not an exhaustive list, of course, and it may well be that actors in environmental SPIs in Ireland will encounter barriers that are not specifically mentioned on this list.

- Unequal power to influence policy agendas between actors
- Lack of understanding of science (by others), in part because policy makers generally lack the time to read research findings and may not understand technical and scientific language, but also because access to scientific findings may be restricted.
- Lack of understanding of policy process (by others), related to this is that scientists often lack an awareness of what research areas or specific findings are policy relevant
- Research focus driven by economic agenda so that green growth dominates environmental research
- Lack of interaction between social and environmental science to take account of behavioural and socio-economic information in policy implementation
- Perceived decline of coverage of environmental issues in the media during the current period of financial crisis

Scientists involved in environmental science-policy discussions in Ireland often feel that vested interests often have more political sway than scientific evidence in policy decisions. In addition, policy making activity does little to enhance or progress academic career building. Both of these factors discourage scientists from being involved in policy making and so building trust between policy makers and scientists is crucial as it assures scientists that there is political will to integrate scientific findings into policy.

Policy makers require short, to-the-point accounts of environmental science presented in plain language. It is vital to them that they develop relationships with their science contacts as trust is an important issue for this group also. Policy makers would benefit from some basic training in scientific concepts and in building capacity in understanding academic papers. Policy makers are generally interested in the integration of social justice into environmental policy and would welcome increased consideration of social sciences in such discussions.

Being situated between scientists and policy makers, it's unsurprising that intermediaries' communication needs overlap with those of both scientists and policy makers. Like policy makers, they would benefit from plain language versions of research findings as well as access to academic journals and the skills to extract information from them. Similar to scientists, they are concerned about the power that vested interests seem to have in policy decisions and would like a deeper understanding of how the policy process works.

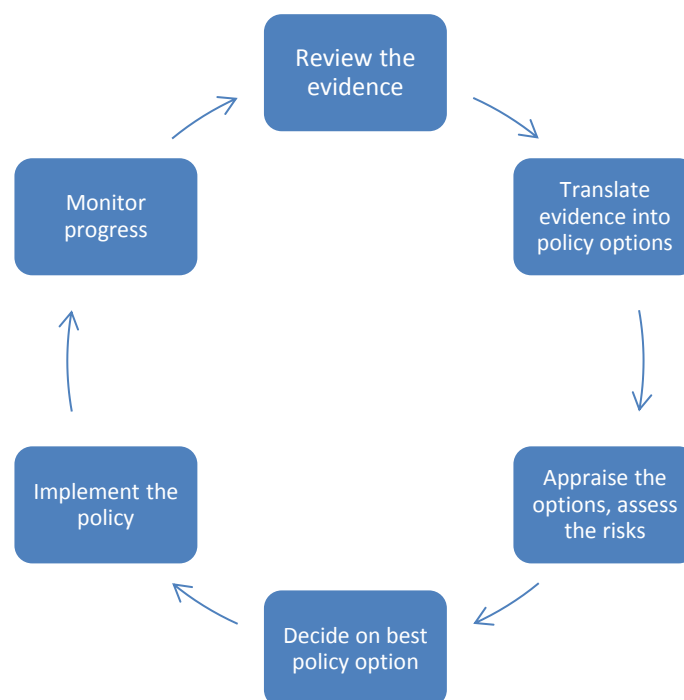
All groups find it difficult to access the ‘right’ person or people to connect with in relation to specific policy areas, so easier ways of finding and contacting each other is necessary for all actors in an SPI.

## 5. Policy making and science-policy communication

### The policy cycle and science-policy communication

The policy cycle can be broken into six main steps; reviewing the evidence, translating the evidence into policy options, assessing each option (including risk assessment), deciding on the final policy, implementing the policy (including legislation) and monitoring the impact of the policy (see Figure 2 below). In environmental science policy, environmental scientists may play a role in each of these cycle stages. However, the earlier scientists are involved in the process, the more likely it is that the relevant science will be integrated into the resultant policy. Such early involvement necessitates that the scientists and policy makers are already well integrated and fully aware of policy cycles and scientific practice activities.

Figure 2: The policy process (adapted from Clayton and Culshaw, 2009:5)

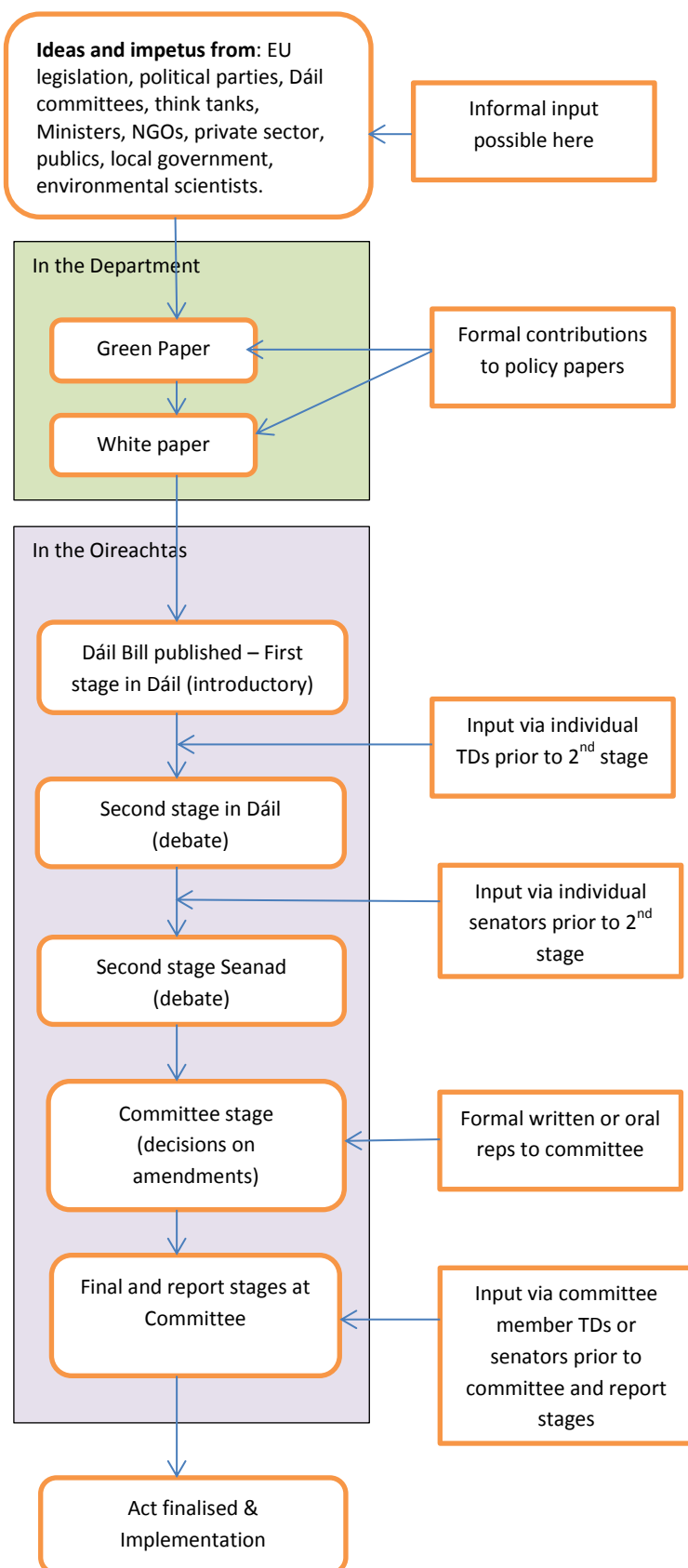


Throughout the policy development and implementation process there are specific points where communication between policy makers and scientists is appropriate and useful. There are multiple routes to making policy<sup>1</sup>. A quick guide to the process for national legislation is given here (see Figure 3 below).

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<sup>1</sup> For a more complete description of the Irish policy landscape please refer to the Policy Atlas in A Guide for Researchers carrying out Knowledge Transfer.

**Figure 3: Irish policy process stages and potential science input points**



### The Irish Policy Process

Legislation in Ireland goes through a number of stages. Policy papers are drawn up in government departments by officials. These are circulated widely for consultation purposes. Once these papers are finalised, a legislative bill will be prepared. The bill is introduced into the Dáil (the lower house of the Parliament) at the first stage. This is a short stage with no debate, instead the debate takes place at the second stage. Following the second stage all TDs will vote on the bill, and presuming the bill is voted through it will pass on to the Seanad (upper house of the parliament) where it is again debated and voted upon, after which it passes to the committee stage. The committee stage is less adversarial than the debate in the house and amendments, which have been submitted prior to the meeting, will be discussed and decided upon.

Dáil committees often request or grant permission to experts to address them on various issues. Following the committee stage the bill will be altered to reflect the amendments agreed and the report and final stages will take place at a meeting of the committee. It is possible for TDs and Senators sitting on the committee to bring further amendments to the committee at this point.



The most opportune times to influence legislation in this process is either in an informal capacity at the idea-gathering phase or formally when the green and white papers are being prepared in the department. Outside of these windows, there is less chance of shaping the policy to any great extent, although amendments to the legislation are possible at the Oireachtas committee stages via parliamentarians who are members of the relevant committee.

## 6. Using the BRIDGE tools

### The BRIDGE structure

BRIDGE is organised around three main science-policy communication activities:

- planning tools
- networking and collaboration tools
- content creation tools

Planning tools include tools for placing research findings in a policy context, identifying stakeholders related to a particular issue or the audience for a particular message and setting out a science-policy communication strategy. The BRIDGE tools for network-building include tools for initiating science-policy networks as well as tools for organising networking events and for promoting communication and cohesion within the network.

Networking and collaboration between the various stakeholders in SPIs is an important aspect of science-policy communication to get right. There are quite a number of factors separating scientists, policy makers and intermediaries including divergent work practices, time scales that do not synchronise well and priorities and goals that may clash. Consequently, creating common ground for these groups is an integral part of the BRIDGE product. This section contains tools for organising events, meetings and online communication resources.

Content creation tools include tools to initiate a science-policy discussion and two-way science-policy communication tools as well as a special media section designed for scientists and intermediaries.

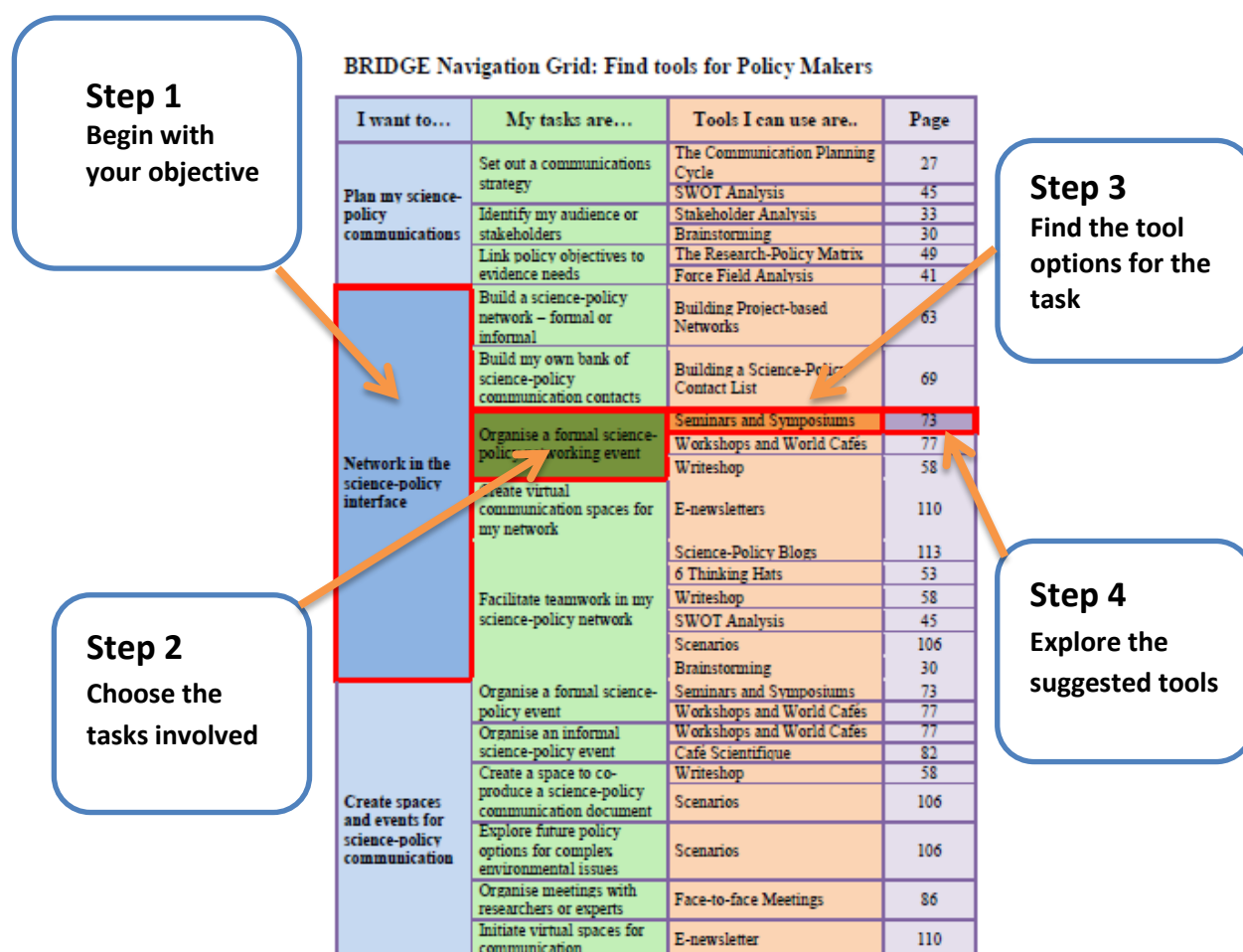
## Finding tools

Finding the appropriate BRIDGE tools to use for your SPI communication needs is quite simple using the BRIDGE navigation grid. Depending on the aim of your communication and the tasks you wish to complete, the BRIDGE navigation grid (see Figure 4 below) will direct you to the most suitable tools.

The grid is set out separately for scientists/researchers, policy makers and intermediaries to reflect the different roles and communication needs of each group. If you feel you could potentially be categorised in more than one group, just choose the one most aligned to your communication needs at that time. For instance, if you work for a NGO and wish to communicate about a piece of research you have completed, the *scientist/researcher* Navigation Grid might work better than the *intermediary* Navigation Grid in this case.

Figure 4: The BRIDGE Navigation Grid

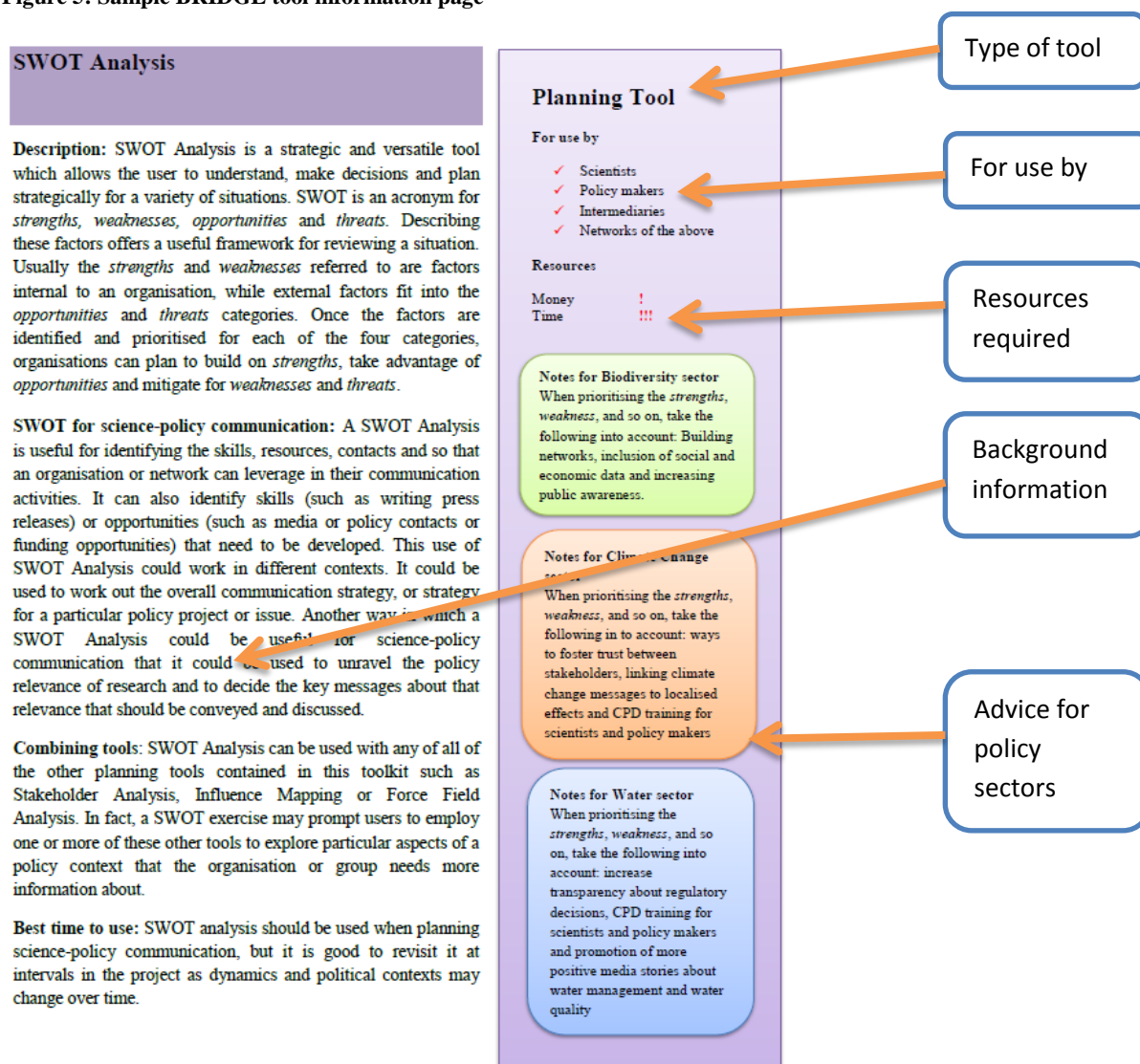
To use the BRIDGE Navigation Grid, just follow these four steps:



## Using the tools

Each BRIDGE tool is prefaced with an information page like the one shown here (see Figure 5). This provides a good deal of background information about using the tool in the environmental science-policy interface. Where necessary, specific suggestions and considerations for biodiversity, climate change and water sectors are provided. It is advisable to read this page carefully before proceeding to use the tool.

Figure 5: Sample BRIDGE tool information page



Instructions, tips and further resources are provided for each tool. Try to be clear about exactly how you want to use the tool and exactly what you need the tool to do before you use it as this will help you to get the best results. It is important to realise that, as with any new technique, these tools become easier to use and more beneficial as you build capacity in your ability to use them. Practice makes perfect!

## BRIDGE Navigation Grid: Find tools for Scientists/Researchers

I want to.....	My tasks are to....	Tools I can use are...	Page
Plan my science-policy communications	Set out a communications strategy	The Communication Planning Cycle	23
		SWOT Analysis	45
	Identify my audience or stakeholders	Stakeholder Analysis	33
		Brainstorming	30
		Influence Mapping	37
	Put my science message in a policy context	Influence Mapping	37
		The Research-Policy Matrix	49
	Force Field Analysis	41	
Network in the science-policy interface	Build a science-policy network – formal or informal	Building Project-Based Networks	63
	Build my own bank of science-policy communication contacts	Building a Science-Policy Contact List	69
	Organise a formal science-policy networking event	Seminars and Symposiums	73
		Workshops and World Cafés	77
		Writeshop	58
	Create virtual communication spaces for my network	E-newsletters	110
	Facilitate teamwork in my science-policy network	Science-Policy Blog	113
		6 Thinking Hats	53
		Writeshop	58
		SWOT Analysis	45
		Scenarios	106
Brainstorming		30	
Create spaces and events for science-policy communication	Organise a formal science-policy event	Seminars and Symposiums	73
		Workshops and World Cafés	77
	Organise an informal science-policy event	Workshops and World Cafés	77
		Café Scientifique	82
	Create a space to co-produce a science-policy communication document	Writeshop	58
		Scenario	106
	Organise meetings with policy makers	Face-to-face Meetings	86
	Initiate virtual spaces for communication	E-newsletter	110
Science-Policy Blog		113	

## BRIDGE Navigation Grid: Find tools for Scientists/Researchers (continued)

I want to.....	My tasks are to....	Tools I can use are..	Page
<b>Create Content and Communicate</b>	Write plain language accounts of my research	DIY SPI Thesaurus	89
	Contribute to formal legislative processes	Submission on a Green Paper	100
		Submission to an Oireachtas Committee	103
	Communicate my research findings to specific policy makers	Policy Brief	93
		Face-to-Face Meetings	86
		1:3:25 Report Format	97
	Communicate my research findings and expertise in an quick and easy format to policy makers	Policy Brief	93
		Video Shorts	116
		Science-Policy Blogs	113
		E-newsletter	110
		Café Scientifique	82
	Communicate complex future scenarios to policy makers	Scenarios	106
	Start a science-policy discussion	Policy Brief	93
		1:3:25 Report Format	97
		E-newsletter	110
		Science-Policy Blog	113
		Video Shorts	116
		Media Masterclass for Scientists	125
	Two-way science-policy communication	Face-to-face Meetings	86
		Café Scientifique	82
		Seminars and Symposiums	73
		Workshops and World Cafés	77
	Prepare a media article, press release or letter to the editor	Media Masterclass for Scientists	125
	Respond to a request for a media interview	Media Masterclass for Scientists	125

## BRIDGE Navigation Grid: Find tools for Policy Makers

I want to...	My tasks are...	Tools I can use are..	Page
<b>Plan my science-policy communications</b>	Set out a communications strategy	The Communication Planning Cycle	27
		SWOT Analysis	45
	Identify my audience or stakeholders	Stakeholder Analysis	33
		Brainstorming	30
	Link policy objectives to evidence needs	The Research-Policy Matrix	49
		Force Field Analysis	41
<b>Network in the science-policy interface</b>	Build a science-policy network – formal or informal	Building Project-based Networks	63
	Build my own bank of science-policy communication contacts	Building a Science-Policy Contact List	69
	Organise a formal science-policy networking event	Seminars and Symposiums	73
		Workshops and World Cafés	77
		Writeshop	58
	Create virtual communication spaces for my network	E-newsletters	110
	Facilitate teamwork in my science-policy network	Science-Policy Blogs	113
		6 Thinking Hats	53
		Writeshop	58
		SWOT Analysis	45
		Scenarios	106
		Brainstorming	30
<b>Create spaces and events for science-policy communication</b>	Organise a formal science-policy event	Seminars and Symposiums	73
		Workshops and World Cafés	77
	Organise an informal science-policy event	Workshops and World Cafés	77
		Café Scientifique	82
	Create a space to co-produce a science-policy communication document	Writeshop	58
		Scenarios	106
	Explore future policy options for complex environmental issues	Scenarios	106
	Organise meetings with researchers or experts	Face-to-Face Meetings	86
	Initiate virtual spaces for communication	E-newsletter	110

## BRIDGE Navigation Grid: Find tools for Policy Makers (continued)

I want to.....	My tasks are to....	Tools I can use are..	Page
Create Content and Communicate	Prepare accessible, plain language documents for those not directly involved in the policy or legislative process	DIY SPI Thesaurus	89
	Request informal input from experts; what formats should I ask for?	Policy Brief	93
		Face-to-Face Meetings	86
		1:3:25 Report Format	97
	To find out quickly if particular research is relevant to my policy work. What formats should I ask for	Policy Brief	93
		Video Shorts	116
		Science-Policy Blogs	113
		E-newsletter	110
		Café Scientifique	82
	Start a science-policy discussion	E-newsletter	110
	Foster two-way science-policy communication	Face-to-Face Meetings	86
		Café Scientifique	82
		Seminars and Symposiums	73
		Workshops and World Cafés	77
	Indicate to researchers the types of evidence needed for current and future policy decisions	Evidence-based Plans	119
	Communicate to researchers and other stakeholders the positive environmental outcomes of moving research into policy	Case Studies	122



## BRIDGE Navigation Grid: Find tools for Intermediaries

I want to.....	My tasks are to....	Tools I can use are..	Page
<b>Plan my science-policy communications</b>	Set out a communications strategy	The Communication Planning Cycle	23
		SWOT Analysis	45
	Identify my audience or stakeholders	Stakeholder Analysis	33
		Brainstorming	30
		Influence Mapping	37
	Put my science message in a policy context	Influence Mapping	37
		The Research Policy-Matrix	49
		Force Field Analysis	41
<b>Network in the science-policy interface</b>	Build a science-policy network – formal or informal	Building Project-based Networks	63
	Build my own bank of science-policy communication contacts	Building a Science-Policy Contact List	69
	Organise a formal science-policy networking event	Seminars and Symposiums	73
		Workshops and World Cafés	77
		Writeshop	58
	Create virtual communication spaces for my network	E-newsletters	110
	Facilitate teamwork in my science-policy network	Science-Policy Blogs	113
		6 Thinking Hats	53
		Writeshop	58
		SWOT Analysis	45
		Scenarios	106
		Brainstorming	30
<b>Create spaces and events for science-policy communication</b>	Organise a formal science-policy event	Seminars and Symposiums	73
		Workshops and World Cafés	77
	Organise an informal science-policy event	Workshops and World Cafés	77
		Café Scientifique	82
	Create a space to co-produce a science-policy communication document	Writeshop	58
		Scenario	106
	Organise meetings with policy makers	Face-to-Face Meetings	86
	Initiate virtual spaces for communication	E-newsletter	110
		Science-Policy Blog	113

## BRIDGE Navigation Grid: Find tools for Intermediaries (continued)

I want to.....	My tasks are to....	Tools I can use are..	Page
<b>Create Content and Communicate</b>	Write plain language accessible accounts of scientific evidence	DIY SPI Thesaurus	89
	Contribute to formal legislative processes	Submission on a Green Paper	100
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## The Science-policy Communications Planning Cycle (for researchers and intermediaries)

**Description:** This tool brings together the information gleaned from the other planning tools in this toolkit to form an overarching communication strategy. This tool requires the user to identify the audience (Who?), the policy message of the research (What?) and the promotion of that message (How?). An important feature of communication processes is that dynamics are constantly changing and these three elements (Who? What? How?) need to be constantly reviewed. This tool provides a simple structure to facilitate this

### The Planning Cycle for science-policy communication:

This tool is most useful for scientists and intermediary stakeholders who want to set out an overall communications plan or strategy for communication with policy makers. It can also be used to help researchers to think about the policy context of their work. It is a good idea to conduct this exercise periodically throughout a research project or policy process as people and political situations may change while scientific information is likely to increase. Any of these factors can cause the communication dynamic to change

**Combining tools:** This planning tool is most useful if the user has information from tools such as Stakeholder Analysis, Influence Mapping and Force Field Analysis to feed into this process.

**Best time to use:** This tool is particularly useful when reviewing the evidence for policy and during the implementation of the policy.

## Planning Tool

### For use by

- ✓ Scientists
- ✓ Intermediaries
- ✓ Networks

### Resources

Money !  
Time !

#### Notes for Biodiversity sector

Responsibility for the biodiversity sector falls between a number of government departments and bodies including Environment, Agriculture and the Parks and Wildlife Service, so include these in your audiences.

#### Notes for Climate Change sector

Responsibility for the climate change sector falls between a number of government departments and bodies including Environment, Energy, Transport and the SEAI. In addition there are many influencers in this sector from ENGOs to business organisations, so include these in your audiences.

#### Notes for Water sector

Responsibility for the water sector falls between a number of government departments and bodies including Environment, Agriculture, Natural Resources and Irish Water so include these in your audiences.

**You will need:** This exercise can be carried out by a single person if required. However, it works better with a small group. This tool can be used by larger groups if desired. A flip chart, pens and lots of thoughts and ideas are required for this toolkit

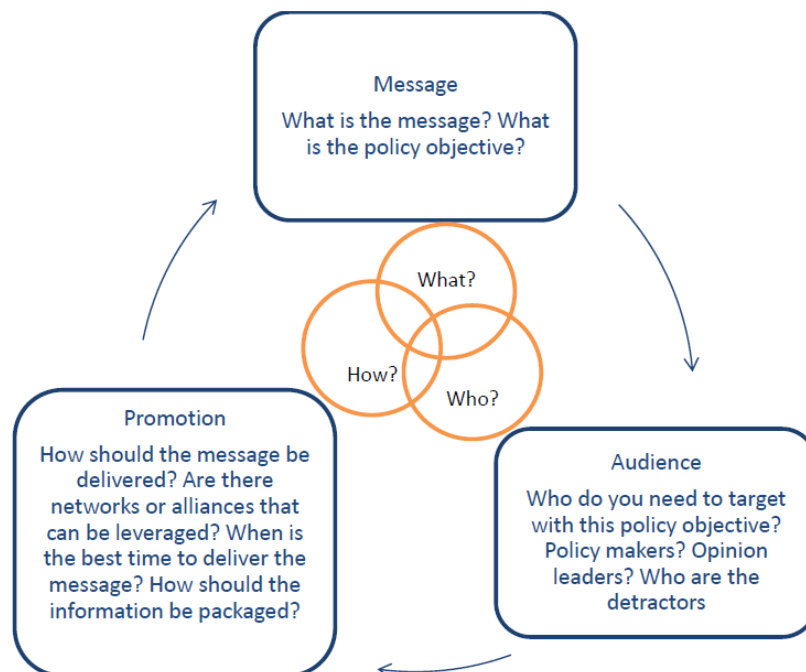
### Instructions for the Planning Cycle

The Planning Cycle is really a tool to help you think and plan. It has three main components. The message, the audience and the promotion that is, the best way to get the message to the audience (see Figure 6 below.)

Answering and noting down the answers to the following questions will help with the planning process:

1. What is the outcome of the research that should be of interest to policy makers? Write this in plain language.
2. What are the policy implications or area that the research relates to?

**Figure 6: The Planning Cycle (adapted from Start and Hovland, 2004: 21)<sup>2</sup>**



<sup>2</sup> Start, D. and Hovland, I. (2004) *Tools for policy impact*. Overseas Development Institute: London.

3. Who are the policy makers and decision makers who need to hear this message? Be as specific as possible (names, job titles and so on) (tools such as Stakeholder Analysis or SWOT Analysis will help here).
4. Who else influences the policy and who should hear this message? (Influence Mapping will help here).
5. Who might be the detractors in respect of this research being used for this purpose? What arguments are they likely to put forward? (Force Field Analysis will help here).
6. What messages need to be imparted to the policy makers and their influencers to counteract the arguments from detractors? (Force Field Analysis will help here).
7. How can alliances and networks be built and utilised to help communicate research knowledge to the people who need to hear it?
8. What content creation tools can be used to package and communicate the research knowledge and to begin a two-way conversation with the people identified in 3 and 4 above? (Browse the *Content creation* section of this toolkit for ideas).
9. Review all the questions above on a regular basis, as people and political contexts are likely to alter over time.
10. Evaluate your communications strategy frequently. This can be done quantitatively, qualitatively or a combination of both. Quantitative or numerical evaluation would include counting the numbers of outputs, the numbers of people reached, the number of press releases to make it into the media and so on. Qualitative evaluation could include the outcome of participant evaluation questionnaires from seminars or similar events.

### **Tips for the Planning Cycle**

- As the name of this tool suggests, this is not a linear process and frequent reviews of the messages and audiences should be undertaken.
- This tool could be used by just one person; however getting a small group of two to three people to go through these questions is likely to result in more ideas for the communication strategy.
- Once the strategy is finalised, it would be a good idea to set it out as action points and assign these action points to specific people in the group. This way, the work done in the planning is not lost.

## Resources for the Planning Cycle

For more information on the Planning Cycle see:

<http://www.odi.org.uk/publications/5696-planning-tools-audience-message>

For more advice on planning a communications strategy see:

<http://knowhownonprofit.org/campaigns/communications/effective-communications-1/communications-strategy>

To see a draft copy of the communications strategy of The Economics of Ecosystems and Biodiversity see:

[http://www.teebweb.org/wp-content/uploads/2013/05/TEEB\\_WW\\_CommunicationStrategy\\_070301-doc.doc](http://www.teebweb.org/wp-content/uploads/2013/05/TEEB_WW_CommunicationStrategy_070301-doc.doc)

For resources on evaluating communication strategies see the following:

<http://www.rcuk.ac.uk/documents/publications/evaluationguide.pdf>

[http://www.raeng.org.uk/societygov/public\\_engagement/ingenious/pdf/Evaluation\\_Guide.pdf](http://www.raeng.org.uk/societygov/public_engagement/ingenious/pdf/Evaluation_Guide.pdf)

<http://www.nsf.gov/pubs/2002/nsf02057/nsf02057.pdf>

## The Science-policy Communication Planning Cycle (for policy makers)

**Description:** This tool brings together the information gleaned from the other planning tools in this toolkit to form an overarching communication strategy. This tool requires the user to identify the audience (Who?), the policy message of the research (What?) and the promotion of that message (How?). An important feature of communication processes is that dynamics are constantly changing and these three elements (Who? What? How?) need to be constantly reviewed. This tool provides a simple structure to facilitate this

### The Planning Cycle for science-policy communication:

This tool is most useful for scientists and intermediary stakeholders who want to set out an overall communications plan or strategy for communication with policy makers. It can also be used to help researchers to think about the policy context of their work. It is a good idea to conduct this exercise periodically throughout a research project or policy process as people and political situations may change while scientific information is likely to increase. Any of these factors can cause the communication dynamic to change

**Combining tools:** This planning tool is most useful if the user has information from tools such as Stakeholder Analysis, Influence Mapping and Force Field Analysis to feed into this process.

**Best time to use:** This tool is particularly useful when reviewing the evidence.

## Planning Tool

### For use by

- ✓ Scientists
- ✓ Intermediaries
- ✓ Networks

### Resources

Money !  
Time !

### Notes for Biodiversity sector

Responsibility for the biodiversity sector falls between a number of government departments and bodies including Environment, Agriculture and the Parks and Wildlife Service, so include these in your audiences.

### Notes for Climate Change sector

Responsibility for the climate change sector falls between a number of government departments and bodies including Environment, Energy, Transport and the SEAI. In addition there are many influencers in this sector from ENGOs to business organisations, so include these in your audiences.



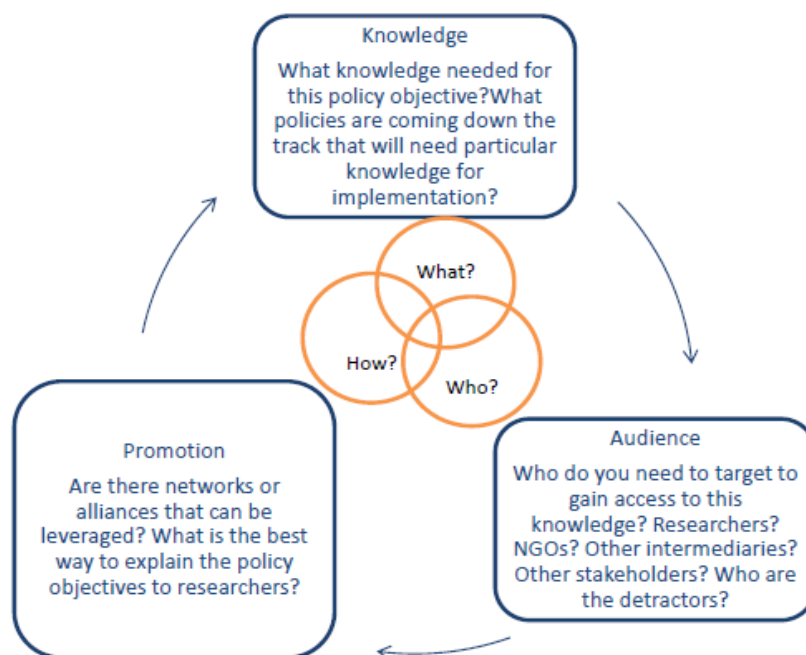
**You will need:** This exercise can be carried out by a single person if required, but works better with a small group. This tool can be used by larger groups if desired. A flip chart, pens and lots of thoughts and ideas are required for this toolkit.

### Instructions for the Planning Cycle for policy makers

The Planning Cycle is really a tool to help you think and plan. It has three main components. The message, the audience and the promotion that is, the best way to get the message to the audience (see Figure 7 below). Answering and noting down the answers to the following questions will help with the planning process

1. What is the environmental science information you need for the policy or issue you are concerned about?
2. What are the policy implications of that knowledge? What difference will that knowledge make to the policy?
3. How can alliances and networks be built and utilised to access the environmental information needed?

Figure 7: The Planning Cycle (adapted from Start and Hovland, 2004: 21)<sup>3</sup>



<sup>3</sup> Start, D. and Hovland, I. (2004) *Tools for policy impact*. Overseas Development Institute: London.

4. Who are the leading researchers working in this area? Be as specific as possible (names, job titles and so on) (use web searches, lists of participants from environmental policy conferences and other events, snowballing techniques where others suggest suitable researchers).
5. Are there other stakeholders who need to be involved in this discussion? (from Influence Mapping).
6. Who might be the detractors in respect of this research being used for this purpose? What arguments they are likely to put forward? (from Force Field Analysis)
7. What communication tools can be used to begin a two-way conversation with the people identified in 4 and 5 above?
8. What communication tools can be used to begin a two-way conversation with the people identified in 6 above, if required?
9. Review all the questions above on a regular basis, as people and political contexts are likely to alter over time.

### **Tips for the Planning Cycle**

- As the name of this tool suggests, this is not a linear process and frequent reviews of the messages and audiences should be undertaken.
- This tool could be used by just one person; however getting a small group of two to three people to go through these questions is likely to result in more ideas for the communication strategy.
- Once the strategy is finalised, it would be a good idea to set it out as action points and assign these action points to specific people in the group. This way, the work done in the planning is not lost.

### **Resources for the Planning Cycle**

For more information on the Planning Cycle see:

<http://www.odi.org.uk/publications/5696-planning-tools-audience-message>

To see a draft copy of the communications strategy of The Economics of Ecosystems and Biodiversity see:

[http://www.teebweb.org/wp-content/uploads/2013/05/TEEB\\_WW\\_CommunicationStrategy\\_070301-doc.doc](http://www.teebweb.org/wp-content/uploads/2013/05/TEEB_WW_CommunicationStrategy_070301-doc.doc)

## Brainstorming

**Description:** Brainstorming is a problem solving technique based on open, creative and lateral thinking. Brainstorming attempts to bypass unhelpful group behaviour, overly structured thinking and the sorts of criticism that close down innovative thinking. The approach is to work towards having quantity rather than quality of ideas. Judgement is withheld and ideas are built on. The final phase of a Brainstorm prioritises the outcomes of the exercise. Brainstorming is used in many of the tools in this toolkit and so instructions for the process are given here. It is also a tool in its own right. Whereas Brainstorming is generally thought of as a group exercise, and indeed is frequently used as such, it can also be used by individuals. There are a number of Brainstorming techniques and the method described here is quite a simple technique. However, there are a number of rules that must be followed to get the best out of this tool.

**Useful for:** Brainstorming is useful for generating ideas and building on ideas. It works well in problem solving especially where different agendas are at play and it can help where groups or individuals feel stuck in a particular problem or way of thinking.

**Combining tools:** Brainstorming is central to a number of planning and collaboration science-policy communication tools in this toolkit. For example, Stakeholder Analysis, Influence Mapping and Building Lists of science-policy contacts all begin with Brainstorming. It can also be used on its own to generate ideas. It is a versatile tool that can be used in groups or by individuals.

**Best time to use:** Anytime during the policy cycle or research process.

## Planning tool

### For use by

- ✓ Scientists
- ✓ Policy makers
- ✓ Intermediaries
- ✓ Research funding bodies
- ✓ Networks

### Resources

Money	!
Time	!

**You will need:** Brainstorming rules, flip-chart or a large sheet of paper, post-its, marker pens.

### **Instructions for Brainstorming**

1. Before organising the Brainstorming session, prepare by setting out the questions in a clear fashion. Aim for no more than three questions.
2. If using a group Brainstorm, include a balanced mix of researchers, policy makers and other stakeholders. The more diverse the group, the better the process will work.
3. Use a group of between five and eight people and ensure that the room atmosphere and layout is comfortable.
4. If the members of the group are not used to working together or do not know each other, try using an icebreaker to ease the group into the Brainstorming session. This might be an ‘easy’ question related to the topic being discussed (for example “Where does science-policy communication fit into your job?”).
5. Go through the Brainstorming rules with the group. These are:
  - Focus is on quantity of ideas, not quality
  - Participants contribute all ideas they think of, no matter how outlandish they may think they are
  - Participants build on each other’s ideas
  - Judgement is withheld so that neither praise nor criticism is offered on ideas
  - Condensing and categorisation of points happens at the end of the Brainstorming session
6. Explain the first Brainstorming question clearly to the group. Make sure everyone is clear on what is being asked of them.
7. Write ideas on the flipchart, or ask the participants to write them on post-its and place them on the flip chart so that everyone can see all the ideas.
8. If possible, group ideas on the flipchart. Post-its are convenient in that they make this sort of grouping easy. Another alternative is to use a mind map to organise the ideas as they are received and built upon.
9. Ensure that the Brainstorm is tightly facilitated and that the rules are followed. Encourage quieter participants to speak and (nicely) rein in dominant participants if necessary.

10. At the end of brainstorming the first question, get the group to prioritise the ideas – this can be done by simply voting on the ideas or by agreeing a top three or five, for instance.
11. Once the first question is complete, move on to the second question and repeat steps 6 to 9.
12. When all the Brainstorming questions have been answered and the outcome prioritised, make appropriate action points and agree and allocate responsibility for these with the group.

### **Tips for Brainstorming**

- If Brainstorming as an individual, choose a comfortable place to conduct the Brainstorm, minimise distractions so that you can focus on the issue and use a mind map to organise all the ideas and thoughts generated.
- Individual and group Brainstorming can be combined. To do this, each participant generates a swathe of ideas by themselves and then brings these to the group. The group builds on these ideas. This approach marries the best elements of individual and group brainstorming together.

### **Resources for Brainstorming**

For more information and ideas about brainstorming see the following web sites:

<http://www.mindtools.com/brainstm.html>

<http://www.isixsigma.com/tools-templates/brainstorming/brainstorming-rules/>

<http://www.openideo.com/fieldnotes/openideo-team-notes/seven-tips-on-better-brainstorming>

To see the result of a brainstorm on scientists connecting with policy makers on climate change follow this link:

<http://www.climatecommunication.org/wp-content/uploads/2011/07/Communicating-with-Congress-low-res1.jpeg>

## Stakeholder Analysis

**Description:** Stakeholders are those who have an interest or influence in a process or a new project. Generally they have something to lose or to gain in relation to the process or project. They may be capable of blocking it or aiding it. Stakeholder Analysis is a tool that allows the user to identify stakeholders, classify them with regards to interest and influence and prioritise them.

**Useful for:** Stakeholder Analysis is a versatile tool that can be used in the science-policy interface at the outset of a research project or policy cycle to pinpoint the interested parties, helping to place research and data in a policy context. It can also be used to plan communications programmes throughout a research project, prioritising the groups and individuals who need most attention. Stakeholder Analysis is a great first step in building a science-policy network.

**Combining tools:** For establishing policy context, Stakeholder Analysis can be combined with tools such Influence Mapping or Force Field Analysis. In addition, Stakeholder Analysis can be used with Policy Influencing Cycle or SWOT Analysis when planning science-policy communications. Brainstorming can be used along with this tool.

**Best time to use:** The best time to use Stakeholder Analysis is at the beginning of a policy cycle. It is also useful when appraising policy options or monitoring the progress of the policy impacts. As stakeholders and personnel may change as legislation or the implementation of legislation progresses, it is a good idea to revisit this tool at various times during the research and policy cycles.

## Planning Tool

### For use by

- ✓ Scientists
- ✓ Policy makers
- ✓ Intermediaries
- ✓ Networks of the above

### Resources

Money                   !  
Time                   !!

### Notes for Biodiversity sector:

Consider including an environmental economist when identifying stakeholders so that the economic benefits of protecting ecosystem services can be taken into account and communicated

### Notes for Water sector:

Consider including an environmental economist when identifying stakeholders as water charge proposals mean that financial considerations will play a big part in communications in this sector

**You will need:** About six people, try to include scientists, policy makers and intermediaries, if possible, for different perspectives. Pens and paper. See the Stakeholder Analysis template in the Appendix of this document.

## Instructions

1. Define the policy proposal or research goals being considered to ensure that everyone in the group is clear about this before they begin to suggest possible interested parties
2. Using Figure 8 below as a guide, construct a similar grid by conducting a Brainstorm about who the relevant stakeholders might be.

**Figure 8: Stakeholder Analysis brainstorm grid**

Scientists	Policy makers	Intermediaries
<ul style="list-style-type: none"> <li>• Research scientists in different disciplines in the area</li> <li>• Research funding bodies</li> <li>• Government scientists (involved in monitoring, research and so on) e.g. local authority scientists, EPA scientists</li> <li>• Environmental economists</li> <li>• Social scientists</li> </ul>	<ul style="list-style-type: none"> <li>• Ministers responsible for the policy area</li> <li>• TDs sitting on a relevant Dáil Committee or from a relevant constituency</li> <li>• Other TDs</li> <li>• Local Authority politicians</li> <li>• Senior officials from relevant departments</li> <li>• Local Authority officials</li> <li>• Government agency officials</li> <li>• Department advisors</li> <li>• Parliamentary assistants</li> </ul>	<ul style="list-style-type: none"> <li>• Media</li> <li>• ENGOS</li> <li>• International NGOs</li> <li>• Other relevant NGOs (e.g. Age Action)</li> <li>• Business organisations</li> <li>• Farming organisations</li> <li>• Representative bodies from other sectors</li> <li>• Local residents' associations, local environmental groups, if appropriate</li> </ul>

3. To conduct the Brainstorm, one member of the group needs to lead and take notes. All members of the group contribute ideas about who they believe to be stakeholders. Normal Brainstorming rules apply. That is, all ideas are valid, criticism of ideas is withheld and the aim is to get as many ideas as possible. The time needed for this task depends on the process or project being discussed, but 10 to 15 minutes is a good guide.
4. Once the Brainstorming grid is complete, the stakeholders are prioritised according to both their influence over the decisions involved in the process or project and by their probable interest in it (including the extent to which they may lose or gain). Using Figure 9 below, the stakeholders identified in Step 3 are arranged into their appropriate categories.

**Figure 9: Stakeholder Analysis prioritisation grid**

<b>High Influence/Low Interest</b> Aim to keep these stakeholders satisfied. Inform them, but try not to bore them	<b>High Influence/ High Interest</b> Aim for close engagement with these stakeholders
<b>Low Influence/Low Interest</b> Monitor this group, in case any issues arise, but do not spend excessive time or effort on them. Concentrate on the other groups.	<b>Low Influence/High Interest</b> Aim to keep these stakeholders informed. These stakeholders will often provide you with important information for the project or process, so listen to them.

5. Where many of the stakeholders are organisations or institutions, it is advisable to identify the appropriate people within those organisations with whom to communicate.
6. At this stage, it is possible to analyse the stakeholders further by thinking about issues such as:
  - Type of information they require
  - Concerns they may have
  - Motivations they might have – e.g. ENGOs may have very different motivations to businesses for instance
  - Pressures or constraints they may be under
  - The likelihood of their supporting or opposing the process or project
  - Level of their understanding of science/policy
  - People the stakeholders may influence and whether these become stakeholders in their own right
7. Use the issues mentioned above to decide on the level and type of engagement that might be appropriate for each stakeholder, the messages that need to be developed for and communicated to each stakeholder and how best to include each stakeholder in two-way communication methods.

### **Tips for Stakeholder Analysis**

Don't be tempted to skip the Brainstorming stage when starting this tool, while it takes a bit of time and effort, it does pay dividends. While the tool could be used by one person, getting a group of people to work on it will give a range of perspectives which is likely to minimise the possibility of omitting stakeholders.



## Resources for Stakeholder Analysis

For more tips and advice on conducting a Stakeholder Analysis see Mindtools.com

[http://www.mindtools.com/pages/article/newPPM\\_07.htm](http://www.mindtools.com/pages/article/newPPM_07.htm)

For an example of a Stakeholder Analysis for water management see the following

[http://www.integrated-assessment.eu/guidebook/defining\\_stakeholders\\_example\\_water](http://www.integrated-assessment.eu/guidebook/defining_stakeholders_example_water)

For a more in-depth look at Stakeholder Analysis used in natural resources management, see the following academic paper:

Reed et al. (2009). Who's in and why? A typology of stakeholder analysis methods for natural resource management. *Journal of Environmental Management* 90, 1933-1949.

<http://sustainable-learning.org/wp-content/uploads/2012/01/Who%E2%80%99s-in-and-why-A-typology-of-stakeholder-analysis-methods-for-natural-resource-management.pdf>

## Influence Mapping

**Description:** Influence Mapping is a tool that allows users to ascertain which stakeholders make decisions, which stakeholders influence decision makers and how influential the stakeholders are relative to each other. Decision makers often have a slew of advisors and individuals and groups on whom they rely for information. Using the tool creates a visual representation of these power and influence relationships. Influence Mapping follows on quite naturally from Stakeholder Analysis.

**Useful for:** When planning science-policy communication, Influence Mapping can be used to map decision making and influence in respect of individual policies or entire policy agendas. It works particularly well when used by networks made up of a range of organisations. It can aid the identification of communication channels (direct or indirect) with decision makers who are difficult to access. It can also be used to prioritise stakeholders and rationalise resources where there are many stakeholders to engage. Influence Mapping also helps to place research in a policy context by identifying stakeholders and their motivations that will either help or hinder the adoption of research findings into policy.

**Combining tools:** Influence Mapping builds on Stakeholder Analysis, it also complements Force Field Analysis. Brainstorming can be used with this tool.

**Best time to use:** When a significant change in policy is being considered or when reviewing the evidence.

## Planning Tool

### For use by

- ✓ Scientists
- ✓ Policy makers
- ✓ Intermediaries
- ✓ Networks of the above

### Resources

Money                   !  
Time                   !!

#### Notes for Biodiversity sector

When using this tool in a Biodiversity SPI, concentrate on ways that influence can be leveraged to help organisations in the sector lobby decision-makers and counter act the power imbalance in the sector. For example, scientists might want to target business sectors such as eco-tourism and fisheries with their communications.

This sector connects to a range of government departments and agencies, be careful not to leave any out.

#### Notes for Water sector

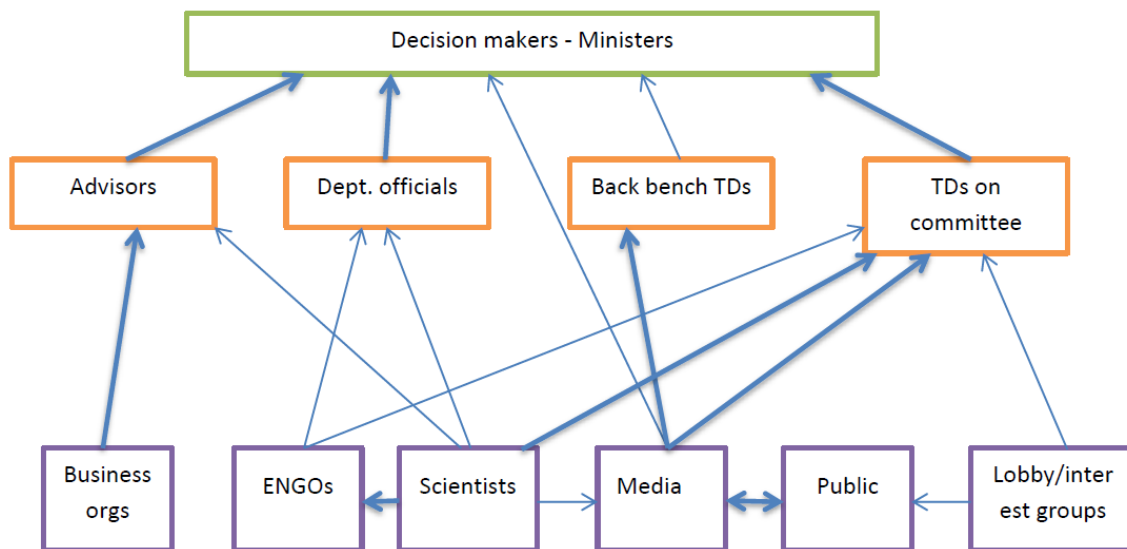
When using for a Water SPI, do factor in Irish Water as an influencer.

**You will need:** About six people, try to include scientists and intermediaries and, if possible, policy makers for different perspectives. Pens (different colours would be good) and large sheets of paper. See the Influence Mapping template in the Appendix at the end of this document.

### **Instructions for Influence Mapping**

1. Define the policy goal or policy change being focused upon. Ensure that all members of the group are clear on this.
2. Using either a Stakeholder Analysis exercise or Brainstorming, prepare a list of the stakeholders relevant to the policy area or research area.
3. From the list of stakeholders, identify the following:
  - the policy decision makers
  - individuals or groups who lead the opinions of the policy decision makers
  - individuals, groups or sectors who influence opinion leaders and/or decision makers
4. Where possible, try to actually include the names of relevant contacts (either names of the individuals or names of contacts within organisations) and other information such as their background, scientific area (if any) and so on.
5. Map the influence relationships between the different stakeholders. Use heavier lines where the influence is particularly strong (see Figure 10 below as an example). Influence can be in one direction or might be mutual, which can be indicated by a double-sided arrow.
6. Use the resulting map of power and influence to plan and prioritise science-policy communication.
7. The Influence Mapping diagram you prepare will also help to identify the factors and actors that could potentially compete with or support the integration of environmental science evidence into policy. If using this exercise to consider a controversial issue, it might be a good idea to make two maps. The first could look at influencers who may be persuaded to agree with the point of view the user wishes to promote and these organisations and individuals could be targeted for support. The second could map out organisations and individuals who may oppose the views of the user and this could be used to consider how to mitigate for these influences on the decision.

**Figure 10: Influence mapping**



8. Actions points that might follow from this exercise include the following:

- Choose the most efficient routes to influencing the decision- makers.
- List the names of the individuals and organisations to be targeted for communication.
- Use the BRIDGE Navigation Table or simply browse BRIDGE to decide on the types of content that should be produced or communication method to be used in order to connect with each individual or organisation listed above.

### **Tips for Influence Mapping**

- This tool is best used as a collaborative tool, however it can be used by an individual provided that person is knowledgeable and well-informed about the actors in the relevant science-policy interface.
- Power and influence relationships change over time and this is a good tool to use periodically throughout a long research project or policy making process
- Influence Mapping can also be used to map out power and influence relationships as they may potentially happen in the future.
- The diagram template used here to map power and influence relationships is just one way of creating the map. Other methods use a pyramid shape template with power represented as the apex of the pyramid and actors represented as different-sized circles signifying the numbers of individuals involved. The more influential the actor, the closer they are to the apex.

## Resources for Influence Mapping

For more tips and advice on using Influence Mapping to understand the policy context of research see the following resources:

<http://www.odi.org.uk/publications/5697-influence-mapping-stakeholder-analysis>

[http://www.mindtools.com/pages/article/newPPM\\_83.htm](http://www.mindtools.com/pages/article/newPPM_83.htm)

For an alternative Influence Mapping template see:

<http://www.policy-powertools.org>

For an example of Influence Mapping being used as a tool for mapping political influence in climate change adaption policies and action, see this example from the Consultative Group on International Agricultural Research (CGIAR):

<http://ccafs.cgiar.org/node/164>

## Force Field Analysis

**Description:** New projects, policies and legislation or proposed changes in environmental law often give rise to complex debates with many different arguments for and against the new proposal. Force Field Analysis is a tool that helps the user to set out and analyse forces that support or create resistance to a new project or to a change of some sort. Factors such as resources, costs and knowledge are also taken into account as negative or positive forces. The idea is that the positives can be strengthened and the negatives weakened or mitigated so that there is a more successful outcome for the change or project proposed.

**Useful for:** Force Field Analysis helps the science-policy communication process and at the same time places environmental science in a policy context, which helps stakeholders to see the policy relevance of research findings. Setting out the forces for and against a policy proposal can help when explaining and communicating decisions made about the proposal. Also, examining the forces and arguments against a proposal can help to pinpoint essential topics and content for science communication within the policy discussion, and identify further research that may be necessary.

**Combining tools:** Force Field Analysis differs from Stakeholder Analysis and Influence Mapping in that it looks at stakeholders' central arguments rather than at the stakeholders themselves. Used in conjunction with either or both of these tools, Force Field Analysis is a powerful planning tool for science-policy communication. To ensure that a comprehensive range of issues are explored, it would be a good idea to use the 6 Thinking Hats tool to scope different aspects of the topic under consideration. Brainstorming might also be helpful with this tool.

**Best used when:** This tool is particularly useful when reviewing the evidence, deciding on the best policy options and monitoring the impacts of a policy.

## Planning Tool

### For use by:

- ✓ Policy makers
- ✓ Intermediaries
- ✓ Networks of scientists, policy makers and intermediaries

### Resources

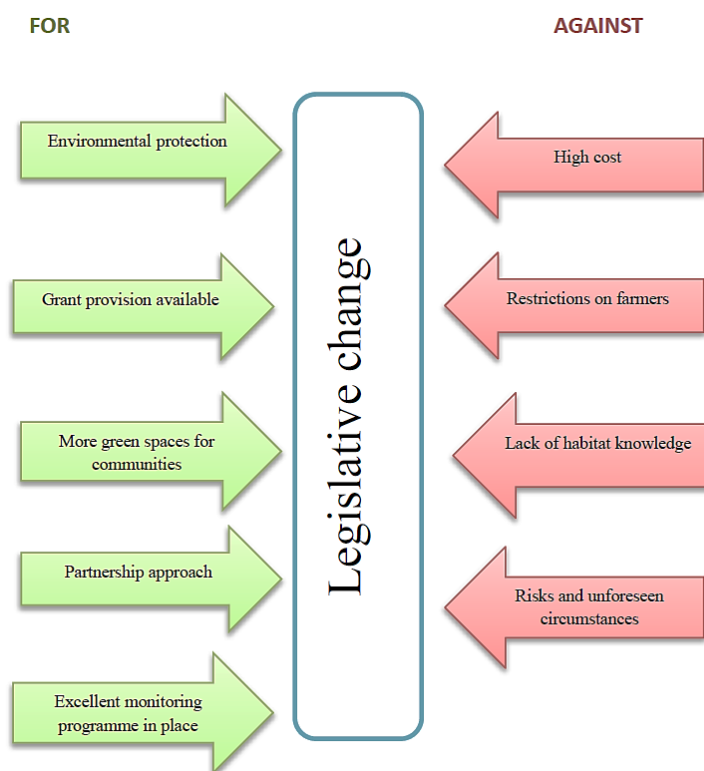
Money	!
Time	!!

**You will need:** A group of about six to eight people (including one to facilitate), an overhead projector or flipchart so that everyone can easily see the progression of the exercise, and pens. See the Force Field Analysis template in the Appendix of this document.

### Instructions for Force Field Analysis

1. Write the change or new project/legislation in the middle of the page as shown in Figure 11 below.
2. The group works to list all the supporting factors and arguments in favour of it on the left-hand side.
3. The group works to list all the restrictions, pressures or arguments against on the right-hand side.

**Figure 11: Force Field Analysis example for conservation policy**



4. Use the Brainstorming tool here to scope the range of views on all sides of the controversy.

5. Use the following questions to help ensure that as many factors as possible are captured:
  - Is there a formal partnership and/or enough co-operation between stakeholders to carry the legislation through?
  - How big are the financial costs of implementing/not implementing the change?
  - What are the advantages and disadvantages of this change to society/locality/community/citizenry?
  - How much knowledge and understanding is there about the issue among the different stakeholders and is there a lack of scientific knowledge about any aspect of the issue?
  - What are the possible risks for different stakeholders or the environment if this route is followed?
  - Is the relevant technology available to implement this change?
  - What political pressures will impact on implementing/not implementing this change?
6. At this stage, the group can go through the negative and positive factors and plan where communications should be concentrated, which scientific information needs to be prioritised (e.g. health, habitat, species, climate, flood risk).
7. The relative pressure exerted by each factor can be indicated by using a scale (for example, from 1 to 5) so that the factors can be prioritised if necessary.
8. If it is appropriate, the group can go through the different factors and discuss ideas for mitigating the negatives and strengthening the positives to ease the path of new or changing legislation.

### **Tips for Force Field Analysis**

- Don't underestimate the time that this analysis will take. While the time varies from project to project, complex issues will require a lot of discussion and a wide range of factors need to be taken into account.
- This tool will work best if researchers, policy makers and intermediaries are all involved in the group undertaking this exercise.
- This tool will work best when those using it have a good knowledge of the topic they are exploring.



## Resources for Force Field Analysis

To view a short video about how to conduct a Force Field Analysis see

[http://www.mindtools.com/pages/article/newTED\\_06.htm](http://www.mindtools.com/pages/article/newTED_06.htm)

For an example of Force Field Analysis used in relation to land use and conservation see the following journal article: Watts, K. and Selman, P. (2004). Forcing the pace of biodiversity action: a force field analysis of conservation effort at the landscape scale. *Local Environment: The International Journal of Justice and Sustainability*, 9(1), 5-20.

<http://www.tandfonline.com/doi/pdf/10.1080/1354983042000176575>

## SWOT Analysis

**Description:** SWOT Analysis is a strategic and versatile tool which allows the user to understand, make decisions and plan strategically for a variety of situations. SWOT is an acronym for *strengths*, *weaknesses*, *opportunities* and *threats*. Describing these factors offers a useful framework for reviewing a situation. Usually the *strengths* and *weaknesses* referred to are factors internal to an organisation, while external factors fit into the *opportunities* and *threats* categories. Once the factors are identified and prioritised for each of the four categories, organisations can plan to build on *strengths*, take advantage of *opportunities* and mitigate for *weaknesses* and *threats*.

**SWOT for science-policy communication:** A SWOT Analysis is useful for identifying the skills, resources, contacts and so that an organisation or network can leverage in their communication activities. It can also identify skills (such as writing press releases) or opportunities (such as media or policy contacts or funding opportunities) that need to be developed. This use of SWOT Analysis could work in different contexts. It could be used to work out the overall communication strategy, or strategy for a particular policy project or issue. Another way a SWOT Analysis could be useful for science-policy communication is that it could be used to unravel the policy relevance of research and to decide the key messages about that relevance that should be conveyed and discussed.

**Combining tools:** SWOT Analysis can be used with any of all of the other planning tools contained in this toolkit such as Stakeholder Analysis, Influence Mapping or Force Field Analysis. In fact, a SWOT exercise may prompt users to employ one or more of these other tools to explore particular aspects of a policy context that the organisation or group needs more information about.

**Best time to use:** SWOT Analysis should be used when planning science-policy communication, but it is good to revisit it at intervals in the project as dynamics and political contexts may change over time.

## Planning Tool

### For use by

- ✓ Scientists
- ✓ Policy makers
- ✓ Intermediaries
- ✓ Networks of the above

### Resources

Money !  
Time !!!

#### Notes for Biodiversity sector

When prioritising the *strengths*, *weaknesses*, and so on, take the following into account: Building networks, inclusion of social and economic data and increasing public awareness.

#### Notes for Climate Change sector

When prioritising the *strengths*, *weaknesses*, and so on, take the following into account: ways to foster trust between stakeholders, linking climate change messages to localised effects and CPD training for scientists and policy makers

#### Notes for Water sector

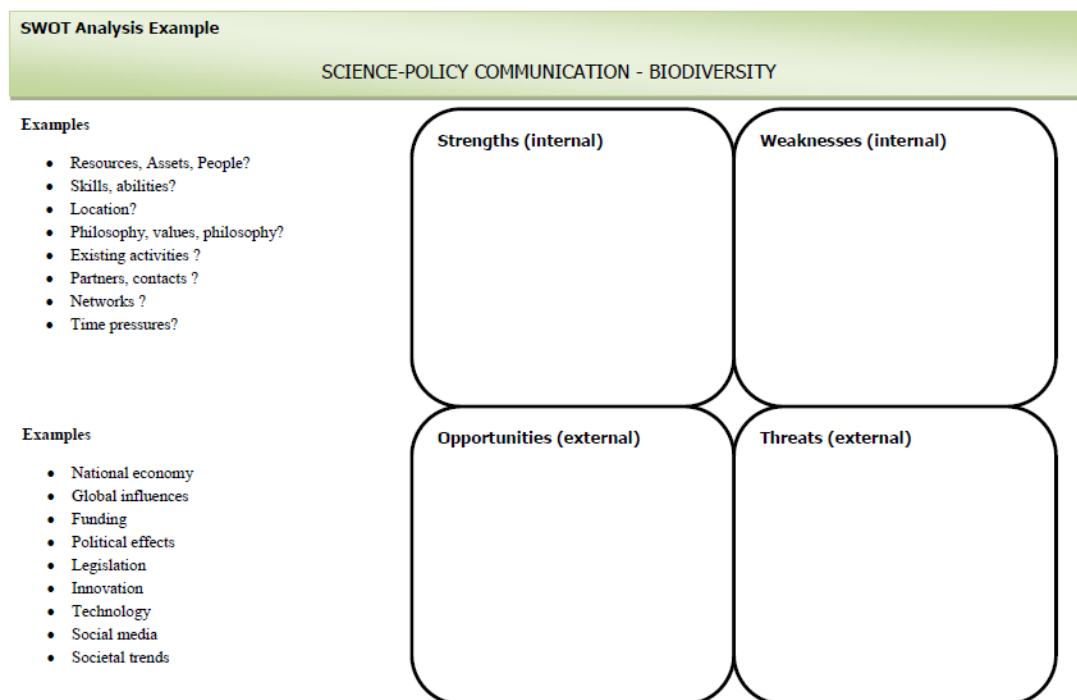
When prioritising the *strengths*, *weaknesses*, and so on, take the following into account: increase transparency about regulatory decisions, CPD training for scientists and policy makers and promotion of more positive media stories about water management and water quality

**You will need:** SWOT Analysis works best with a small group of six to eight people. Materials required include a flipchart, SWOT templates can be downloaded free from the internet or a 2x2 matrix simply drawn on the flipchart (see the template example for guidance). Pens. See the SWOT template in the Appendix of this document.

## Instructions for SWOT Analysis

1. Clarify the issue or concern to be addressed and articulate the goal or aim the group wishes to achieve. This sets out the direction for the group.
2. Using the 2X2 matrix SWOT template (see Figure 12 below), fill in the strengths, weaknesses, opportunities and threats relating to the issue under discussion.

**Figure 12: SWOT Analysis template**



3. A strength is a skill, resource or ability that can be used to achieve the desired goal and that is currently available within the organisation or network. Questions that could help here include:
  - What do we do well?
  - What advantages have we in relation to this?
  - What resources do we currently have that we could use here?
4. A weakness is an internal limitation or challenge that could work against achieving the desired objective. Questions that could help here include:

- What do we have problems doing?
  - What resources are we lacking in order to reach this goal?
  - What is preventing us from doing this better?
5. An opportunity is generally external to the organisation. It may be a favourable trend, a future change that will benefit your goal, or something currently available that you are overlooking or not utilising. Questions that could help here include:
- Are there external resources we could be using (such as training or funding for example)?
  - Are there any imminent changes in national policy or research funding strategy that might benefit us in realising this goal?
6. Threats are external factors that could make it difficult for the organisation to achieve its goal, such as for example economic or political environments that restrain the organisation. Questions that could help here include:
- Are there changing requirements on the organisation that will impact time, money or other resources needed to achieve this goal?
  - Are there political factors now or in the near future that will make achieving this goal difficult?
  - What activities by other stakeholders involved in this issue could affect the organisation achieving this goal?
7. Once the grid has been filled in, prioritise the strengths, weaknesses, opportunities and threats. This could be done by taking a vote or reaching agreement within the group about the factors that are likely to have most impact in the issue being discussed. It may also be a good idea to indicate the level of impact (low or high) that each factor will have relative to the other factors in its category. That is, indicate major and minor strengths, weakness, opportunities and threats. If there are lots of factors generated, it is probably best to discard minor factors.
8. Going through each section of the grid at a time, discuss how strengths can be built on, how opportunities can be exploited and how weaknesses and threats can be neutralised or mitigated. There may be some overlap here in that strengths could be used to counter weaknesses or threats, and so on.
9. Turn ideas discussed in the task above into action points for both communication strategy and communication activities.

### **Tips for SWOT Analysis**

- Try to avoid the exercise becoming a long list of potential strengths, weaknesses, opportunities and threats. Be ruthless in prioritising and culling if necessary.

- A SWOT Analysis is best performed at the beginning of a communications strategy process.
- Make sure the last step, turning ideas into action points, is not overlooked. If this is not carried out the SWOT becomes an academic exercise and the valuable insights will be forgotten.

### **Resources for SWOT Analysis**

For more information on the process of conducting a SWOT Analysis see:

<http://www.businessballs.com/swotanalysisfreetemplate.htm>

<http://www.cuttingedgepr.com/articles/swot-analysis-communication-projects.asp>

For an example of how a SWOT Analysis was utilised in communicating climate and ocean change see the following presentation:

<http://prezi.com/fi5jeehgyjfr/communicating-climate-and-ocean-change/>

## The Research-Policy Matrix

**Description:** Matrix Mapping of policy relevant evidence has been used by DEFRA and by the UK Health and Safety Executive (HSE). It maps existing research to current or future policy goals. The Research-Policy Matrix sets out policy goals against the tasks defining the research needs of the policy – in other words it cross-cuts *what* needs to be done with *how* it can be done. The existing research evidence can be mapped against this matrix.

**Useful for:** The Research-Policy Matrix is useful for identifying and taking stock of the existing and current research in relation to particular policy needs, goals and agendas. In doing so, it helps to ascertain the policy context of research. It clusters the available research according to *what* needs to be done for each policy goal. Once the research is mapped onto the matrix, it allows the user to identify gaps in the evidence and so informs research agendas and the possible commissioning of research. It provides a way of displaying a lot of information all at once. A picture of the state of the evidence base in relation to a policy goal, need or agenda can be seen at a glance.

**Combine with:** This tool links research to policy needs and in doing so helps users to see the policy relevance and context of research. Other tools that look at the policy context of research from different aspects include Stakeholder Analysis and Force Field Analysis.

**Best time to use:** This tool is particularly useful when planning new research with respect to policy direction. It could also be used when implementing a policy or when monitoring the progress of an existing policy.

## Planning Tool

### For use by

- ✓ Networks
- ✓ Funding bodies

### Resources
















Money	!
Time	!!

**You will need:** A group containing policy makers, scientists and other stakeholders who are knowledgeable in either current policy agendas and goals or the current state of research in the sector and a facilitator, if possible. A flip chart, or large sheet of paper (A1 or A0 would be best), different coloured pens. See the Research-Policy Matrix template in the Appendix of this document.

### Instructions for the Research-Policy Matrix

1. Clarify within the group the policy goals under consideration (the *What*). Be as specific as possible with this as using policy goals that are too broad will make the exercise less effective.
2. With respect to these goals, set out the different tasks or stages that need to be addressed within the policy making process (the *How*). Using Figure 13 below as a guide, choose the tasks or stages that are appropriate to the policy goal under discussion. This policy goal may have more or less stages than shown here. That is perfectly fine – just fit the grid to suit the policy goal.
3. Using the goals and tasks, prepare a grid or matrix similar to Figure 13 below.

**Figure 13: The Research-Policy Matrix example (adapted from Shaxson, 2009:21)<sup>4</sup>**

<div>How</div> <div>What</div>	Identifying and understanding the issue	Solutions to the issue	Implementing the solution	Monitoring and assessing the impact
Policy Goal 1				
Policy Goal 2	 	  	 	
Policy Goal 3	 			

<sup>4</sup> Shaxson, L. (2009) *Cost-effective tools for managing the SCP evidence base*. Final report of DEFRA project EV0410. DEFRA: London.

4. Working through each square in the matrix, place relevant research findings or projects on the matrix depending on the policy goal and policy task addressed. This step requires a lot of thought on the part of particularly the scientists and intermediaries in the group and a great deal of knowledge about the types of research happening in relation to the topic, as well as existing research that is central to the policy goal.
5. If it helps the group with the exercise, the research findings or evidence can be colour-coded as shown in Figure 13 to reflect different projects, scientific disciplines, the stage the research is at or to indicate different types of evidence (e.g. environmental science, social science, environmental economic research) and so on.
6. Take note of where clusters form, of what research relates to what task and goal and of where the research gaps are.
7. Make action plans based on the completed Research-Policy Matrix:
  - Should policy briefs be prepared for the existing research mapped on the matrix?
  - Where there are clusters of research indicated, should these researchers be brought together as a network?
  - Should the research gaps be used to set research agendas?

### **Tips for the Research-Policy Matrix**

- Policy goals need to be clear and focused – the Research-Policy Matrix works best when used for very specific policy goals.
- For this tool to work effectively it needs a good mixture of policy makers, researchers and other stakeholders who are familiar with the policy (or intended policy) being discussed and/or the body of current and recent research being done in the area.
- It would be a good idea to include researchers from different disciplines and also relevant social science and environmental economics researchers.
- It would be a good idea to include personnel from research-funding bodies when doing this exercise, if at all possible.
- Where a piece of research or evidence has implications for two policy goals or for two policy tasks, that's fine, just put it in each square of the grid or draw it across the grid line, whichever makes sense.
- Using an independent facilitator for this exercise works well as it allows the participants to focus on the thinking work and it helps ensure balance between participants in their contributions to the exercise.



## Resources for the Research-Policy Matrix

To see matrix mapping used as part of a knowledge brokering process designed for DEFRA (UK) see:

<http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&Completed=0&ProjectID=15656#RelatedDocuments>

## 6 Thinking Hats

**Description:** There are many ways of thinking about an issue or problem – logical, emotional, creative, negative and optimistic. Also contemporary discussion about problems and decisions is often adversarial and focused on winning the arguments. Experts on thinking have suggested that by combining a number of different types of thinking and by short-circuiting the need to win arguments, better and more rounded decision-making can be achieved. The 6 Thinking Hats exercise is a powerful and relatively simple tool that helps decision makers view situations from an array of perspectives. It was devised by Edward de Bono, who has been called *the father of lateral thinking*. The basic idea is that there are 6 hats of different colours. Each hat represents a different way of thinking; the participants are assigned a coloured hat and take on that outlook for the discussion.

**Useful for:** Useful for illustrating perspectives, minimising confrontation and examining consequences, strategies or scenarios. This tool is a useful collaboration tool as it helps to foster communication between people with different priorities. Participants must think outside of their usual style and from a number of perspectives. By examining a situation from a number of viewpoints, issues such as possible flaws, risks, opportunities and contingency measures can be revealed. This can make plans and policies more robust. It is also useful for bringing possible public relations issues to the fore so that they can be planned for.

**Combine with:** 6 Thinking Hats is an ideal tool for use within network activities such as Workshops and Seminars.

**Best time to use:** This tool is particularly useful when reviewing the evidence and appraising the options for policy making.

## Networking and collaboration tools

### For use by

- ✓ Scientists
- ✓ Policy makers
- ✓ Intermediaries
- ✓ Networks

### Resources

Money	!
Time	!!

## Instructions for 6 Thinking Hats

What do the 6 Hats represent?

**White:** The white hat represents objective, neutral thinking. It concentrates on facts, figures and information that is known or needed. Past trends are used to predict present and future events. It also highlights missing factual information for the group.

**Red:** The red hat represents emotional thinking. It concentrates on feelings, gut instinct and intuition. It concentrates on judgements and suspicions as well as how other people will react emotionally to the issue, particularly those who are not familiar with the reasoning behind decisions.

**Black:** The black hat plays devil's advocate for the group and represents negative thinking. It concentrates on potential risks, difficulties, distractions and reasons why the policy or plan may not work. It concentrates on caution and on potential flaws in the issue under discussion. This helps the group eliminate or mitigate negative thinking and to prepare adequately for risks. This is a very beneficial part of this exercise and helps to 'toughen up' the plan, making it more robust.

**Yellow:** The yellow hat represents positive, optimistic thinking. It concentrates on the benefits and value of the policy or plan and on the reasons why it will work. The yellow hat proposes positive, constructive ideas and suggestions. It helps keep the mood upbeat when things seem difficult.

**Green:** The green hat represents creative thinking. It concentrates on new innovative ideas and creative solutions. It may be a good idea to give the group prompts to help with green thinking – such as encouraging them to think in terms of job growth and infrastructure. It employs little critical thinking and comes up with alternative solutions and ideas.

**Blue:** The blue hat controls or 'chairs' the discussion, keeping everyone on track and making sure all hats contribute and are heard. When the discussion dries up, or if it becomes unbalanced, the blue hat can request input from particular hats to counteract this. The blue hat also looks for ways to move the issue forward. The blue hat directs the summing up process at the end. Where there is no note taker, the blue hat can fill that role too.

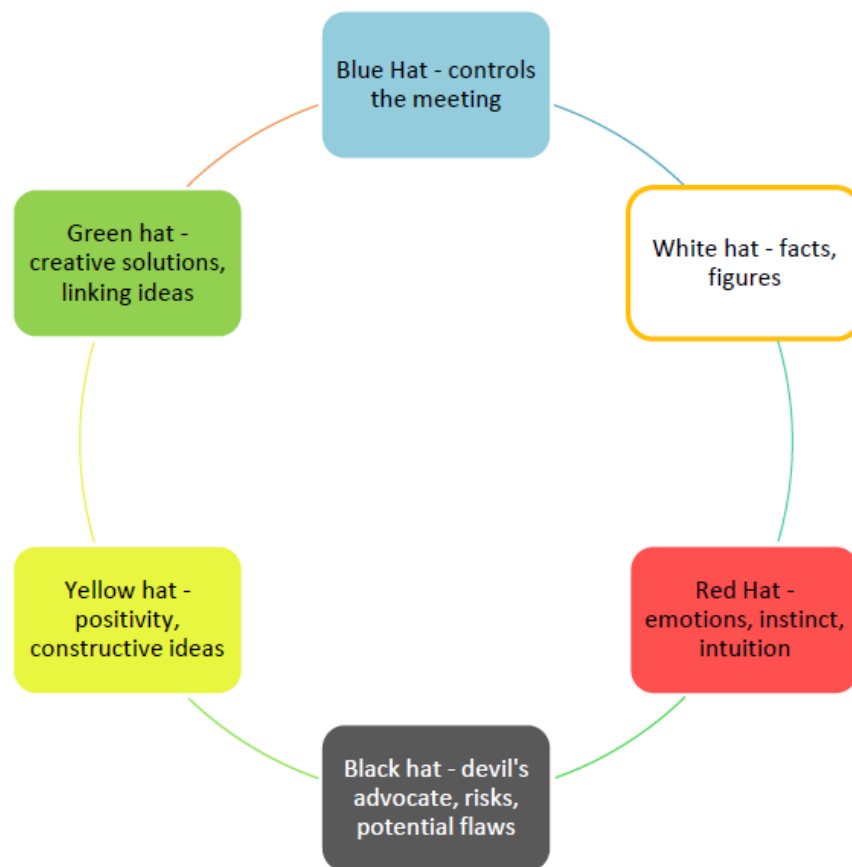
**You will need:** Ideally a group of six people, or a number divisible by six, however this tool can be used individually and a group of less than six could double up on the hats. A large sheet of paper to record the outputs of the exercise as a mind map (this can have a template set out on it if that helps). Pens. Card or A4 pages with a coloured hat and a description of the sort of thinking it represents to help guide the participants. A note-taker to fill out the mind map, or to note down the main points of the discussion is a useful addition. See the 6 Thinking Hats template in the Appendix of this document.

## Instructions for the 6 Thinking Hats

This exercise will take between one hour and 1.5 hours. This should be broken up along the following lines:

- Introduction to the exercise, explanation of the hats and clarification of the issue in question (15 - 20 minutes)
  - Discussion (25 – 40 minutes)
  - Conclusion and debriefing (20 – 30 minutes)
1. Clarify the issue for discussion. It could be a new piece of legislation, a research agenda or a press release on a controversial topic.
  2. Present background information on the subject.
  3. If you are dealing with a large group, for example at a workshop, divide into small discussion groups. Each group needs to choose a rapporteur to report back to the full group at the end.
  4. Each discussion group will require a white board or flipchart to keep track of the discussion.
  5. Explain what each hat represents to the participants, how the exercise works and that the time will be evenly distributed between the hats.
  6. The exercise can be carried out by assigning a hat, or way of thinking, to each participant. If desired, the hats may be swapped or rotated during the sessions to allow each participant to look at the issue from different points of view. However a more productive and workable method for science-policy groups, especially if they are unused to the exercise is to choose a blue hat person to act as a facilitator and have the rest of the group use white hat thinking for a specified time before all moving on to red hat thinking and so on through the different hats or thinking types. See Figure 14.
  7. Ask the groups to choose one person who will report back to the main group at the end of the exercise.
  8. Allow the groups to discuss the issue or topic with the blue hat facilitating.

**Figure 14: The 6 Thinking Hats tool**



9. When the discussion is finished, the group works together to sum up the main points of the discussion. At this stage, a list of action points can be put together if required.
10. If the tool is being used by a number of small groups simultaneously, then the rapporteurs report back to the full group to conclude.

### **Tips for 6 Thinking Hats**

- Ensure that enough time is given to explaining the type of thinking represented by each of the hats and to clarifying the issue at hand, the value and benefit of the tool depends on this. If additional information is needed on the hats, use the links provided in the *Resources* section of this tool.

- Ensure that all participants have written guidance to hand about the hat they are using at all times.
- If possible, do make action points as it prevents the work from being lost.

### **Resources for 6 Thinking Hats**

For background to the tool see the Edward de Bono web site at:

<http://www.edwdebono.com/>

For additional information on the tool see:

<http://www.kstoolkit.org/DeBonos+Six+Thinking+Hats>

For a simple example of using the 6 thinking hats to look at oil as a finite resource see the following blog:

<http://johnkapeleris.com/blog/?p=1644>

## Writershop

**Description:** A Writershop is an intensive process which brings together a range of stakeholders to create, edit and revise written material with the aim of moving from a first draft right through to a final draft during the session. Its purpose is to produce a completed written piece in a shorter space of time than would normally be the case, particularly where the drafts need input from a number of people. The Writershop gets all those people in the same space to work on the piece at the same time. Writershops can vary in length from hours to days depending on the size of the outputs. Outputs produced can range from policy briefs, press release and information booklets to case studies and even books. The Writershop described here is designed to be included as part of a larger event, such as a workshop or seminar, and so is really a mini-Writershop. However the design could be adapted to accommodate a longer event.

**Useful for:** In addition to producing completed and often publishable written documents, Writershops are useful for science-policy communication in a number of ways. Including members of the intended audience in the Writershop group can greatly improve the efficacy and uptake of the completed document. The Writershop process is an excellent way to kick-start positive two-way communication. Working on a common task helps to build relationships and mutual understanding between the different stakeholders.

**Combining tools:** This Writershop is designed to be used to create the science-policy content tools contained in this toolkit including Policy Abstract, Policy Brief, Press Release, 1:3: 25 Report and so on. While these communication materials do not have to be written in a Writershop environment, it is a great option for collaboration and networking events.

**Best time to use:** This tool is useful for reviewing the evidence within a policy process as well as appraising policy options.

## Networking and collaboration tool

### For use by

- ✓ Scientists
- ✓ Policy makers
- ✓ Intermediaries
- ✓ Networks

### Resources

Money	! - !!
Time	!! - !!!

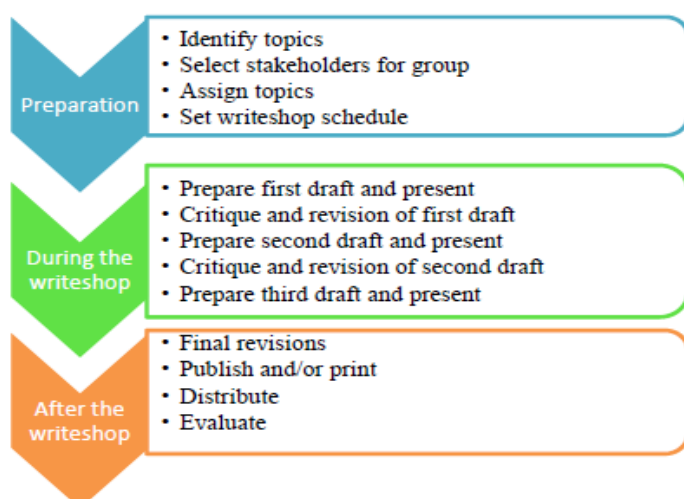
**You will need:** A well balanced group of stakeholders, laptops, flipcharts for discussions, pens, notebooks. A projector is useful. See the Writeshop Planning template in the Appendix of this document.

## Instructions for Writeshop

### *Preparation*

1. A good deal of preparation is necessary to make the Writeshop as successful as possible. The outline of the process is shown in Figure 15 below. Whether organising the Writeshop as an event in itself or as a breakout activity for a larger event like a workshop, try to group the participants so that there is a good mixture of science-policy stakeholders.
2. The topics should ideally be chosen prior to the event and communicated to the participants. If the intended output or result of the Writeshop is a substantial piece of work, such as a booklet or a 1:3:25 Report, it is a good idea to have a first draft prepared prior to the event. However, smaller pieces, such as press releases, policy briefs, blog entries or policy submissions work well when written on the day.
3. Set a schedule for the Writeshop tailored to the time available. Writeshops designed for smaller pieces should take between two and four hours. Expect those for longer pieces to take at least a day or two.

**Figure 15: Process for a Writeshop (adapted from Start and Hovland, 2004:49)<sup>5</sup>**



### *During the Writeshop*

<sup>5</sup> Start, D. and Hovland, I. (2004) *Tools for policy impact*. Overseas Development Institute: London.



- Using the template below, discuss the policy relevance of the scientific information being communicated amongst the group, decide who the audience is, the key points that need to be included and any other considerations that may occur to members of the group. (See Figure 16 below)

**Figure 16: Example discussion template for Writeshop**

<b>Topic</b>	<b>The role of parrot fish in keeping coral reefs healthy in Belize</b>
<b>Science to be communicated</b>	Parrot fish keep coral reefs healthy by eating seaweed that might otherwise over-grow, smother and kill the coral reef. At the same time, parrot fish are being over-fished in the area and populations are dwindling.
<b>Policy relevance of science</b>	By controlling the volume of parrot fish taken from the area by fishermen, the coral reef can be protected. This control needs to be imposed by legislation.
<b>Audience</b>	Specialist media (such as Science magazine); main stream media in Belize, Belize politicians, Belize fishermen
<b>Headline</b>	Parrot fish – the key to healthy coral (One sentence summary of science and its relevance as a headline)
<b>Output document type</b>	Press release
<b>Key points that need to be included</b>	<ol style="list-style-type: none"> <li>1. Parrot fish are being overfished in Belize</li> <li>2. Parrot fish have an important role in maintaining coral reefs</li> <li>3. Falling parrot fish populations will lead to a decline and reduction in coral reefs around the Belize coast</li> <li>4. Coral reefs are important for maintaining the variety and numbers of fish available to commercial fishermen in Belize</li> <li>5. Coral reefs are important to the tourist industry in Belize</li> <li>6. Legislating in order to restrict or ban overfishing of parrot fish will protect the parrot fish and in turn benefit the fishing and tourism sectors</li> </ol>
<b>Other comments or considerations</b>	<p>What is the backstory to the research?</p> <p>What terms, concepts or processes need to be explained?</p> <p>Does the document require an illustration of photo?</p> <p>Are there any salient examples already in the public domain, or in the knowledge of the audience, that this can be compared to? (e.g. where the loss of another species threatened livelihoods)</p>

- Choose one or more members of the group to write the first draft of the output document using a laptop or PC. Use the relevant tool from this toolkit for guidance. Remember it is just a draft, it does not (and is unlikely to be) perfect. It will be fixed as a collaborative effort. Remember to include all the points discussed by the group.
- Once the draft is written, the authors present it to the rest of the group and it is discussed, critiqued and edited.

7. The draft is revised to reflect the comments from the group, and again presented back to the group.
8. The presentation, critiquing and revision of the document may be carried out a number of times before the group is happy with the document.
9. If illustrations are produced for the document, these should be included in these cycles of critique editing and revision.
10. Once the document is finalised, the group may wish to make suggestions or discuss arrangements for the next stages of the process, that is, what happens to the document now in terms of how it should be printed, published and distributed, what news agencies or decision makers should it be directed towards and so on.
11. It is a good idea for a member of the group to take notes of these discussions and transform them into action points so that the considerable work done during the Writeshop can be exploited to its full potential.

### ***After the Writeshop***

12. The document should be finalised, printed and distributed without delay following the Writeshop.

### **Tips for Writeshops**

- Professional technical writers, press officers, editors, illustrators, graphic designers or those proficient in desk-top publishing may be included in the Writeshop group and would be a great addition to the process.
- If you do not have such individuals in your organisation and you wish to produce a long document to publishable level should consider buying in this expertise for the event.
- Long term Writeshops are expensive and difficult to arrange, however, short pieces such as press releases, policy briefs or information pamphlets for example could be prepared in shorter and more manageable sessions.
- A short Writeshop would work well as part of a larger workshop.
- It might be a good idea to have a facilitator at the event making sure everyone gets a chance to be heard.
- As critiquing and editing are integral parts of the Writeshop, and as some members of the group may be sensitive about criticism, it would be a good idea to set out ground rules for the discussions during the Writeshop.

## Resources for Writeshops

For further tips and suggestions for running a Writeshop see the following:

<http://www.odi.org.uk/sites/odi.org.uk/files/odi-assets/publications-opinion-files/7229.pdf>

<http://www.mamud.com/writeshop.htm>

[http://www.kit.nl/net/KIT\\_Publicaties\\_output/ShowFile2.aspx?e=1739](http://www.kit.nl/net/KIT_Publicaties_output/ShowFile2.aspx?e=1739)

## Building Project-based Networks – a guide and overview

**Description:** Science-policy communication is a network activity and prior research has shown that in addition to formal national and intergovernmental science-policy networks (such as the NPBR and the EPBRS), project based networks constitute an important part of the SPI. Networks should include good balanced representation from researchers, policy makers and other stakeholders. Science-policy networks work best when the participants are knowledgeable and experienced in their own field and are also well-versed in the operations of other stakeholders in the network. Strong commitment from the various participants and an acknowledgement that the science-policy activity is not an add-on activity but an integral element of the project are essential to optimise the integration of science into policy. As intermediaries have been shown to have a positive and often crucial role in producing good science-policy interaction, their inclusion in project networks is encouraged. Also, particularly with larger projects, a network could play a central role in science-policy communication training for researchers and policy makers involved in the project.

**Useful for:** Building a network around a project will help with fostering mutual understanding between the partners, sharing information and increasing the likelihood that the research findings will be used.

**Combining tools:** Most of the tools described in this toolkit are compatible with and useful for Project-Based Networks.

**Best time to use:** Ideally, at the beginning of a research project or at the evidence review stage of a policy cycle.

## Networking and collaboration tool

### For use by

- ✓ Scientists
- ✓ Policy makers
- ✓ Intermediaries
- ✓ Networks

### Resources

Money            !! - !!!  
Time             !!

#### Notes for Biodiversity sector:

Consider including an environmental economist when constructing the network so that the economic benefits of protecting ecosystem services can be taken into account and communicated

#### Notes for Water sector:

Consider including an environmental economist when constructing the network. It is important that the economic implications of water policy are communicated

#### Notes for Climate Change sector:

Consider including an environmental economist when constructing the network. It is important that the economic implications of climate change are linked to the science and communicated.

## Instructions for Building Project-based Networks

The following are suggested steps for setting up a network for a particular project or for a particular research interest group:

- Define the research area or policy sector
  - Decide if the network should be formal or informal, temporary or on-going
  - Define and identify the people to be included
  - Connect with and engage those identified
  - Identify the person or group to drive the network
  - Take stock of the strengths and needs of the group
  - Set out a programme for the network
  - Define support requirements (institutional, financial) and work towards engaging these
- 
1. **Define the research area or policy sector:** Decide the research area or policy sector for which you are convening the network. This is important as it will define who should be targeted to join the network as well as the sorts of events or activities in which the network should invest its time and resources. Also this may dictate the type and level of institutional support and even financial support the network is likely to leverage, so think strategically here.
  2. **Define the goal or purpose of the network:** What role do you want the network to play in the science-policy communication for the project? This will help determine the types of activities you will need to plan for the network.
  3. **Decide if the network should be formal or informal, temporary or on-going:** Be clear about the type of network you wish to have. Will it be formal or informal? Either works fine as long as the members are aware of the importance of science-policy communication and are committed to that process. Formal networks may take more work and organisation, however it may be easier to apply for grants or otherwise leverage financial support if the network is a formal body. Is the network for the duration of the project only or will it be on-going? This is important as it is likely that network members will want to know, at the outset, the commitment they are expected to make. If the network members have the time and inclination, on-going networks work particularly well for SPIs as this way the capacity built up through one project can be utilised in other projects or contexts. In addition, they provide a source of information for policy makers as a common frustration for this group is that once a project ends it is difficult to get information about the findings. However, on-going networks take time and effort that the participants may simply not be able to spend on this.

4. **Decide how extensive you want your network to be:** How big the network should be very much depends on the type of network you wish to create. Do you want to restrict it to a committee-sized science-policy group (five-eight) of those directly involved in the project (researchers, department officials, funding body people)? Or do you wish to include everyone working on the project and a range of policy makers and intermediaries already directly involved? Or would you like to include a wider set of stakeholders, including the research team, researchers from cognisant areas, researchers from cross-cutting areas, a wider range of policy makers, a broad array of intermediaries including ENGOs, business organisations and media? Or some combination of all of the above? Be mindful that a bigger group is likely to offer richer and possibly more productive communication possibilities. However, a larger network will require more organisation and money to run it. Take all these factors into account as well as the purpose or goal of the network before you decide.
5. **Define and identify the network members:** Working from the decisions made in Steps 1 – 4, list the names and/or job descriptions of those you need to be part of the network. Make sure you include researchers, policy makers and relevant intermediaries. You may find that it helps to use Brainstorming to identify the people or sorts of people you need. If the area is particularly complicated or the decision about who should be included in the network is difficult, consider using Stakeholder Analysis. If there is a difficulty with identifying enough people, then maybe consider using an expression of interest request
6. **Use knowledgeable participants genuinely interested in science-policy communication:** Such participants will make the network most effective. Also try to make sure that the members of the network are very experienced in their own field and if possible have some knowledge of the other stakeholders' areas. Depending on the sector and the particular research project or policy proposal, people from a number of different scientific disciplines and even cognisant disciplines may be needed. For example, if the policy area concerns drinking water, the network might need input from both water chemistry scientists and microbiologists and also environmental economists. Decide the number and types of people you need and use this to tailor the list. List over and above the numbers needed as it is unlikely that everyone listed will be available and interested!
7. ***Expressions of interest?*** If there seems to be a dearth of suitable candidates, a request for expressions of interest could be prepared and publicised wherever you expect the people you are looking for will see it (e.g. web sites, media, notice boards). The request can be simple enough, but should include clear descriptions of what the network is, what its goals are, what sorts of qualifications and experience and areas of interest the members should have as well as providing an indication of the time commitment that will be required.
8. **Connect with and engage those identified:** This is one of the more difficult tasks in this process, but some persistence and lateral thinking should pay off here. While it is

difficult to specify exactly how contact should or could be made with particular stakeholders, some suggestions are given here. In this task, internet searches and social media are important tools.

9. **Researchers:** Many of the researchers needed for a project-based workshop will already be working with the project in question, but there may be situations where different or additional experts are needed. To make contact with particular researchers is quite easy. If the institutions or organisations where they work are known, a simple internet search should produce a contact number or email address. If the area or discipline is known but the names of specific experts are not, an internet search will help to locate suitable experts and their contacts. Looking at the length of their experience and the type of work they have done will provide clues to how effective they might be as part of the network.
10. **Policy makers:** Making contact with policy makers is a little more difficult. Members of Dáil Éireann normally have web sites and their email addresses area generally follow the following format *firstname.lastname@oireactas.ie*. To reach government department officials, it is worth looking for the departmental organisation chart online which provides names and areas of responsibility for the more senior officials. These are tricky to find on the web sites of some government departments, but a little determination should pay off here. Equally, a phone call to the government department main number may help you find the right person or people with whom to connect. Also, remember that local council officials are generally involved in policy implementation and in formulating local regulations and so on and, for this reason, are also useful additions to science-policy networks. These can be contacted through the local county hall or through the local council web sites.
11. **Identify the person or group to drive the network:** An important element in making a project science-policy network work well is having a committed driver, that is a person or organisation who takes on tasks such as managing the network, arranging events and organising on-going communications. If you have brought the network this far; that is, deciding on the goals, size and make-up of the network, then chances are you are already the network driver. However, you may want to delegate that task, formalise it or explore the possibility of other members of the network helping with these tasks. The important thing is that there needs to be clear responsibility for the required tasks for the network to flourish and work well.
12. **Take stock of the strengths and needs of the group:** Initiation of the network could take the form of an inauguration event or could be as simple as a meeting over coffee. Either way, it is a good idea at this stage to take stock of the strengths and needs of the network in order to decide what the network can realistically and usefully achieve. Ask yourself, what or who is missing from the group and what types of training, information or events the members of the network might need in relation to their science-policy communication activities. One effective way of doing all this is to use

a SWOT analysis to ascertain the *strengths, weaknesses, opportunities* and *threats* relating to the network and its potential or intended science-policy activities.

13. **Set out a programme for the network:** Using the science-policy communication goals set down for the network and the results of the taking stock exercise and SWOT analysis (if used) set out a programme of events, training, activities and work for the network. Be as realistic as possible with this keeping in mind that the members of the network will have limited time to give to the body and so that time must be used usefully and wisely. Also be practical about what can be done within the budget constraints of the network and it may be necessary to get funding or sponsorship of some sort for particular events. Keep in mind that these will take time to organise.
14. **Keep the communication going:** The programme could include events such as face-to-face science-policy meetings, seminars, workshops and pop-up science talks or regular Café Scientifiques. To foster on-going engagement tools such as e-newsletters, blogs, as well as social media tools such as a Facebook group, Linkedin group or a Twitter account for the network. These can be used to alert members to network news and events as well as to other articles, happening or whatever else may be of interest to the group. The programme is also likely to include science-policy communication or public dissemination work in relation to the research project or policy that brought the group together. In this case, items such as science-policy communication training or preparation of media material may be on the programme for the network. Think through all the possibilities and fit the programme to what the network needs to do and to the skills of the members and other resources available to the network.
15. **Define support requirements (institutional, financial) and work towards engaging these:** Again, networks take resources to run and if this has not been factored into the research project budget, it will probably be necessary to get some support from your institution or research funding body to facilitate the network's activities. Such support could include the provision of venues for events, opening up contacts to the network, administration support, access to academic journals (for ENGOs involved) as well as funding for training or event expenses (e.g. catering costs, seminar speaker expenses).



## Resources for Building Project-based Networks

Read this article on the value of project-based networks to science-policy communication  
<http://www.ingentaconnect.com/content/oekom/gaia/2013/00000022/00000002/art00008>

Browse the EU Spiral project site. This research project concerns an extremely large science-policy communication network with an extensive range of activities; however it should provide some excellent and creative ideas for smaller project-based science-policy networks.  
<http://www.spiral-project.eu/>

A network bringing together stakeholders interested in a particular policy sector could be organised in a similar way. The Cambridge Conservation Initiative is an example of a network of academic institutions and conservation organisations. Although it does not include policy makers, it does involve itself in policy matters. Have a look at the network's web site here:

<http://www.conservation.cam.ac.uk>

## Building a Science-Policy Contact List

**Description:** A list of relevant and useful contacts, whether as part of a formal network or as a simple list of individuals is an essential tool for science-policy communication. Ideally connections should be made with these people before they are really needed for particular science-policy communication. Also, the list should be added to as time goes on. Once set up, the bank of contacts can be contacted in an ad hoc manner to elicit information from or because you have particular science-policy information you need to discuss with them. Setting up a contact base is easy requiring little time, money or other resources. It should be one of the first steps of planning and preparing science-policy communications.

**Useful for:** Having a bank of contacts such as this is useful both for getting particular scientific information from an expert or for contacting a particular policy maker to whom you may need to speak. It is also a good idea to cultivate some media contacts also.

**Combining tools:** Many of the tools in this toolkit will come into play in your communication with the bank of contacts. In many ways this tool is a preparation stage for using some of the other tools. The tools chosen will depend on the context, purpose and requirements of the communication. Individual users may find that the content creation section tools such as the Policy Brief, Blog, Press Release, Submission to a Green Paper and so on are particularly useful to communicate with your contacts.

**Best time to use:** This can be used anytime, but should ideally be one of your first tasks when planning science-policy communication.

## Networking and collaboration tool

### For use by

- ✓ Scientists
- ✓ Policy makers
- ✓ Intermediaries
- ✓ Networks

### Resources

Money !  
Time !

#### Notes for Biodiversity

Try to include an environmental economist on the contact list as it is often important to understand and communicate the economic benefits of protecting ecosystem services

#### Notes for Climate Change

Try to include an environmental economist on the contact list. It is increasingly important that the economic implications of climate change are understood and communicated along with the science

#### Notes for Water

Try to include an environmental economist on the contact list. It is important to understand and communicate the economic implications of water policy.

## Instructions for building a Science-Policy Contact List

Set up a database or file to build and organise your contacts. The more science-policy contacts on the list the better. However, they need to be relevant and useful. It is really important to have the contacts well organised in a database. The database can be an Excel file, for example or just a table. The important thing is that all contact details are included along with other details such as their area of expertise, area of responsibility and so on.

1. Decide on the types of people you need on the contact list. For example, policy makers will need researchers in areas that are relevant to their areas of responsibility but it would also be useful for policy makers to make contacts from intermediary groups such as ENGOS. Researchers should include policy makers in their contact lists, but they may also require contact details for other researchers, ENGOS and journalists. Intermediaries will require contact details for researchers, policy makers and other intermediaries such as ENGOS and business organisations.
2. While many of the contacts on the list may be made by networking at events and so on, it is a good idea to actively target particular contacts also.
3. If time allows it, it is worth setting up short informal meetings with each one to cement the relationship.
4. When connecting with a new contact, explain who you are, what your work entails and why you have contacted this particular person or organisation. If the person or organisation is interested in collaborating in science-policy communication, find out the best (or most preferred) way to communicate with them. Also note the particular policy areas or issues where collaboration in science-policy communication would make the most sense.

## Tips for building a Science-Policy Contact List

### *Ideas for making first contact with the different stakeholders*

- **Researchers:** Making contact with particular researchers is quite easy. If the institutions or organisations where they work are known, a simple internet search should produce a contact number or email address. If the area or discipline is known but the names of specific experts are not, an internet search will help to locate suitable experts and their contacts. Looking at the length of their experience and the type of work they have done will provide clues to how effective they might be as part of the network.
- **Policy makers:** Making contact with policy makers is a little more difficult. Members of Dáil Éireann normally have web sites and their email addresses are generally of the following format [firstname.lastname@oireactas.ie](mailto:firstname.lastname@oireactas.ie). To reach government department officials, it is worth looking for the departmental organisation chart online which provides names and areas of responsibility for the more senior officials. These

are tricky to find on the web sites of some government departments, but a little determination should pay off here. Equally, a phone call to the government department main number may help you find the right person or people with whom to connect. Also, remember that local council officials are generally involved in policy implementation and in formulating local regulations and so on and are also useful additions to science-policy networks. These can be contacted through the local county hall or through the local council web sites.

- **Intermediaries - ENGOs/business organisations:** Although they are the most diverse of the three stakeholder groups, intermediaries are probably the easiest with which to make contact. This is largely because much of their work entails reaching out to the other stakeholders in the science-policy interface and it is in their interest to have a bank of contacts of their own. Again, internet searches are most useful to identify intermediaries and the particular people in such organisations who would be useful to contact. ENGOs, business organisations and think-tanks can be easily reached through their web sites.
- **Intermediaries - Media:** While some science-policy stakeholders, such as policy makers and intermediaries, will have more need for media contact than others and probably already have long established contacts with media outlets, it's a good idea for researchers to think about having a few judiciously selected science media contacts. These may be science correspondents for mainstream print and broadcast media or for particular trade or special interest media. Choose media outlets that will best reach the target audience (policy makers, intermediaries and/or the public). Making media connections can be done by emailing particular journalists (emails are often included at the end of their articles, particularly online articles) or by contacting the news desks of newspapers, magazines or TV and radio programmes.

## Resources for building a Science-Policy Contact List

While the make-up of your science-policy contacts list will be dependent on your role within the science-policy interface and on the sector within which you position yourself, this online version of a contacts database of scientists created primarily for liaison with media and press personnel is a nice example of a climate change science contacts list – of course the contacts list you create does not have to be online and will be suited to your needs:

<http://www.climatecommunication.org/who-we-are/advisors/>

For an example of a contact list for scientists in medical and life-science areas produced by Enterprise Ireland see:

<http://www.enterprise-ireland.com/en/publications/reports-published-strategies/life-sciences-research-guide-.pdf>

## Seminars and Symposiums

**Description:** Seminars and Symposiums are excellent events for bringing researchers, policy makers and intermediaries together around a particular issue or policy area. The description and instructions given here are for a seminar or symposium aimed at a mixed audience, rather than a specialist audience, with an emphasis on giving adequate time for questions and discussions with the audience. The basic difference between a seminar and a symposium is that a seminar is taken to involve one expert speaker addressing a general audience with the purpose of informing them, while a symposium involves a number of experts presenting and taking part in a panel discussion in front of an audience. The emphasis should be on encouraging audience participation and an open and respectful exchange of views. Seminars and Symposiums are organised along similar lines. The choice about which one should be used really depends on the topic and what the event aims to do. For controversial topics or where the organisers wish to have both science and policy represented in terms of speakers, a symposium works best. Where the purpose is an awareness raising exercise or opening up a discussion, a seminar would work well.

**Useful for:** These events are useful for bringing the different stakeholders together and focusing the discussion on a particular topic. They work equally well outside networks and are a great way for an organisation, institution or a group of stakeholders to open up dialogue on a particular topic.

**Combining tools:** As organising an event such as a seminar or a symposium can be resource intensive requiring a lot of time, effort and money, it is a good idea to combine it with an interactive breakout session for the audience to work on an aspect of the topic in question and come up with action points. Many of the collaboration and planning tools in this toolkit could be used to this end.

**Best time to use:** Anytime during research processes or policy cycles.

## Networking and collaboration

### For use by

- ✓ Scientists
- ✓ Policy makers
- ✓ Intermediaries
- ✓ Research funding bodies
- ✓ Networks

### Resources

Money	!!!
Time	!!!

## **Instructions for organising Seminars and Symposiums**

Organising a seminar or symposium can be an intensive (and stressful) process. It is difficult to give precise instructions here and instead the main logistical tasks with approximate timescales are given here. Making lists, allocating tasks and ticking off jobs as they are achieved will go a long way in helping the organisation of your event. The lists and tasks given here are not exhaustive and it is essential that the event is well thought through. Use the following points as guidance, but do think about what this event is intended to achieve and plan accordingly.

### ***Two to three months in advance:***

- Decide on the aim, scope and reach of the event
- Establish a working group to assist with the event and allocate specific jobs and responsibilities for everyone
- Decide on possible speakers, respondents, chairpersons and those invited to attend
- Plan budget and seek funding, if necessary
- Invite speakers, agree dates with them
- Book venue
- Send out initial notice of the event

### ***Four to six weeks in advance:***

- Send invitations to potential attendees/participants/audience
- Plan accommodation and transport for speakers,
- Plan and book refreshments and catering for the event
- Plan agenda and running order
- Organise activities, facilitations and materials for any breakout sessions planned
- Check in with speakers, respondents, chairpersons and so on to ensure they are still available. It might be a good idea to have back-up ideas at this stage just in case anyone has become unavailable in the meantime

### ***One to two weeks to the date:***

- Liaise with speakers to ensure they are aware of the theme, agenda and activities involved in the event. Let each speaker know how long they will get to speak and who the other speakers are and so on
- Send a gentle reminder and reiterate all the relevant information, such as time, venue, maps and so on to all those attending in the days before the event

- Organise badges for all participants, event packs for participants, signage for venue, tasks for assistants on the day, background information on speakers for chairperson
- Plan and check room layout and other requirements or arrangements
- Organise registration lists, participant contact lists (if applicable) and any other necessary documents needed for the day
- Keep checking and updating the participant list in the days before the event, adjust arrangements for breakout groups, numbers for catering, rooms booked and so on, if necessary

### **Tips for organising Seminars and Symposiums**

- The first step is to decide the purpose and the theme of the event as this will help you decide if you need a seminar or a symposium. It will also dictate the types of speakers needed and the audience or participants that should be targeted to attend.
- Establish the budget and resources early on in the process as this will dictate how big or small the event should be, if the speakers should be local or if there is enough in the budget to include international speakers. Also, considerations such as having access to a free venue or having to rent a venue will make a difference to the amount of money available for spending on the event. Tie all these resource details down at the outset.
- Clarify if extra spaces or rooms are needed for breakout sessions. Pilot the breakout sessions to reveal any issues prior to the real event.
- Do try to organise breakout sessions or some form of workshop or interactive activities along with the presentations and discussion sessions. Seminars and Symposiums on their own might be interesting, but are unlikely to lead to cementing action on issues or to useful outputs. Think creatively about the best use of the event and all the resources spent on it.
- If a number of speakers are taking part, try to keep it between three and six to ensure that the panel discussion works well. Less than three speakers makes for a rather dull panel discussion while more than six may be confusing for the audience.
- If you are organising a symposium for those involved in science-policy interfaces, it's a good idea to include a good mix of speakers from both science and policy areas. Include practitioners as well as academics.
- Ensure that the plenary session is long enough for the audience to have a good discussion and exchange of views.
- Good chairing, facilitation and time keeping are essential. Ensure that those assisting with the event are well-briefed, confident and comfortable with their roles and ideally are experienced in these tasks.
- Make sure that speakers are clear about the agenda, including the time they have to speak and that there will be a panel discussion and a questions session and any other activities that are planned around the event.
- Check and re-check all arrangements in the run up to the event.

- Finally, as the saying goes, *over-prepare and then go with the flow*. Try to enjoy the event as it unfolds, this will help all the participants feel more comfortable and it will help you cope assuredly with any hiccups that may occur on the day.

### **Resources for organising Seminars and Symposiums**

For more checklists, tips and suggestions about organising events such as seminars and symposiums see the following from the Natura 2000 networking programme:

[http://www.natura.org/nnp\\_toolkit/nnp\\_workshop\\_checklist.pdf](http://www.natura.org/nnp_toolkit/nnp_workshop_checklist.pdf)

For a shorter, snappier version see the following web site:

<http://www.inanyevent-uk.com/assets/iae-conference-checklist-jan2006.pdf>



## Workshops and World Cafés

**Description:** Both Workshops and World Café style events create interactive and informal collaboration spaces for communication. They are particularly useful for bringing different types of groups together and for getting people to mix within those groups. These tools are grouped together here as the process of arranging them is similar and they are used for broadly similar purposes in science-policy communication. While Workshops and World Café style events set the scene for science-policy communication other tools must be used during the event to actually make communication happen. Also it is worth noting that a workshop can be run as a world café so really they can overlap. For a World Café event the venue is set out in such a way that the event has an informal feel and discussions can happen easily. Usually the room is set up as if it is a café with participants seated around small tables to facilitate ease of discussion.

**Useful for:** In terms of science-policy communication, Workshops and World Café events are useful for bringing the different stakeholders with different agendas together and focusing the discussion on a particular topic. They are useful for cementing networks, but work equally well outside networks and are a great way for an organisation, institution or a group of stakeholders to open up dialogue on a particular topic. These events are also useful as science-policy training sessions and extended over a number of days, could form the basis of a science-policy summer school event.

**Combining tools:** Many of the tools described in this toolkit are suitable for events such as these. Any of the tools that can be used for groups would work well. Training for individual tools could also be done during a workshop, for example, participants could write press releases during a science-policy communication media training session. The tools used will depend on the aims of the event. Workshops and World Cafés can be used as events on their own or could be elements of Seminars, Symposiums or larger conferences.

**Best time to use:** Anytime during research processes or policy cycles.

## Networking and collaboration tool

### For use by

- ✓ Scientists
- ✓ Policy makers
- ✓ Intermediaries
- ✓ Research funding bodies
- ✓ Networks

### Resources

Money	!!!
Time	!!!

## **Instructions for organising Workshops and World Cafés**

Organising a workshop or world café can be an intensive (and stressful) process. While the feel and atmosphere of the event is informal and somewhat casual, its organisation and preparation must be taken just as seriously as more formal events.

It is difficult to give precise instructions here and instead the main logistical tasks with approximate timescales are given. The lists and tasks given here are not exhaustive and it is essential that the event is well thought through. Use the following points as guidance, but do think about what this event is intended to achieve and plan accordingly.

### ***Two to three months in advance***

- Decide on the aim, scope and reach of the event and how many participants you wish to have at the event
- List the people you want to invite
- Think about what you need the event to do and what activities you need to include, such as interactive exercises and break-out sessions – look through the science-policy communication tools in this tool kit for ideas on this
- Establish a working group to assist with the event and allocate specific jobs and responsibilities for everyone
- Plan budget and seek funding, if necessary
- Scope out venues, make sure the venue can accommodate the numbers of participants, the activities and break-out sessions you are planning, also try to choose a venue that best helps create the atmosphere you need
- Set the date and book venue
- Send out initial notice of the event

### ***Four to six weeks in advance***

- Plan agenda and running order
- Send invitations to potential participants
- Organise facilitators, timekeepers, table hosts for World Café events and any other personnel needed to assist with the Workshop. All those helping with the Workshop must be well-briefed. It is really crucial to the success of the event that the facilitators are well-prepared and confident in their roles
- Plan and book refreshments and catering for the event
- Organise activities, facilitations and materials for any breakout sessions planned

### ***One to two weeks to the date***

- Send a gentle reminder and reiterate all the organisational information, such as time, venue, maps and so on to all those attending in the days before the event

- Organise badges and event packs for all participants, signage for venue, tasks for assistants on the day
- Plan and check room layout and other requirements or arrangements
- Organise registration lists, participant contact lists (if applicable) and any other necessary documents needed for the day
- Keep checking and updating the participant list in the days before the event, adjust arrangements for breakout groups, numbers for catering, rooms booked and so on

### **Tips for organising Workshops and World Cafés**

- The first step is to decide the purpose and the theme of the event as this will help you decide how best to set it up and run it. It will also dictate the science-policy communication tools needed and the participants you should be targeting to attend.
- Establish the budget and resources early on in the process as this will dictate the size of the event. Also, considerations such as having access to a free venue or having to rent a venue will make a difference to the amount of money available for spending on the event. Tie all these details down at the outset to help the planning.
- Making lists, allocating tasks and ticking off jobs as they are achieved will go a long way in helping the organisation of your event.
- Clarify if extra spaces or rooms are needed for breakout sessions.
- Pilot the breakout sessions with the facilitators to reveal any issues prior to the real event. Ask those taking part to be honest about elements that are confusing or need to be improved in any way. It is better to find this out prior to the event.
- When preparing Workshops, the rule of thumb is that every hour of an event requires 4 hours preparation – however this is the time taken by those experienced in organising such events. If this is your first (or almost first) foray into Workshop organisation, put aside enough time to think about, plan and prepare the workshop activities.
- Think creatively about the best use of the event and all the resources spent on it. Exercises such as The 6 Thinking Hats are good ice-breakers to begin an event where lots of interaction is needed. SWOT exercises, Scenarios, Brainstorming, and Force Field Analysis are all good for group work. Ultimately though, the activities used will depend on the overall aims of the event.
- Your plan for Workshop or World Café activities should, if possible, include quite exact timings for each stage of the event. For example, welcome (5 minutes), opening address (10 minutes), ice-breaker (5 minutes) Brainstorm (20 minutes) and so on. While this sounds pedantic, it means that the event is well-thought through and will run much more smoothly as a result. It really pays to do this.
- World Café events require the room to be set out like a café with small groups (aim for four to five people at each table) participants seated around small to medium sized tables. The tables can be covered with table clothes and/or a flower or centre piece

used to reinforce the idea of a café. Likewise, refreshments such as teas, coffees and pastries can be used to create a convivial atmosphere to encourage discussion.

- Workshops and World Cafés can be used as events on their own or could be break-out elements of Seminars, Symposiums or larger conferences.
- If using a World Café style set-up within a workshop or conference, it is a good idea to do this early on in the event as it helps to break down communication barriers and will contribute to the success of the event as a space for engagement and collaborative learning.
- It is important to include a good mix and balance of participants from both science and policy areas and of course intermediaries. Also, be sure to include practitioners as well as academics.
- The following are good ice-breakers for Workshops or similar events:
  - Asking the participants to introduce themselves by name, organisation and one little known fact about themselves. The little known fact humanises them for each other.
  - Playing two truths and a lie where the participants introduce themselves by telling the group two items that are true about themselves and one made up item. The group must guess which items are true and which are false. This is fun and lets the group learn about each other.
  - Get the participants to pair up with their neighbour and interview each other for two or three minutes. Finally, get each person to introduce the person they interviewed.
- Ensure that plenary sessions are long enough for the audience to have a good discussion and exchange of views.
- Good presenting, facilitation and time keeping are essential. Ensure that those assisting with the event are well briefed, confident and comfortable with their roles and ideally are experienced in these tasks.
- Check and re-check all arrangements in the run up to the event.
- Finally, as the saying goes, *over-prepare and then go with the flow*. Try to enjoy the event as it unfolds, this will help all the participants feel more comfortable and it will help you cope assuredly with any hiccups that may occur on the day.

## Resources for organising Workshops and World Cafés

For more checklists, tips and suggestions about organising events such as Seminars and Symposiums see the following from the Natura 2000 networking programme:

[http://www.natura.org/nnp\\_toolkit/nnp\\_workshop\\_checklist.pdf](http://www.natura.org/nnp_toolkit/nnp_workshop_checklist.pdf)

For a shorter, snappier version see the following web site:

<http://www.inanyevent-uk.com/assets/iae-conference-checklist-jan2006.pdf>

For extra hints and tips on organising Workshops see this excellent resource from mondtools.com:

<http://www.mindtools.com/pages/article/PlanningAWorkshop.htm>

For extra hints and tips on organising a World Café event see the following web site:

<http://www.theworldcafe.com/pdfs/cafetogo.pdf>

For an account of a climate change World Café in action in Redwood City, US see:

[http://conversationsthatmatter.typepad.com/climatechange/redwood\\_city\\_caf.html](http://conversationsthatmatter.typepad.com/climatechange/redwood_city_caf.html)

NERC uses Workshops for science-policy communication training, see:

<http://www.nerc.ac.uk/site/guides/policymakers/workshop.asp?cookieConsent=A>

## Café Scientifique

**Description:** The Café Scientifique is based on the French Café Philosophique and is sometimes called a Science Café or simply a Pop-up Science Talk. The idea began in the UK a number of years ago as a grass roots initiative where scientific expert or experts give an informal talk to a general audience, usually about a cutting edge or in-the-news science topic. A Café Scientifique is normally held in an informal social setting such as a coffee shop, café or pub. Presentation aids such as PowerPoint are not generally used. In fact, this is actively discouraged! The talk is usually followed by refreshments and chatting and then the Café resumes with questions and a general discussion about the issue. Respect for all viewpoints is an overriding principle of the Café Scientifique. For this toolkit, the Café Scientifique idea has been adapted for a science-policy communication context.

**Useful for:** This tool is an innovative and informal way for scientists or intermediaries to communicate with department officials or political researchers. A Café Scientifique can be set up, for instance, as a lunch time event in a government department or as an after-work event in a local coffee shop or pub. By working in such an informal setting, this tool is good for breaking down barriers and building trust and understanding between the different actors in the SPI. This is a good tool for projects where particular policy areas/officials can be targeted.

**Combining tools:** This tool works quite well as a stand-alone event. However, it can also be used as one of a suite of tools as part of a communication strategy.

**When to use:** Café Scientifique can be used at any stage during the policy cycle or the research process. If possible, try to have one of these regularly enough.

## Networking and collaboration tool

### For use by

- ✓ Scientists
- ✓ Policy makers
- ✓ Intermediaries
- ✓ Networks

### Resources

Money	! - !!
Time	!!

**You will need:** An informal venue such as a coffee shop, pub, work canteen, or open air venue (be creative with this), refreshments, posters, flyers or social media means of publicising the event. While Café Scientific events are communication tools for scientists, organisational support will be required from policy and intermediary actors.

### **Instructions for Café Scientifique**

1. Plan the event. Choose a venue and liaise with the venue proprietor about when would be the best time to hold the Café. It is best to hold the event when the venue is quite and at a time which is convenient for the target audience.
2. Plan the budget. Money will be needed for refreshments and possibly for transport costs for the scientist.
3. Choose and invite a scientist. Explain the nature of the event and that the talk is to be an informal one. Stress that there should be no PowerPoint and that the audience is general. The choice of scientist is crucial. The scientist must be enthusiastic about the idea, understand the concept and be willing to have a discussion with the audience.
4. Choose a chairperson for the event to introduce the speaker and oversee the discussion, if necessary. The chairperson should employ a light touch as this is an informal event.
5. Organise and order refreshments.
6. Aim for a maximum of 30 people in the audience as it is important that everyone feels they have a chance to contribute in the discussion, if they so wish.
7. A Café Scientifique is an open event where everyone should be made feel welcome; however in the science-policy communication context there may be particular people you want to attend, such as policy officials working on a particular piece of legislation for instance. These individuals may need to be particularly targeted.
8. Publicise the event by email, social media or by using posters in the workplace.
9. On the day, the venue should be set up so that the seating arrangements are informal, but everyone can see the speaker easily.
10. Respect for all viewpoints is an overriding principle of the Café Scientifique and the chairperson should stress this during the welcome and introduction at the start of the event.

11. The running order should be along the following lines

- The scientist speaker is introduced (by a chairperson)
- The scientist speaks for between 15 and 30 minutes
- The Café breaks and the refreshments are served, during this time the audience mingle and chat
- A discussion ensues between the scientists and the audience
- The chairperson should employ a light touch only intervening if really necessary
- The discussion should be allowed to flow in as natural a manner as possible.

### **Tips for Café Scientifique**

- The science-policy communication Café Scientifique may be a once-off event or could be part of an on-going series whereby a café event is held every month or so.
- This would be an excellent way for scientists working on specific policy-relevant research to communicate with policy officials working in those policy areas.
- This would be a useful tool for environmental science funding bodies to target the research they are funding to specific policy makers.
- If the venue is a work place venue, you may have to be creative with this. Use a quiet corner of a work canteen, a meeting room set out like a café or if the weather allows, you could even have an outdoors Café Scientifique. The important thing is that the atmosphere is an informal one and that the scientist and audience buy into the spirit of the event.
- The focus of the talk should be on not only explaining the science, although obviously that is important, but also on explaining how research or science is done and showing how uncertainty and the unexpected are often part of that process. This will give the policy makers a window into the research process.
- Sometimes a Café Scientifique will have more than one speaker. These events usually have a panel discussion with all speakers after their talks. While this may be useful, it can result in the audience simply observing the panel discussion, rather than feeling they can join in the discussion. Events using just one speaker tend to have more contributions from the audience in the discussion.
- If you are using a pub venue, try to negotiate with the owner on refreshments. Some pubs are happy to provide basic finger food for a large group who will spend money at the bar on an otherwise quiet and under-populated night.



## Resources for Café Scientifique

For further hints and tips on setting up a Café Scientifique and on information about the concept see:

[http://www.cafescientifique.org/index.php?option=com\\_content&view=article&id=73&Itemid=487](http://www.cafescientifique.org/index.php?option=com_content&view=article&id=73&Itemid=487)

The Alchemist Café, a Café Scientifique takes place about once a month in Dublin City Centre, see the following links to get a flavour of the café and the topics covered to date:

<https://www.facebook.com/#!/alchemistcafedublin?fref=ts>

<http://us5.campaign-archive2.com/home/?u=c277ce106bd214caff637b352&id=d5f3a99d2a>

## Face-to-face Meetings

**Description:** Much science-policy communication practice is based on building relationships between scientists and policy makers. Tools such as Policy Briefs, E-newsletter and Video Shorts are useful for imparting information and tools such as Workshops, Café Scientifiques and World Cafés help facilitate meaningful discussion between the actors in the SPI. However, when researchers can talk directly to politicians, it is a really valuable addition to the SPI arsenal of tools. The original research carried out in the process of building this toolkit identified this as being an important need in environmental SPIs in Ireland. This can be achieved by scientists or researchers presenting directly to Oireachtas Committees and this is described elsewhere in this toolkit. Here, the process of arranging a Face-to-Face Meeting with a particular politician, policy maker or expert is described.

**Useful for:** This tool could be used by individual researchers, intermediaries or politicians and other policy makers. It is useful for targeting a particular person with whom you want to discuss the science of an issue in detail. It is also an excellent starting point for building a collaborative relationship with an influential actor in the SPI. It could also be utilised in a way to allow multidisciplinary teams of researchers working in the same sector or on the same project to have a series of meetings with relevant policy makers

**Combining tools:** Tools such as Stakeholder Analysis and Influencing Mapping could be used to identify relevant people with whom to request meetings. Tools such as creating a contacts list will help in making contact with the politicians and researchers identified. Tools on preparing Policy Briefs and DIY SPI Thesaurus will also be of use here.

**Best time to use:** At the reviewing the evidence stage of a policy cycle is best, but can be used throughout policy cycles and research processes.

## Networking and collaboration tool

### For use by

- ✓ Scientists
- ✓ Policy makers
- ✓ Intermediaries
- ✓ Networks

### Resources

Money !  
Time !

### Notes for Biodiversity

Keep in mind that responsibility for biodiversity issues falls between a number of government departments such as Environment, Agriculture, Marine and Natural Resources.

### Notes for Climate Change

Keep in mind that responsibility for climate change issues falls between a number of government departments such as Environment and Energy.

## Instructions for Face-to-face Meetings

1. Identify the individuals with whom you need to have a meeting. If you are unsure about who you need to talk to see the *Tips* section of this tool for ideas.
2. Prioritise and decide which politicians, policy officials or researchers would be the most useful to contact. Stakeholder Analysis or Influence Mapping will help here.
3. Make contact with the relevant person or people and request a meeting. Let them know why you chose them in particular (it could be because they sit on a particular Dáil Committee, for instance), what you want to discuss (new research for example or submission on upcoming legislation) and how much of their time you need (try to keep this short)
4. Agree a date, time and place for the meeting. If meeting a national politician it is a good idea to let them know that you are willing to come to the Dáil to meet with them. This increases your chances of securing a meeting as it is the most convenient option for them.
5. Prior to the meeting, prepare well.
  - If you are a **scientist or intermediary**, note down all the points you need to make and think about the clearest way of presenting your science. Tools such as the DIY SPI Thesaurus will help you here. Prepare a Policy Brief to give to the policy maker.
  - If you are a **policy maker** arranging a meeting with a researcher, take note of all the questions you need answered or points of information you need to know. Send a copy of this to the researcher prior to the meeting so that they can prepare the information. Also request that the researcher bring a one-page summary of the information tailored to the policy issue being discussed.
6. Consider the meeting as a starting point of a collaborative science-policy relationship and keep in touch with your contact by adding them to any email lists you may use to communicate on policy issues or just send them information that may be of interest to them on an on-going basis.

## Tips for Face-to-face Meetings

- Identifying the ‘right’ people or person to meet with can be difficult, but with a little determination and perseverance it can be done. The following guide is intended to help with this but you might find that enquiring through your own social or professional networks is also helpful.
- **Finding Researchers:** To find experts in particular disciplines an internet search will help to locate suitable experts. Most researchers have a CV or at least a professional biography on their staff web page. Take into account the amount of experience they have and the type of work they have done. In particular, try to find out if they have

experience of preparing material (reports, recommendations and so on) for the policy process. Department civil servants will often be aware of experts in many areas. Also the Dáil Oireachtas library service may be helpful in this quest.

- ***Finding policy makers:*** If you want to identify politicians to approach about a policy issue, it is a good idea to aim for a minister, junior minister, opposition party spokesperson or members of the relevant Dáil Committees. Cabinet ministers are very difficult to secure a meeting with, but all of the others should be possible. Contact the politician's office or email ([firstname.lastname@oireachtas.ie](mailto:firstname.lastname@oireachtas.ie)). To reach government department officials, it is worth looking for the departmental organisation chart online which provides names and areas of responsibility for the more senior officials. These are tricky to find on the web sites of some government departments, but a little determination should pay off here. Equally, a phone call to the government department main number may help you find the right person or people with whom to connect.
- Remember that local council officials are generally involved in policy implementation and in formulating local regulations and so on and are also useful additions to science-policy networks. These can be contacted through the local county hall or through the local council web sites.

### **Resources for Face-to-face Meetings**

To see how US climate change scientists used a day of face-to-face meetings with members of the US Congress follow this link:

<http://www.climatecommunication.org/news/climate-science-day-on-capitol-hill/>

To see one scientist's perspective on face-to-face science-policy meetings, see this blog on the Climate Science day on Capitol Hill event:

<http://cobblab.blogspot.ie/2013/03/climate-science-day-on-capitol-hill.html>

## DIY SPI Thesaurus

**Description:** In many ways, policy makers and scientists are speaking different languages. One of the jobs that SPIs do is to provide a translation service between these actors. Collaboration and knowledge brokering help to develop a common language around issues in particular sectoral area. This tool was inspired by work carried out by two science-policy experts in the US, Richard Somerville and Susan Hassol. Somerville and Hassol (2011), who developed a mini-thesaurus to help minimise misunderstandings between climate change scientists and policy makers. This tool takes that idea and expands it into biodiversity, water and climate change SPIs in Ireland. In this tool the group of scientists, policy makers and intermediaries are asked to create a list of terms that cause confusion or misunderstanding and to find better terms that can be substituted.

**Useful for:** Some terms may mean one thing to a scientist and quite another to a non-scientist. Likewise, the policy making and politics arena has its own set of terms that may be unclear or misunderstood to those who live and work outside it. The DIY Thesaurus tool can be used by science-policy networks to help bridge the language gap. It allows the network to explore the types of terms that cause miscommunication. It provides a quick reference guide for scientists and policy makers to help when writing science-policy communication material. It results in a mini-thesaurus which can be built-on as science and policy landscapes change.

**Combine with:** The outputs from the DIY SPI Thesaurus can (and should) be used with any of the writing tools in this toolkit including Policy Briefs, Press Releases, Blogs, 1:3:25 Reports. It can also be a big help when preparing for a Café Scientifique, Video Short or a Media Interview and so on. The Brainstorming can be employed usefully here.

**Best time to use:** Set this up when planning communications at the beginning of a research process or policy cycle and build on it.

## Content creation tool

### For use by

- ✓ Scientists
- ✓ Policy makers
- ✓ Intermediaries
- ✓ Networks

### Resources

Money !

Time !!

### Notes for Biodiversity sector

In addition to natural scientists, include environmental economists and social scientists here. Those working in the media would be a good addition to the group here also.

### Notes for Climate Change sector

Although the example featured in this tool gives climate change sector SPIs a head start, political and geographic context are important and there may be important terms relevant to your SPI. Besides, this tool aims to include policy making terms also.

**You will need:** A good mix of scientists, policy makers and intermediaries, flip chart and pens. Post-its would be useful here. See the DIY SPI Thesaurus template in the Appendix of this document.

## Instructions for the DIY SPI Thesaurus

1. Explain to the group the reason for creating the mini-thesaurus, how the mini-thesaurus will be tailored to their interactions and that it is a useful resource that can be developed and built on.
2. Allow the group to view the Somerville and Hassol chart (Figure 17 below) designed for climate change SPIs so that they can get a good idea of how some terms might cause difficulty and the types of terms that can be substituted to provide clarity without compromising accuracy.
3. Explain that the group is going to produce similar charts for their own sector – one for technical and scientific terms and one for policy terms.
4. Keep in mind that that audience for the outputs of this tool is going to be non-specialist in the area (whether science or policy).

**Figure 17: The climate change language barrier (adapted from Somerville and Hassol, 2011:57)<sup>6</sup>**

Terms that have different meanings for scientists and non-experts		
Scientific Term	Public Meaning	Better choice
enhance	improve	intensify, increase
aerosol	spray can	tiny atmospheric particle
positive trend	good trend	upward trend
positive feedback	good response, praise	vicious cycle, self-reinforcing cycle
theory	hunch, speculation	scientific understanding
uncertainty	ignorance	range
error	mistake, wrong, incorrect	difference from the exact true number
bias	distortion, political motive	offset from an observation
sign	indication	plus or minus sign
value(s)	ethics, monetary value	numbers, quantity
manipulation	illicit tampering	scientific data processing

5. On the flip chart draw a table using the template in Figure 18 as a guide. You should have three columns; ***Professional term, Everyday meaning, Better choice***.

<sup>6</sup> Somerville, R. and Hassol, S. (2011) *Communicating the science of climate change*. Physics Today, October 2011: 48-53.

6. Start with either scientific or policy terms.

**Figure 18: Template for the DIY SPI Thesaurus**

DIY SPI Thesaurus for [B, CC, W]		
Professional term	Everyday meaning	Better choice

7. Ask the group to think of words, terms or phrases that they use in their professional lives which have caused misunderstandings in communications with others outside that profession. If it helps, participants can write these terms down on post-its, notepaper or similar. List the terms in the first column.
8. Next, ask the group to think of terms which they have encountered other professions using in science-policy discussions which they found confusing the first time they heard them. Again, participants may want to note these down before listing them on the chart.
9. Go through each term and discuss it in the group.
  - Discuss why the word is confusing and how non-specialist would interpret it. Fill in the **Everyday meaning** column for that term.
  - Agree on a **Better choice** term and fill that in to the last column.
10. When each chart is complete, allow the group to review and edit it as necessary.
11. The completed DIY SPI Thesaurus is a resource for those in the SPI when creating content, encourage the participants to regard it as such and remind them that they can build on it also.

### **Tips for the DIY SPI Thesaurus tool**

- Brainstorming techniques can be used to explore difficult terms and their better choice alternatives.
- Don't be tempted to skip the revision and editing step at the end. The more polished the finished product is the more useful it is as a resource.
- It may not always be possible to find a substitute word or short phrase for a particular technical or policy phrase. Don't worry if a short (or even long!) explanation is

needed. The object of the tool is to provide a quick reference guide for plain language versions of technical terms.

- Be careful that the alternative terms are simple, understandable and plain – but also accurate and not too simplistic – do not ‘dumb down’ the terms.

### **Resources for the DIY SPI Thesaurus Tool**

For background on this tool and great advice on language and science communication see Richard Somerville and Susan Hassol’s original article here:

<http://www.climatecommunication.org/wp-content/uploads/2011/10/Somerville-Hassol-Physics-Today-2011.pdf>



## Policy Briefs

**Description:** A Policy Brief is a short document which presents research findings to a non-specialist audience. Its primary purpose is to disseminate these findings to policy makers and those who influence them. For the science-policy interface, a Policy Brief provides a fast and easy way of communicating salient research findings, an expert opinion on an issue and the policy implications of the findings. As Policy Briefs are a one-way communication channel, they should not be seen as an end in themselves. Rather they are an important part of an integrated science-policy communication strategy and should be considered as a way of starting a conversation on a topic which can then be opened up through two-way communication tools.

**Useful for:** Policy Briefs provide fast dissemination of research findings and their policy implications to time-pressed policy makers and so are essential elements of science-policy communications. They work well in opening up dialogue about a particular issue. This would be a good communication piece to develop as part of a Writeshop. The DIY SPI Thesaurus is a good tool to use in preparing a policy brief.

**Combining tools:** Policy briefs can be used along with Face-to-face Meetings, to begin an email discussion, as an opening to a science-policy Seminar or Café Scientifique.

**Best time to use:** At the information gathering stage and reviewing the evidence stage of a policy cycle, but can be used at any stage if needed.

## Content creation tool

### For use by

- ✓ Scientists
- ✓ Intermediaries
- ✓ Networks

### Resources

Money	!
Time	!!

## Instructions for Policy Briefs

1. The Policy Brief should be short, eight pages maximum including abstracts, summary, and references.
2. In planning the content for your Policy Brief, check with Figure 19 below to ensure that you have the information for all the 'key ingredients' of a policy brief.
3. To tailor the Policy Brief to your audience, think about why this information is important to their policy objectives and policy sector. The other elements of the EPA Resource Kit may be helpful here.
4. The title should be sharp but needs to reflect the topic of the Policy Brief.
5. Place the names of the authors and your organisation's name, logos and so on at the beginning of the document.
6. Use plain language and keep to the point. The DIY SPI Thesaurus may be useful here.
7. Use headings where necessary to break up the piece and to help the reader navigate through it.
8. The Policy Brief should be structured along the following lines
  - A short abstract explaining what the study is about, what the findings are and the policy implications of these findings.
  - A one-page (maximum) bullet-point summary listing the key points of the Policy Brief.
  - A short introductory paragraph explaining what the Policy Brief will discuss, setting out the structure of the brief for the reader and giving some background to why the study was undertaken and how the research was carried out. Aim to be transparent in relation to the research – for example, is this the result of one study or a synthesis of many.
  - The main body of the Policy Brief should provide in-depth detail of the findings of the study. This is the evidence for the policy recommendations or suggestions you will make. Keep it clear and tight while giving enough detail to make your case. Include your conclusions and expert opinions about the findings. These are the reasons policy makers want to hear from you.
  - Once the evidence has been set out, the policy implications need to be explained in detail. This section should have policy recommendations and if possible and appropriate provide actionable points for international, national and local scales.
  - Include references, further reading and acknowledgements at the end of the document.

**Figure 19: Key ingredients of effective Policy Briefs (Jones and Walsh, 2008: 4)<sup>7</sup>**

Evidence	Persuasive argument	Clear purpose Cohesive argument Quality of evidence Transparency of evidence underpinning policy recommendations (a single study, a synthesis of available evidence etc.)
	Authority	Messenger (individual or organisation) has credibility in the eyes of the policy maker
Policy Context	Audience context specificity	Addressed specific context (national and subnational) Addresses needs of target audience (social vs. economic policy)
	Actionable recommendations	Information linked to specific policy processes Clear and feasible recommendations on policy steps to be taken
Engagement	Presentation of evidence-informed opinions	Presentation of author's own views about policy implications of research findings But clear identification of argument components that are opinion-based
	Clear language/writing skills	Easily understood by educated non-specialist
	Appearance/design	Visually engaging Presentation of information through charts, graphs, photos

### Tips for Policy Briefs

- Policy Briefs are important at the end of a project to push the research findings towards the policy arena. However they do not have to be confined to this, as important research findings occur within the lifetime of the project also.
- Use visuals such as graphs, photos, diagrams and tables to present information in Policy Briefs.
- Policy makers are careful to ensure they take information from credible sources such as experts and organisations they trust. Building relationships with policy makers through formal or informal networks helps build this level of trust.

<sup>7</sup> Jones, N. and Walsh, C. (2008) *Background Note: Policy briefs as a communication tool for development research*. ODI: London.

## Resources for Policy Briefs

This paper describes a study that looks at Policy Briefs and their relevance for policy makers. It provides some useful information about creating effective and useful Policy Briefs:

<http://www.odi.org.uk/publications/425-policy-briefs-communication-tool-development-research>

For some good Policy Brief examples on climate change, see:

[http://www.climatestrategies.org/index.php?option=com\\_googlesearch&q=policy+briefs](http://www.climatestrategies.org/index.php?option=com_googlesearch&q=policy+briefs)

<http://www.planetunderpressure2012.net/policybriefs.asp>

The ERSI publish regular short research bulletins describing specific research findings and the policy implications of these findings, see here for examples:

[http://www.esri.ie/publications/latest\\_research\\_bulletins/](http://www.esri.ie/publications/latest_research_bulletins/)

## 1:3:25 Report Format

**Description:** The 1:3:25 Report Format is used to ensure that research findings can be related in a clear and consistent fashion to a general audience, primarily policy makers. The 1:3:25 Report Format was developed by the Canadian Foundation for Healthcare Improvement (CFHI), an organisation whose work involves integration of medical evidence into policy. The 1:3:25 Report Format is now used world-wide mainly in the health care area, but also in other technical areas, for example it is part of the house style for UK Home Office Science reports. The first page of the report carries the main points for policy makers about the research. The following three pages contain an executive summary of the report. The remaining 25 pages comprise the report proper setting out the context, methods, findings and policy implications in some detail. The writing style is non-technical and accessible.

**Useful for:** The 1:3:25 Report Format is useful for setting out the policy implications of scientific research for policy makers. The structure means that time-pressed policy makers can scan the first one-page section, move on to the three-page summary and then read the full report if they think the topic is relevant to them.

**Combining tools:** As this report is a plain language account of the research and its policy implications, the DIY SPI Thesaurus would be useful with this tool. If the report is being prepared by a science-policy network or a team of researchers (as opposed to an individual researcher), a Writeshop would help to speed up the writing and editing process. With regards to writing the executive summary for this document the press release section of the Media Master Class will be useful.

**Best time to use:** This tool is particularly useful at the reviewing the evidence stage of policy making. It can however, be used throughout the process as needed.

## Content creation tool

### For use by

- ✓ Scientists
- ✓ Intermediaries
- ✓ Networks

### Resources

Money	!
Time	!!!

## Instructions for the 1:3:25 Report Format

1. The first page the document should carry between four and six key points or messages about the research that policy makers need to know. To prepare these messages, focus on the key conclusions of your research and how they relate to policy. Think about your audience and think about what you need to communicate to them about how your research links to their policy sectors.
2. If there are recommendations suggested by the research, refer to them here. If there are not then be as concrete as possible with any relevant conclusions. If more research is needed then set out these questions clearly at this point.
3. The executive summary should not exceed three pages. In this section of the document, explain your findings in plain language. Remember your target reader is a time-pressed policy maker who will need to decide quickly if this research is useful and relevant to their current policy goal or area of work.
4. For the executive summary, the structure should be similar to the inverted pyramid structure of a press release (see Media Masterclass tool). The main conclusions or messages of the report should be in the first paragraph, with supporting information, background and context next. Methods and technical details can be placed near the end of the executive summary but do not need to be elaborated on at this point.
5. The 25 page report will provide detail on the research and offer some depth on the findings and conclusions. Although it is closer to an academic structure than the executive summary, it is written in a non-academic style (see Figure 20 below for a summary). The language should be plain and for a non-specialist audience. If you have prepared a DIY SPI Thesaurus, this will be useful here.
6. The 25 page report should cover the following:
  - **Context** of the research. Here you will need to express the problems addressed by the research, provide a clear statement of the research questions, highlighting earlier research and how this research may contribute to the area.
  - **Implications** that the research has for the reader. This is your main message. If this report is targeted at more than one types of reader, think about the implications of the different types of readers and set these out separately, each with their own heading.
  - **Methods** used in the research. Rather than focusing on lots of technical detail, outline the basic approach, how the data was gathered and explain how the approach may have affected the results.
  - **Results** of the research. Summarise the results to show how they support the conclusions you have already stated. The use of graphs and tables will help the reader understand these more readily.
  - **References** should be included.

**Figure 20: Summary of the 1:3:25 Report Format**

Document Section	Content
<b>1</b>	One page containing between four and six key points about your research that are relevant to policy makers
<b>3</b>	Three pages of an executive summary of the context, findings and conclusions of the research
<b>25</b>	25 page report detailing the context, methods, findings and policy implications of the research

### **Tips for the 1:3:25 Report Format**

- The most important part of a document written in the 1:3:25 Report Format is the one-page overview and the beginning. It will allow policy makers (and others) to quickly grasp the significance of the research.
- When preparing this document, especially for the first time, it would be a good idea to have a non-specialist look over it to check it for clarity.

### **Resources for the 1:3:25 Report Format**

For more information about the 1:3:25 Report Format see the Canadian Foundation for Healthcare Improvement (CFHI) web site:

<http://www.cfhi-fcass.ca/publicationsandresources/resourcesandtools/communicationnotes/10-06-01/d497a465-5398-4ec8-addf-d7cbf86b1e43.aspx>

For more hints and tips on the 1:3:25 Report Format see the following:

<http://www.hse.gov.uk/research/producing-reports-advice.pdf>

To browse some examples of reports using the 1:3:25 Report Format:

<http://www.cfhi-fcass.ca/Libraries/Reports/REISS-Data-for-Improvement-Fraser-E.sflb.ashx>

## Submission on a Green Paper

**Description:** A green paper is a proposed policy document or a consultation document produced by a government department to stimulate discussion. Broad participation in the policy making process is encouraged by seeking submissions from the public on the green paper. Anyone can make a submission, from individual citizens to think tanks, NGOs, business and professional bodies. The process is normally as follows. A green paper is published and its publication is announced on the relevant department web site and in the media. Submissions are sought by a particular date – usually up until number of months from the date of publication. These submissions are taken into account in the preparation of the final policy document, which is the white paper.

**Useful for:** A Submission on a Green Paper is quite a powerful science-policy channel as it is a formal and official way to input into a policy discussion.

**Combining tools:** As the Submission on a Green Paper will be read by a general or mixed audience rather than by a purely technical or scientific audience, aim for a plain language version of your expertise. The DIY SPI Thesaurus will be useful here as well as tools for helping to identify policy context, such as Force Field Analysis.

**Best time to use:** When Submissions on a Green Paper are being sought by a government department, this is generally advertised in the newspaper.

## Content creation tool

### For use by

- ✓ Scientists
- ✓ Intermediaries
- ✓ Networks

### Resources

Money	!
Time	!!



## Instructions for making a Submission on a Green Paper

1. Download the Green Paper from the web site of the appropriate government department. Read it carefully and take note of the closing date for submissions.
2. Choose a number of issues that your research or expertise can usefully inform.
3. It might be a good idea to discuss the proposed policy measures with colleagues, others interested in the area or with your formal or informal network (if you are part of one). This will help you get some different perspectives on the proposed policy and refine your ideas and arguments in relation to your Submission on a Green Paper.
4. Submissions vary widely in format, length and style. However it is a good idea to include the following elements:
  - Begin by describing your organisation, institution or company and your role
  - Link your organisation, institution or company to the issue of subject matter of the Green Paper and explain how your work relates to the issue and to the policy
  - If you or your organisation have experience of earlier advisory work on policy include this as it gives credence to your opinions and views
  - Once you have qualified your authority to give suggestions and recommendations on the paper, you should set out clearly what your views, suggestions and recommendations are in relation to the green paper. Clearly indicate what section and paragraph of the green paper to which you are referring.
  - Use plain language wherever you need to explain your science. If you need to use technical terms, explain them.
5. Once the Submission on a Green Paper is written, it is a good idea to have someone read over it to ensure it is clear and well thought out. See the *Resources for making Submissions on a Green Paper* section below for examples
6. Ensure you submit before the closing date!

## Tips for making Submissions on a Green Paper

- This process is straight forward enough. The important thing is to be very clear in what you are suggesting or recommending.
- Be as succinct as you can. Depending on the green paper and the issue it addresses, hundreds of submissions could be received by the government department section dealing with the green paper; you need your submission to be quickly and easily understood.

- While a Submission on a Green Paper is quite a powerful science-policy tool, an even more influential role in policy making is to be involved in the preparation of the green paper in the first place. Making contacts in the department is a good first step in working towards that goal.

### **Resources for making Submissions on a Green Paper**

To see an energy policy green paper from the Irish government, submissions on this paper and the resultant white paper, go to the following website:

<http://www.dcenr.gov.ie/Energy/Energy+Planning+Division/>

## Submission to an Oireachtas Committee

**Description:** A great deal of the political work of the Irish parliament is carried out by the Oireachtas Committees. Oireachtas Committees consider and discuss each piece of legislation that goes through the parliament. The committees have considerable powers in terms of making amendments to bills as they pass through the parliament. The original research carried out in the process of building this toolkit identified the possibility of experts speaking directly to politicians as being an important need in environmental SPIs in Ireland. The Oireachtas Committees have the power to invite oral submissions from individuals and groups who can offer relevant information on particular topics related to a committee's programme of work. Sometimes these groups are invited by the committee to give presentations. However, members of the public can apply to be invited to make a submission and the committee may decide to extend an invitation to them.

**Useful for:** This is a good way to communicate directly with politicians and to influence the policy process. As many environmental issues straddle two or more government departments, making a submission to a Joint Oireachtas Committee can be really beneficial in terms of reaching the 'right' people.

**Combining tools:** Any of the tools designed to help with creating plain language material and material that links the science with its policy relevance and context would be useful in preparing for such a submission. Tools such as DIY SPI Thesaurus, Policy Brief and Force Field Analysis would be useful here.

**Best time to use:** At the committee stage of an Oireachtas legislative process, whenever, an Oireachtas Committee is scheduled to discuss the issue in question.

## Content creation tool

### For use by

- ✓ Scientists
- ✓ Intermediaries
- ✓ Networks

### Resources

Money !  
Time !!

### Notes for Biodiversity

Climate change issues are generally considered by the committees with responsibility for Environment, Transport, Natural Resources and Energy. These areas are often moved between political briefs at the beginning of a new government term so it may be necessary to check which committees are relevant.

### Notes for Climate Change

Climate change issues are generally considered by the committees with responsibility for Environment, Transport, Natural Resources and Energy. These areas are often moved between political briefs at the beginning of a new government term so it may be necessary to check which committees are relevant.

## Instructions for making a submission to an Oireachtas Committee

1. Decide to which committee you wish to make a submission. If you are unsure about which Committees exist and their respective areas of responsibilities, then check this on the Oireachtas web site, see the *Resources* section of this tool for the link to the list of current Oireachtas Committees.
2. Ensure that the issue you want to present to the Oireachtas fits in with the work programme of the relevant committee. Details of the agendas and work of Oireachtas Committees can be found under *Committees* on the Oireachtas web site. Often there is a restricted amount of time set aside for the committee stages for new legislation. Therefore, if your submission is related to a specific piece of legislation, then apply in plenty of time to make your submission.
3. Find out who the point of contact is for the Oireachtas Committee to whom you wish to present. This will be the Clerk of the Committee, who is a civil servant. Contact details for all the Clerks of the Committees can be found on the Oireachtas web site. Again a link for this is provided in the *Resources* section below.
4. Prepare and send a written version of your submission to the Clerk of the Committee. The members of the Oireachtas Committee will use this to decide if the Committee need to hear from you in detail at a Committee meeting. The submission should contain the following elements:
  - Your name, organisation, position within the organisation and area of expertise
  - Any factual information you wish to impart to the Committee
  - Any recommendations you have for government in relation to your submission
  - An executive summary of your submission (required if the submission is longer than 10 pages)
5. If you are invited to give an oral presentation on the strength of your written submission, prepare your presentation based on the written submission. This can be more detailed than the written submission. It is a good idea to practice your oral submission prior delivering it to the committee.
6. Think about what questions the committee members may ask and try, as far as possible, to have the answers to hand.
7. Consider carefully and be sure to follow information and advice that the Clerk of the Committee offers you in relation to making an oral submission to the committee. There are particular rules, protocols and procedures that need to be followed both for visiting the Houses of the Oireachtas and for presenting to committees.

## **Tips for making a Submission to an Oireachtas Committee**

- If you are having problems finding out who the Clerk of a particular committee is, then try contacting the Chairperson of the committee instead. The Chairperson will be a Member of the Oireachtas, generally TD and he or she will pass the submission on to the Clerk of the Committee so that it can be considered by all the committee members.
- Be sure to number the pages and paragraphs of your written submission as the committee members will need to refer to these in asking for clarification on any aspects of the submission or when asking questions.
- Read the guidance for making a submission provided on the Oireachtas web site as it offers really useful information on all aspects of making the submission, things you need to consider on the day of the oral submission and how such submissions relate to the work of the committee. A link to this document is included in the *Resources* section of this tool.

## **Resources for making a Submission to an Oireachtas Committee**

For general information on Oireachtas Committees, including membership, areas of responsibility and agendas see:

[http://www.oireachtas.ie/parliament/oireachtasbusiness/Committees\\_list/](http://www.oireachtas.ie/parliament/oireachtasbusiness/Committees_list/)

To find contact details for the Clerks of all Oireachtas Committees see:

[http://www.oireachtas.ie/parliament/media/Committees/factsheets/Fact-Sheet-1-Oireachtas-Committees-of-the-31st-Dáil\\_24th-Seanad.pdf](http://www.oireachtas.ie/parliament/media/Committees/factsheets/Fact-Sheet-1-Oireachtas-Committees-of-the-31st-Dáil_24th-Seanad.pdf)

For detailed information, including rules, procedures and protocols on making Submissions to Oireachtas Committees see:

<http://www.oireachtas.ie/parliament/media/michelle/Guidelines-on-making-Submissions-and-Presentations.pdf>

## Scenarios

**Description:** Scenarios are stories about possible futures or aspects of possible futures and how these could arise from current realities. They differ from predictions in that they are not based on probabilities, rather they take into account that people make decisions based on a wide range of factors, that there is a range of possible decisions that can be made and that these carry particular consequences. The purpose of Scenarios is not to pinpoint exactly how various futures might look, but to understand the dynamics or factors that may influence these envisaged futures. Scenarios are widely used in business and in policy planning. Methods used range from simple visioning to quite sophisticated and long-ranging processes involving the use of modelling techniques. The version outlined here is one of the easier and more accessible versions. Whatever version is used, this tool requires a lot of prior preparation, an experienced facilitator and lots of time. However, with some skill and practice it should provide a powerful decision-making tool and if the outputs are presented creatively, a compelling way of communicating policy options to stakeholders.

**Useful for:** Scenarios are useful for setting out policy options, making decisions, illuminating the most influential factors in relation to possible futures. In terms of science-policy communication needs, Scenarios could be very useful in helping policy makers to confront uncertainties as well as identify alternative approaches to environmental issues. It is a good tool to get stakeholders working together opening discussions and building consensus.

**Combining tools:** Brainstorming and SWOT analysis may be required at different stages of the Scenario building process.

**Best time to use:** At the information gathering stage, reviewing the evidence stage or considering the policy options of a policy cycle is best, but can be used throughout policy cycles and research processes.

## Content creation tool

### For use by

- ✓ Scientists
- ✓ Policy makers
- ✓ Intermediaries
- ✓ Research funding bodies
- ✓ Networks

### Resources

Money	!!
Time	!!!

## Instructions for Scenarios

1. Define the problem or issue to be addressed. Ensure that all participants are clear on what needs to be achieved. Also set out the timeframe and scale (local, regional, national, supra-national) involved as this is relevant to the Scenarios developed.
2. Identify the key drivers, factors and trends that are likely to influence the issues. Brainstorming techniques can help here to ensure that you cover as many important factors as possible. In identifying these factors include the STEEPV factors below:
  - Social
  - Technological
  - Economic
  - Environmental
  - Values
3. Rank the key drivers, factors and trends in terms of importance or impact to the decision and level of uncertainty (low and high will suffice). Hence they will be categorised as one of the following:
  - high importance/high uncertainty
  - high importance/low uncertainty
  - low importance/high uncertainty
  - low importance/low uncertainty
4. Concentrating on the two *high importance* categories choose three to four Scenarios to be developed and further fleshed out.
5. Develop the Scenarios into stories. In doing this try to incorporate both desirable and undesirable elements of possible futures into the Scenario. Try to be neither unrealistically optimistic nor unwarrantedly negative. Using the following criteria will help to create well thought-out scenarios:
  - Plausibility: The Scenarios should be plausible
  - Differentiation: The Scenarios should be sufficiently different to each other that they avoid being variations of each other
  - Consistency: Each Scenario must have an inbuilt consistency so that it cannot be undermined by having illogical elements
  - Decision-making utility: the Scenarios should be constructed so that they provide insight into the issues under discussion
  - Challenging: Scenarios that challenge assumptions or the participants conventional wisdom about the future are particularly useful

6. Presenting the Scenarios with some creativity and flair helps to make them more compelling, easier to communicate and better as decision making tools. The following will help to this end:
  - Use a highly descriptive title – try to make it memorable too
  - Sketch out an interesting and well written story
  - Go back to Step 2 and include some of the extra factors and trends that were discarded just to lend nuance and texture to the story (they are not the focus though – just colour)
  - If possible, use visuals such as maps, illustrations, graphs and tables to augment the story
7. When the Scenarios are complete, review them and think about the implications that the various main factors and uncertainties have for the decision or strategy being discussed. Consider doing the following with the Scenarios:
  - See what options are suggested by the Scenarios for policy, strategy or approach
  - Use a SWOT to draw out the opportunities and threats presented by each Scenario

### **Tips for Scenarios**

- Scenarios are commonly used for public policy planning and are powerful tools for looking at environmental issues where there are many potential uncertainties.
- A lot of preparation and even practice will be required if Scenarios are to be used effectively. Do not expect to get it right first time.
- Due to the amount of time and commitment needed to prepare and work through a scenario, they are probably best suited to science-policy networks, project based groups or other groups who work well together.
- Budgeting for a Scenario could include costs associated with venue hire, professional experienced facilitator, short data gathering or desk research as preparation for the exercise, refreshments for the participants.
- The Scenario building process may need to take place over two sessions, depending on the level of prior experience the participants have in the tool, the amount of data gathering that may be needed, the amount of planning required and the level of complexity the group wish to reach.
- Resist the temptation to assign probabilities or most-likely-to-happen labels to the Scenarios. Keep an open mind on all the Scenarios developed. The object of the exercise is not to make most-likely predictions, but to learn and plan for different possibilities.



- Scenarios based on qualitative information about trends and key drivers work really well so do not be concerned if numerical data is lacking, it is not important in the context of this tool.
- So much work is required to produce the Scenario outputs, it is worth presenting the finished Scenarios in a creative and engaging fashion so that the set of Scenarios can be used as a science-policy (or even public awareness) communication piece. This will ensure you can get good value from the resources used.

## Resources for Scenarios

For more instructions, hints and suggestions about developing and using Scenarios see the following links:

[http://www.mindtools.com/pages/article/newSTR\\_98.htm](http://www.mindtools.com/pages/article/newSTR_98.htm)

<http://www.wired.com/wired/scenarios/build.html>

[http://forlearn.jrc.ec.europa.eu/guide/4\\_methodology/meth\\_scenario.htm](http://forlearn.jrc.ec.europa.eu/guide/4_methodology/meth_scenario.htm)

For examples or where Scenarios have been used in relation to biodiversity planning and decision-making processes see the following examples:

<http://www.millenniumassessment.org/en/Scenarios.aspx>

<http://www.naturalcapitalproject.org/pubs/ScenarioGuide.pdf>

Shell has used Scenarios for many years. To see some Scenarios the company has developed around energy futures, see this link:

<http://www.shell.com/global/future-energy/scenarios.html>

To see how Scenarios were used by the European Environmental Bureau (EEB) to examine policy options for waste management, see this link:

<http://www.eeb.org/EEB/?LinkServID=4E9BB68D-5056-B741-DBCCE36ABD15F02F>

## E-Newsletters

**Description:** Producing a regular E-Newsletter is an excellent way of keeping in touch with a science-policy network or community. E-Newsletters are used by a wide variety of organisations from businesses to NGOs to parent-teacher associations! The attraction of an E-Newsletter is that it is relatively easy to pull together and send out via an email list. Once an effort is made to make it interesting and engaging, the E-Newsletter is a very effective and cheap way to communicate with a disparate audience. Although an E-Newsletter is a one-way rather than two-way mode of communication, it is an important addition to the mix of communication methods channels required to sustain on-going science-policy communications.

**Useful for:** An E-Newsletter is useful for keeping those interested in a research area or policy sector informed and engaged. It can be an important tool for science-policy networks to sustain communications between meetings and face-to-face events. This tool can be used by research centres to publicise their research. It is a useful way of presenting a succinct version of environmental science to policy makers and other stakeholders. It could also be used by policy makers to highlight policy areas under review, types of information needed for policy formulation or to request submissions on Green Papers, for instance.

**Combining tools:** An E-Newsletter should be written for a general, but interested audience and should tend towards a journalistic style. Tools such as Press Release and DIY SPI Thesaurus should help here.

**Best time to use:** Can be used throughout policy cycles and research processes.

## Content creation tool

### For use by

- ✓ Scientists
- ✓ Policy makers
- ✓ Intermediaries
- ✓ Research funding bodies
- ✓ Networks

### Resources

Money	!
Time	!!

## **Instructions for E-Newsletters**

### ***Planning the E-Newsletter***

1. Define the audience and from this decide on the types of topics that will be covered and also on the assumptions that can be made about the level of scientific knowledge the audience will have.
2. Decide how often the E-Newsletter will be produced. This should be a regular frequency such as bi-monthly, monthly, quarterly or whatever suits your purposes. The important thing is that it should be regular and realistic. The frequency will depend on how much time can be devoted to it and on how much relevant and interesting material can be written or gathered in the time between issues. Set out a schedule based on the publication frequency.
3. Design the E-Newsletter template. There are dozens of free online newsletter templates to help you do this. These are quick and easy to use with different options to allow you to customise the E-Newsletter with a few simple clicks and no need for any graphic design skill.
4. Set out on the format in terms of the amount of content that each issue will carry. The E-Newsletter could be as short as one page or run to several pages. Just try to be generally consistent with this so that the different issues carry similar amounts of content.
5. Decide on the types of articles that will be included, these might include a news round-up, articles on cutting edge science areas of interest, up-dates on your research from your institution or project, articles on relevant policy areas, opinion pieces, researcher/policy maker profile.

### ***Writing articles for E-Newsletters***

6. Ensure you have a good grasp of the facts and figures related to the topic you wish to write about. Do some research on this, if necessary.
7. Write like a journalist. (See *Writing a Press Release* in the Media Master Class tool). The main points are as follows:
  - Begin with a snappy headline
  - The first paragraph should relate the most important piece of information, such as how a new piece of research relates to a policy, or how it will help protect a threatened species for instance.
  - Be as succinct as possible and use plain language.
  - Answer the 5Ws and H – who, what, where, when, why and how
  - Use background information to support the article, but do not start with it.
  - Use quotes to add human interest and colour.

8. Using visuals make the e-newsletter more colourful and appealing. Visuals can be really informative also.
9. Spend time proof reading and editing the articles.

### **Tips for E-Newsletters**

- The E-Newsletter can be used as a way to exchange views and information if others are encouraged to contribute to it. This would be good option for science-policy networks to encourage communication between science and policy communities, but also for research institutions or multi-disciplinary research teams so that researchers can learn about each other's work.
- E-Newsletters are often well produced to begin with but sometimes the enthusiasm for producing them dwindles; try to avoid this by integrating the tasks into your work schedule and being realistic about the frequency of the issues. Also having other contributors to the e-newsletter will help in this respect.
- An E-Newsletter would work well for research funding bodies who wish to spread the word to interested scientists, policy makers, intermediaries and publics about the research projects they are funding.

### **Resources for producing E-Newsletters**

Some nice and easy E-Newsletter templates can be found at the following sites:

<http://www.campaignmonitor.com/templates/>

<http://www.hongkiat.com/blog/excellent-free-html-newsletter-templates-best-of/>

For more tips and hints on how to write E-Newsletter articles see the following links:

<http://www.businessdesignstudio.com/resources/articles/how-to-write-newsletter.html>

<http://www.procopytips.com/write-newsletter-articles>

<http://mylist.co.za/tips-a-tricks/53-10-tips-on-writing-effective-newsletter-articles>

To see an example of a science-policy E-Newsletter, have a look at this excellent resource from the European Commission: Science for Environmental Policy:

<http://ec.europa.eu/environment/integration/research/newsalert/pdf/brochure.pdf>

The Trinity Centre for Biodiversity Research produces a monthly E-Newsletter, to browse some issues of this:

<http://www.tcd.ie/tcbr/news/newsletters.php>

## Science-Policy Blog

**Description:** Blogging has become a popular and accessible way of communicating to a wide audience. Blogs are typically produced by an individual or a small number of people. The term *blog* is short for web log, so really it is a journal or diary written for the internet. A Blog is informal in style, but the material covered can range from light and humorous posts to more serious contributions all on the same Blog. As blogging lends itself to being casual and even quirky at times, it is designed for engagement and so is useful for science-policy interfaces. Initiating a Blog does not require any knowledge of web or graphic design. There are a number of sites that provide blog templates and host the blog free of charge. Blog posts are relatively short and can be produced quite quickly. To work well though, Blogs must be updated with great frequency.

**Useful for:** Blogs are very versatile and can be used by individual researchers, research teams or science-policy networks. A Blog would work well to keep a science-policy network in touch between meetings. Blogs can also be set up to allow readers to comment and so this one-way form of communication can become interactive. They are also a nice way of extending communication about a research project beyond the research team or science-policy network.

**Combining tools:** A Blog could be used as part of a suite of tools to communicate about a specific project, policy area or research field. A Blog can be used to balance and compliment more in-depth forms of communication like Seminars, 1:3:25 Reports and so on.

**Best time to use:** Can be used throughout policy cycles and research processes.

## Content creation tool

### For use by

- ✓ Scientists
- ✓ Intermediaries
- ✓ Networks

### Resources

Money	!
Time	!!

## Instructions for a Science-Policy Blog

1. Set up the Blog using one of the many Blog design and hosting sites available (see the *Resources* section for suggested links)
2. When setting up the Blog, remember to activate the comments section to enable will be interaction between the Blog and the readers.
3. Define the audience. Think about who you wish to aim the Blog at, what they are interested in, what level of knowledge they have about the area and what aspects of the project they need to know about. If it helps, have a particular person (real or virtual) in mind as you write.
4. Plan the types of Blog posts you intend to produce and also a list of possible topics. It is a good idea to do this as Blogs need to be updated with great frequency, every few days at least, and some forward planning is advisable.
5. Most posts on a Science-Policy Blog will probably be 300-500 word pieces about a research project finding, a short explanation of a particular policy, your thoughts on some aspect of a policy sector or an interesting experience you have had in your research. These can be interspaced with other Blog posts, such as shorter one-paragraph pieces as updates on the research process and visuals, like photos, graphs and maps that are related to the research.
6. Create an attention-grabbing headline for each Blog post.
7. A Blog post should be written in a casual style, a good rule of thumb is to write like you speak and in your own voice. It is fine to use contractions such as *isn't*, *can't*, *won't* and so on to give a good conversational flow to the Blog. It is fine to be amusing but do not force this.
8. For Blog posts with a word count of 300-500 words, the main point of the piece should be made in the first 100 words and should follow the *inverted pyramid* of journalistic writing (see *Writing a Press Release* in The Media Master Class)
9. The first two sentences need to be eye-catching. This is the hook of the piece, think about why the audience should be interested.
10. Before publishing your post, check the spelling and grammar. Also it is a good idea to read it aloud to ensure that it flows well.

## Tips for Science-Policy Blogs

- When beginning a Science-Policy Blog, subscribe to and read a variety of other quality blogs. This will help inspire your posts and help you to find your style.

- Many people find blog posts difficult to write at first, but with practice it becomes a lot easier and quicker. So do persevere with it.
- While many bloggers are concerned with increasing the internet visibility of their blog by using search engine optimisation (SEO) techniques, the latest thinking is that the best way to publicise your Science-Policy Blog is through posting links to your Blog posts on your social media sites such as Facebook, Twitter and LinkedIn. If your Blog is used to connect a science-policy network, then a simple email to your network mailing list may be all you need.
- While there are a lot of resources online that concentrate on the technical aspects of blogging, when it comes down to it, content is king and what matters the most is the quality of the posts. Concentrate on this and you are well on the way to having a successful Science-Policy Blog.

## Resources for a Science-Policy Blog

Some suggestions for blog templates:

<http://www.simplesite.com/pages/StartWizard.aspx>

<http://wordpress.com/>

<http://www.blogger.com>

To learn about the technical aspects of starting a blog, see this web site:

<http://www.blogtipsandtricks.com/>

For more hints and tips on creating content for a blog:

<http://www.teachingenglish.org.uk/help/how-to-write-a-good-blog>

<http://www.dummies.com/how-to/content/writing-a-good-blog.html>

<http://www.searchenginejournal.com/5-5-tips-to-write-amazing-blog-posts-even-if-you-are-a-newbie-seo-without-seoing/61913/>

Some examples of nicely written blogs about science, science-policy and science communication:

<http://news.sciencemag.org/scienceinsider>

<https://planetgeogblog.wordpress.com/publications/>

<http://grist.org/climate-energy/>

<http://www.scilogs.com/>

The following is a bit more than a blog, but it has a quirky take on climate change science that you might find inspiring when considering angles for blog posts:

<http://www.climatebites.org/>

## Video Shorts

**Description:** Many research institutions use short videos as public outreach tools to publicise their research. The benefits of doing so include the capability to reach large audiences easily and the ability of video to engage an audience. It is a small jump to extend this to science-policy communication. Such Video Shorts can be made cheaply enough as pod casts and simply loaded on to the internet. However, it might be worth hiring a professional video maker to get a slick and professionally finished product. This tool describes the preparation and scripting of a video to showcase research to policy makers.

**Useful for:** To a time-pressed policy maker, a 3-5 minute video short offering a condensed but informative account of a research project and its policy implications is useful in deciding whether or not the research is relevant for their policy area.

**Combining tools:** This tool should be considered as the beginning of a science-policy communication process. It opens the discussion, which can then be continued through two-way communication tools such as Face-to-face Meetings, Seminars and so on. Video Shorts would make really good opening pieces or introductions to collaborative tools such as Seminars.

**Best time to use:** This tool can be used throughout policy cycles and research processes, but is a useful addition to the initial data gathering stage.

## Content creation tool

### For use by

- ✓ Scientists
- ✓ Intermediaries
- ✓ Networks

### Resources

Money	!!-!!!
Time	!!!



## Instructions for Video Shorts

1. It is a good idea to contact your institution's communications office as they may be able to help you put your Video Sort together.
2. Establish the goal of the Video Short. It is probably to explain your research and its policy implications.
3. Identify the target audience. This will most likely include policy makers, intermediaries such as the media perhaps and other stakeholders
4. Set out the three to four main messages you want to communicate to the target audience. These should include the problem you are researching, the research findings and what these findings mean for society and/or policy.
5. You are making a Video Short, so think visually. Consider where the filming could take place. While laboratory shots are interesting why not mix these with a different location, such as the outdoors for instance? Try to make the locations relevant to the research, for instance the area where you carried out fieldwork. Will you be standing, sitting or walking as you speak? Are there particular shots that are illustrative of your work and visually interesting?
6. Prepare a three to five minute script for your video, this equates to 300 to 500 words. Since you will be speaking it - write it as you would speak it. While it is unwise to be overly prescriptive about the exact content of the script, a suggested structure would be as follows:
  - Begin with your name, institution and the area of research
  - In one sentence, encapsulate the piece of research you want to talk about in a nut shell
  - Explain what this research will tell you and in doing so relate this directly to the interests of the target audience
  - Set out clearly the policy implications of the research
  - Back this up with a succinct description of your findings
7. It may be necessary to play around with the order of these elements to suit your particular research.
8. In the script use short sentences and plain language. Minimise the use of technical language. If you need to use technical terms, explain them clearly. Allow for pauses every couple of lines so that you can breathe properly and not appear rushed.
9. The trick is to come across as natural as possible and not sound scripted or stilted. It may help to use bullet points instead of a full script so that you do not sound like you

are reading to the camera. Different techniques work for different people, so practice this to find out what works best for you.

10. Become familiar with your script before filming. The better you know what you are going to say the more relaxed you will seem.
11. While filming look at the camera. This can be a bit disconcerting, but the video producer will help you with this.
12. If you make a mistake, do not panic or get flustered. Simply breathe and start again from the beginning of the paragraph. The video producer will be able to edit this together.
13. If you do not have the benefit of a video producer and are recording yourself using a web cam, just practice your script until you are competent. Record it a few times and get someone to help you pick the best version to load up on to YouTube, Vimeo or similar channel.
14. Once your video is uploaded, you can publicise it by creating links through social media sites such as Facebook, Twitter and LinkedIn.

### **Resources for Video Shorts**

This is a site about agricultural science; however it has some nice hints about tips about scripting and creating Video Shorts for communicating research:

<http://www.ciard.net/pathways/using-video-communicate-research-outputs>

This site has some good examples of research Video Shorts for UK universities:

<http://www.nutshell-videos.ed.ac.uk/>

To see a Video Short about the BRIDGE research project for which this toolkit was built, follow this link:

<http://www.youtube.com/watch?v=IBbiNGN9rFQ>

## Evidence-based Plans

**Description:** Evidence-based Plans are documents produced by policy makers to outline the types of evidence that is needed to plan and formulate new policy and legislation and to review existing legislation and its implementation. Evidence-based Plans are published by the UK Department of Environment, Food and Rural Affairs (DEFRA) on a wide range of topics. They set out current and near-term policy objectives and corresponding near-term evidence needs. Long term evidence needs are also detailed. They are aimed at researchers and research institutions.

**Useful for:** Communicating to researchers about the areas and type of research needed for policy. May help to build trust and mitigate any transparency issues between policy makers and researchers.

**Combining tools:** This tool can be used to open up discussions about research based on policy needs. Tools such as Seminars could be utilised to facilitate two-way conversations about the evidence and research required to inform particular policy objectives.

**Best time to use:** When reviewing policy and planning research strategies.

## Content creation tool

### For use by

- ✓ Policy makers
- ✓ Funding bodies

### Resources

Money	!
Time	!!

## Instructions for Evidence-based Plans

1. The Evidence-based Plan is aimed at researchers and should link policy goals with evidence needs and ideally make the next step to setting out quite specific research needs.
2. The DEFRA Evidence-based Plans have the following elements:
  - Key policy objectives and outcomes for the policy area in question are set out.
  - An account of current evidence objectives which are set out in categories and explained in some detail.
  - The evidence objectives are related back to the policy objectives to see how well they match.
  - Near-term evidence needs for policy are set out – these are high priority needs.
  - Based on quite specific policy goals – explicit research needs are set out (see Figure 21 below).

**Figure 21 Linking research needs to policy objectives (DEFRA, 2013:5)<sup>8</sup>**

Water Efficiency	
Policy Objective	
Achieve a sustainable supply-demand balance	<ul style="list-style-type: none"> <li>- Improve our understanding of customer behaviours and barriers to the uptake of water efficiency measures</li> <li>- Assessing the effectiveness of different interventions to encourage water savings and behaviour change</li> </ul>
Reduce water consumption by domestic and non-domestic users	<ul style="list-style-type: none"> <li>- Investigating new technologies for water re-use</li> <li>- Review the effectiveness of enhanced capital allowance schemes for water efficient products</li> <li>- Develop innovative approaches to reducing water consumption</li> <li>- Examine how incentives might stimulate businesses to reduce demand i.e. innovative products, financial incentives</li> </ul>
Reduce leakage levels	Investigate how social and environmental costs and benefits are included in water companies' sustainable, economic level of leakage
Encourage new large domestic developments and non-domestic buildings to be highly efficient in their water use, especially	Develop guidelines to ensure water is fully taken into account in new developments, particularly in water stressed areas.

- Longer term challenges in the policy area are set out and these are related to the types of evidence needed to deal with these challenges. The corresponding research needs are described.
- Planned approaches to meet the near-term and longer-term evidence needs are detailed. These include pinpointing the agencies and department sections responsible for this and also providing some information on the communication that needs to happen between these entities.

<sup>8</sup> DEFRA (2013) *Water availability and quality evidence plan*. DEFRA: London.

## Resources for Evidence-based Plans

To browse some of DEFRA's published Evidence-based Plans, see:

<https://www.gov.uk/government/publications/evidence-plans>

To see the DEFRA Water availability and quality Evidence-based Plan see:

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/221053/pb13933-evidenceplan-water-availability-quality.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/221053/pb13933-evidenceplan-water-availability-quality.pdf)

## Case Studies

**Description:** Case Studies are brief engaging stories or descriptions of real life examples or experiences. They are often used to illustrate success stories, good practices or, in the business world, the types of services that a particular firm can offer. Case Studies generally state a problem to be tackled or goal to be achieved, explain the techniques and strategies used and describe the outcome.

**Useful for:** Finding and publishing Case Studies of your science-policy communication work is an excellent way to showcase the positive impacts of communication between researchers, policy makers and other stakeholders. It also provides a learning opportunity for stakeholders who wish to, or need to, become involved in SPI and offering them ideas and inspiration.

**Combining tools:** Case Studies can be used alone, or used as examples to enhance other content such as 1:3:25 Reports.

**Best time to use:** This can be prepared when annual or similar reports are being prepared and would be a useful exercise as part of a policy review. It would also fit well into the review and evaluation stages of policy and research cycles.

## Content creation tool

### For use by

- ✓ Research funding bodies
- ✓ Research institutions

### Resources

Money	! - !!
Time	!!!

## Instructions for developing Case Studies

1. Identify what you want to achieve by publicising the Case Studies of the research you are funding or managing. This will help to define the type of Case Studies that should be featured and the information about each one that needs to be included.
2. Develop a template for the Case Studies to ensure consistency, use the example template in Figure 22 below as a guide. Tailor this to your own needs, based on what you are trying to achieve as defined in Step 1 above. You may find that you do not need all the information suggested here or indeed that you wish to add new categories such as what lessons were learned, or the name of the specific piece of legislation impacted.

Figure 22: Template for the preparation of case studies

<b>Title</b>	Knowledge exchange in Belize
<b>Area</b>	Belize
<b>Date</b>	2007
<b>Sector</b>	Biodiversity
<b>Tools used</b>	Face-to-face meeting with intermediaries
<b>Short description</b>	Scientists in Exeter and California researching the role of parrot fish in keeping coral reefs healthy communicated their findings at a meeting of the Fisheries Cooperative in Belize. As a result, the fishermen successfully lobbied the Belize government to introduce legislation to protect that species.
<b>Aims and objectives</b>	To promote more sustainable fishing of parrot fish
<b>Target audience</b>	Intermediaries, stakeholders – in this instance fishermen
<b>Activities and outcomes</b>	A research project carried out by scientists Peter Mumby from Exeter University and Robert Carpenter from California State University found that parrot fish play an important role in keeping coral reefs healthy. The parrot fish do this by eating seaweed that might otherwise smother the reef. However, in Belize the overfishing of this species was a threat to the region's coral reefs. Imposing bans on overfishing would protect the parrot fish and so help to ensure the conservation of important coral reef habitats. Such overfishing was already a focus of campaigns by conservation groups such as the Wildlife Conservation Society. An article about the study published in the News Section of <i>Nature</i> magazine came to the notice of the Belize Fisheries Cooperative. The cooperative invited Peter Mumby to speak at a meeting of its members about the role of parrot fish in maintaining the coral reef ecosystem. Mumby explained his study and also detailed the links between protecting the parrot fish, ensuring the health of the coral reef and the positive effect this would have on populations of other fish stocks. During the meeting, the 170 fishermen attending voted unanimously to recommend a ban on the overfishing of parrot fish, mainly to protect stocks of their target fish species. Support for this measure coming from within the fishing industry, helped provide a political impetus for the policy makers. Mumby worked with the Belize government to draft a raft of new laws to protect the parrot fish and these laws were passed in 2009.
<b>Limitations</b>	The communication process described here was largely unplanned and in some ways was a result of a series of happy accidents. However, this example does demonstrate the potential power of intermediary groups in creating political will for better environmental legislation and the role of that good science communication can have in that process.
<b>Examples of dissemination</b>	See the original <i>Nature</i> article at: <a href="http://www.nature.com/news/2006/060102/full/news060102-9.html">http://www.nature.com/news/2006/060102/full/news060102-9.html</a>
<b>References and web links</b>	See details of this and other NERC Knowledge Exchange <sup>9</sup> examples at: <a href="http://www.nerc.ac.uk/publications/corporate/documents/knowledge-exchange.pdf">http://www.nerc.ac.uk/publications/corporate/documents/knowledge-exchange.pdf</a>  Mumby P, Dahlgren C, Gill A, et al. Fishing, Trophic Cascades, and the Process of Grazing on Coral Reefs. <i>Science</i> [serial online]. January 6, 2006, 311(5757):98-101.

<sup>9</sup> Natural Environment Research Council, UK Knowledge Exchange Programme

3. As a Case Study document is used to present your research, the design element is quite important as it should be engaging and aesthetically pleasing. To this end, it is worth having a professional designer to layout and assemble the document. Also eye-catching photos and illustrations can be used to good effect here.

### **Tips for preparing Case Studies**

- Examples of how Case Studies could be used include presenting a specific research project which is in progress, showing the importance of a particular research theme for protecting the environment or demonstrating how particular knowledge or research findings subsequently impacted and informed policy.
- Keep the Case Studies short and sweet. Try not to over-write them. Think of them as a snap-shot of how research can impact positively on policy. Aim for between 200 and 500 words and if producing a document of case studies try to keep them roughly of similar lengths.
- Join the dots for the reader by linking not just the science to the policy, but also how the policy enhances or helps to protect the environment.

### **Resources for preparing Case Studies**

For further tips and advice on preparing Case Studies see the following resources:

<http://www.b2bento.com/2011/08/the-ingredients-of-a-killer-b2b-case-study/>

<http://bestpracticehub.com/onepage-case-study-template-bbpn/>

For examples of how Case Studies can be used in demonstrating the application and use of science including environmental science, see the following examples:

Science Foundation Ireland (Little book of Irish Science):

<http://www.sfi.ie/assets/files/downloads/Publications/Organisation%20Publications/The%20Little%20Book%20of%20Irish%20Science.pdf>

UK National Environment Research Council (Knowledge Exchange: Sustainable solutions form environmental science):

<http://www.nerc.ac.uk/publications/corporate/documents/knowledge-exchange.pdf>

UK Energy Research Centre (Good practice brochures):

[http://www.managenergy.net/management\\_bpbrochure.html](http://www.managenergy.net/management_bpbrochure.html)



## Media Masterclass for Researchers

**Description:** The media is an important intermediary in science-policy interfaces. Policy makers are influenced by the media directly and also indirectly via public opinion, which is partially shaped by the media. In addition, most of the information the general public have about environmental issues is learned through the media. Consequently, there may be times when scientists wish to or are requested to communicate through the media. While media relations are often part of the everyday operations of politicians, senior officials and other intermediaries, this is generally not the case for scientists. This tool is aimed at researchers to give them the basic skills to deal competently with print and broadcast media. Media refers to print media such as newspapers, magazines, trade or specialist publications and also broadcast media such as television and television news, current affairs and special interest programmes. Increasingly, many of these formats are now available online and this guide is equally relevant to those media channels also. This Masterclass covers press releases and articles, media interviews and letters to the editor.

**Useful for:** The information given here is a good starting point for researchers who have received a request to comment in the media, who wish to use the media to communicate about their research or who want to contribute to a media discussion about an environmental issue.

**Combining tools:** Media communication can be an important in the mix of communication used to impart research finding and technical information. This tool can be used alongside Science-Policy Blogs, 1:3:25 Reports and Seminar presentations. The DIY SPI Thesaurus is a valuable tool in preparing for media communication.

**Best time to use:** Can be used throughout policy cycles and research processes.

## Content Creation Tool

### For use by

- ✓ Scientists
- ✓ Networks

### Resources

Money	!
Time	!!

## Instructions for communicating through the media

### *Before you begin*

1. Set out key points you wish to make in your communication via the media. You have a responsibility to ensure that your findings and the science of these findings is communicated accurately, so think about ways of explaining the technical aspects in a clear way using plain language, minimising technical terms while keeping the science as accurate as possible.
2. Be sure to contact the communications or press office in your institution or organisation early in the process. This is important as firstly, most institutions or organisations require their employees to notify them if they are talking about work through the media and secondly, the press officers will have a wealth of knowledge and experience that will help you.
3. There are a number of main ways to communicate through the media which will be covered in this guide. These are:
  - Writing an article for a newspaper or magazine
  - Writing a press release
  - Writing letters to the editor
  - Preparing for a media interview
  - Speaking on radio
  - Speaking on TV

### **General resources for dealing with the media:**

The following guide is particularly for environmental scientists, it was published by the UK Natural Environment Research Council in 2011:

<http://www.nerc.ac.uk/publications/guidance/documents/engaging-the-public.pdf>

This guide covers a little of everything , a great quick guide to the media:

<http://figureoneblog.wordpress.com/2013/04/16/how-to-become-a-science-celeb-tips-for-being-interviewed-and-writing-press-releases/>

This article gives a useful insight into dealing with the Irish media

<http://www.mulley.net/2007/05/01/when-contacting-irish-journalists-some-tips-from-journalists-themselves/>

## ***Writing an article for a newspaper or magazine***

Reasons you may want to write an article for a newspaper or magazine include publicising your research project to an audience that is wider than the academic community or contributing to a policy debate already in the public arena.

1. The first task is to decide on the topic and angle of the article and to decide where you should try to publish the article. Again you should liaise with your institution's press officers here as they will be able to advise you on what types of publications to aim for and how you should pitch the article.
2. Make contact with the editor of the publication in question. Email is a good option here. Explain who you are, what your area of expertise is, what topic you want to write about, what you want to say (your angle) and why your contribution is important. If the editor is interested, then ask for the editorial guidelines for the publication. If your idea is rejected, try a different publication.
3. To write the article, gather all the information you need and organise it.
4. Create a descriptive and punchy headline.
5. The first sentence of this sort of an article needs to hook the audience. Make sure it is interesting, that it gets to the heart of why your research or opinion is important for the audience and that it is not overly long (limit it to around 20 words maximum).
6. Make sure the article has an **introduction** clearly signposting what the article is about and where your argument is heading, a **main body** with all the information and a **conclusion** to sum up and end the article.
7. Stick rigidly to the editorial guidelines for the publication. This will probably cover the style of the article (formal or informal?), the word count, how illustrations need to be labelled, captioned and submitted and so on.
8. Break up the article into paragraphs of three or four sentences and use sub-headings where necessary for ease of reading.
9. Whether the style is formal or informal, try to make your writing clear, unambiguous and entertaining to read.
10. Use adjectives, adverbs, metaphors and opinions to create colour and add life to the article. Feature and opinion pieces usually have longer word counts allocated to them and there is less pressure to be as economical with words as with a news piece.
11. Proof-read your article, or better still, have someone else proof-read it before you submit it to the publication.

## Resources for writing an article for a newspaper or magazine

For further writing tips see:

<http://www.onestopenglish.com/community/lesson-share/pdf-content/exams/exams-article-writing-cae-and-cpe-lesson-plan/147546.article>

<http://www.freelancewriting.com/articles/magazine-article-writing-tips.php>

For advice on writing editorials or op-ed pieces, see:

<http://grammar.yourdictionary.com/grammar-rules-and-tips/tips-on-writing-newspaper-editorial-format.html>

<http://www.videojug.com/film/how-to-write-an-editorial>

This blog post is written for social scientists, but it contains good points for all experts writing for the media, also look out for the link to advice on op-ed writing:

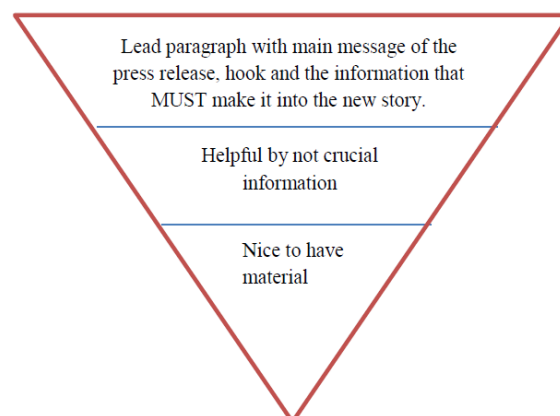
[http://blogs.lse.ac.uk/impactofsocialsciences/2013/09/03/anthropologists-engaging-with-media/?utm\\_source=feedburner&utm\\_medium=email&utm\\_campaign=Feed%3A+ImpactOfSocialSciences+%28Impact+of+Social+Sciences%29](http://blogs.lse.ac.uk/impactofsocialsciences/2013/09/03/anthropologists-engaging-with-media/?utm_source=feedburner&utm_medium=email&utm_campaign=Feed%3A+ImpactOfSocialSciences+%28Impact+of+Social+Sciences%29)

## ***Writing a press release***

The reasons you might want to write a press release include publicising particularly interesting or newsworthy research findings, announcing the beginning of an important or innovative research project or recruiting help from the public with your research.

1. Before writing and submitting a press release, liaise with your organisations press officer or communications office.
2. Press releases are written using an inverted pyramid structure, which is the opposite of most academic writing (see Figure 23 below). Whereas academic writings begin by setting out the background of the study and close with the findings and conclusions, science-related press releases offer the outcome and significance of the science first and background information come further down the page.
3. A press release should run to a maximum of 300-400 words.
4. Begin with a catchy headline.
5. The first paragraph should contain all the information that absolutely has to be included in the published news item.
6. The middle section of the press release contains helpful information to back up the claims or messages in the first paragraph.
7. The end of the press release has the nice-to-have (but not strictly necessary) elements of the story. If an editor has to cut a story to make it fit a particular word count, he or she will cut the bottom paragraphs. So, put the story elements you are prepared to lose at the end of the press release.

**Figure 23: The journalism inverted pyramid**



8. Keep the style plain and to the point. Use shorter rather than longer words. Do not use adjectives, adverbs or metaphors
9. Include a telephone contact so that if a journalist picks up the story he or she can call to find out more details.
10. A press release is not a teaser; put all the important things in there. Do not leave out crucial information in the hopes that a journalist will call to fill in the missing pieces. This is very unlikely to happen.
11. Keep in mind that journalists are always under time pressures with deadlines. Make your press releases clear and understandable. If you absolutely have to use technical terms, explain them clearly.
12. Distribute the press release via your organisations press officers; they will have the contacts and experience to do this effectively to give you the best chance of getting coverage.

### **Resources for writing press releases**

For more tips and hints on writing press releases:

<http://www.siliconrepublic.com/news/item/16623-10-ways-to-write-great-pres>

[http://www.24-7pressrelease.com/press\\_writing\\_tips.php](http://www.24-7pressrelease.com/press_writing_tips.php)

For some examples of science-related press releases, see the following links:

<http://www.eurekalert.org/bysubject/archaeology.php>

<http://www.tcd.ie/Communications/news/pressreleases/>

## ***Writing letters to the editor***

Reasons for writing a letter to a newspaper or magazine are to make a contribution to a debate already in the media or to place a particular issue in the public domain and begin a public dialogue about it. Often, letters have a better chance of being printed than press releases and they are a good way of addressing a current issue quickly.

1. Contact your organisation's press officer to let them know you intend to write a letter to the media and to get any advice they might have.
2. You can address the letter simply 'To the Editor' or if you know the editor's name you could use it. Some publications have a set way of addressing the letter, for example letters to The Irish Times typically use Dear Madam or Dear Sir, depending on the gender of the editor at the time.
3. Limit the letter to 300 words or less. Shorter letters have a far better chance of getting printed.
4. Use extremely plain language. If you really have to use a technical term, explain it clearly.
5. Your writing should be short, sharp and succinct
6. Place the key point in the first line of the letter. Let the readers know up front what the letter is about.
7. Back up any claims or statements with evidence. Simple statistics and numerical evidence can work well, but limit this to one or two figures in the letter.
8. Include suggestions or recommendations if you have them.
9. Sign the letter with your title, name and position, also include your contact details as the editorial team may need to call you to confirm that you wrote the letter.
10. Again, check with the press officer in your organisation as it may be necessary to submit the letter through him or her.
11. As always, proof-read and check for clarity prior to submission.

## **Resources for writing letters to the editor**

For more hints and tips about writing:

[http://ctb.ku.edu/en/tablecontents/sub\\_section\\_main\\_1239.aspx](http://ctb.ku.edu/en/tablecontents/sub_section_main_1239.aspx)

Advice for writing a letter to the editor of *The Irish Times*:

<http://www.irishtimes.com/debate/letters/letter-guidelines>

## *Preparing for a media interview*

Unlike press releases, article or letters to the editor, a media interview is often initiated by journalists rather than the interviewee. Interviews may be for print or broadcast media, they may a simple request for a comment, or a longer piece. Broadcast interviews may be live or pre-recorded and edited. There are lots of commonalities between all these but each has its own particular needs too.

1. When contacted by a journalist or media researcher with a request for an interview or a comment, find out the following:
  - What the interviewer wants to talk to you about
  - What the programme is and what angle is being taken on the issue in question
  - Is your interview to be live or pre-recorded
  - If anyone else is being interviewed about the issue on the programme (and who they are!)
2. Get a contact number from the person who contacted you and give them a time when you will call them back.
3. Contact your organisation's press officer who will help you prepare for the interview, or help you formulate your comment, if that is required
4. Media interviews require quite a lot of preparation, particularly if you are not used to doing them. Set out three to four main points that you want to get across, and be prepared to stick to them at all costs.
5. Assume the interviewer and audience know absolutely nothing about your area of research and note down some plain language phrases and ways to help you explain it clearly. Be descriptive if you can. If you have prepared a DIY SPI Thesaurus, this will come in very useful here.
6. You may be nervous, but good preparation will help with this. Remember, you are the expert; that is why the journalist wants to interview you.
7. The following sections talk you through the experience of the following:
  - Making a comment to a newspaper, magazine or broadcast news programme
  - Radio interviews
  - Television interviews



## Resources for preparing for media interviews

For more hints and tips on doing media interviews see these guides:

<http://www.guestfinder.com/successful.htm>

[http://www.scilogs.com/communication\\_breakdown/tv-interview-prep/](http://www.scilogs.com/communication_breakdown/tv-interview-prep/)

The following guide is written for particularly for authors who are being interviewed about a book they have written, it is though a great guide in any circumstances:

[http://www.westwindcos.com/releases/33\\_Radio\\_Interview\\_Tips.htm](http://www.westwindcos.com/releases/33_Radio_Interview_Tips.htm)

### ***Making a comment to print or broadcast media***

1. Use short, to the point, concrete statements. Whether for print or broadcast, assume your comments will be edited and shortened. If you use long qualifications or caveats, it is likely these will be cut and your meaning will be changed. For broadcast media, try to keep each sentence to about 10 seconds, if it is any longer it may get truncated in the editing room.
2. Keep focused on the key points you want to make. If the interviewer takes you in a different or irrelevant direction, politely return to your key points.
3. Decline to answer questions that are not related to your area of expertise.
4. If your comment is for radio, stand up when you are speaking and smile. Although it sounds odd, this does make you sound more relaxed, assured and is generally received better by audiences.
5. If your comment is on television, look at the interviewer, not the camera.

## *Doing a radio interview*

1. If you can, stand up when you are speaking and smile. Although it sounds odd, this does make you sound more relaxed, assured and is generally received better by audiences.
2. Use notes.
3. Use short, to the point, concrete statements. If the interview is pre-recorded, assume your comments will be edited and possibly shortened. If you use long qualifications or caveats, it is likely these will be cut and your meaning will be changed. For broadcast media, try to keep each sentence to about 10 seconds, if it is any longer it may get truncated in the editing room.
4. Use simple language, for example use 'this result means' instead of 'this result infers'.
5. Keep focused on the key points you want to make. If the interviewer takes you in a different or irrelevant direction, politely return to your key points.
6. Decline to answer questions that are not related to your area of expertise.
7. Paint pictures with your words – use appropriate metaphors if you can such as 'an area twice the size of Ireland'
8. If you are being interviewed in a 'panel' situation with another interviewee opposing your opinions or questioning your findings, keep really calm and stick to the key points you have set out.
9. It is a good idea to record and listen to the interview afterwards, this will help you pick up on anything you would like to note and improve on for the next time.

### ***Doing a television interview***

1. Once you have planned your key points, plan your outfit! Stick to plain colours over patterns and a smart or smart/casual style.
2. Look at the interviewer or presenter, never at the camera.
3. Use short, to the point, concrete statements. If the interview is pre-recorded, assume your comments will be edited and possibly shortened. If you use long qualifications or caveats, it is likely these will be cut and your meaning will be changed. For broadcast media, try to keep each sentence to about 10 seconds, if it is any longer it may get truncated in the editing room.
4. Use simple language, for example use 'this result means' instead of 'this result infers'.
5. Keep focused on the key points you want to make. If the interviewer takes you in a different or irrelevant direction, politely return to your key points.
6. Decline to answer questions that are not related to your area of expertise.
7. Paint pictures with your words – use appropriate metaphors if you can such as 'an area twice the size of Ireland'.
8. If you are being interviewed in a 'panel' situation with another interviewee opposing your opinions or questioning your findings, keep really calm and stick to the key points you have set out.

## **Appendix: Templates for BRIDGE group exercises**

The following templates are provided as aids for organisers of science-policy workshops or breakout seminar sessions.

Each template has a truncated version of the exercise instructions to act as prompts for the facilitator and participants in working through the exercise. It is imperative that the facilitators and organisers of the event are familiar with the full instructions and background information for the exercise they are using.

These templates will work best printed out as increased sized documents on A3 paper so that participants will share them as this will help to encourage team work and discussion during exercise.

Where applicable there is space provided on the templates where the issue or policy goal being discussed can be inserted. This helps keep the participants focused.

The templates provided here are as follows:

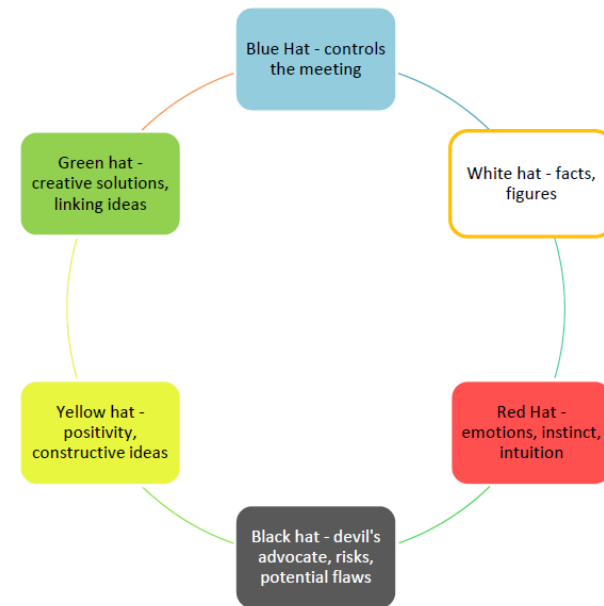
- The 6 Thinking Hats
- The Research-Policy Matrix
- Force Field Analysis
- The SPI DIY Thesaurus
- Influence Mapping
- SWOT (Strengths, Weaknesses, Opportunities and Threats) exercise
- Writeshop Planning

## 6 Thinking Hats Exercise Template

**Issue:**

### Steps

- Group agrees on a facilitator from their number – this will be the blue hat
- Facilitator ensures that everyone understands the issue (this can be written in the space above for convenience) and the hat colours
- As in the template, the order is as follows – blue, white, red, black, yellow and green
- In this instance, you have 20 minutes – so give no more than four minutes to each hat!
- The blue hat asks the entire group to discuss the issue from the different perspectives beginning with white hat thinking and then moving through red, black, yellow and green hat thinking. (*Tip: Use the questions on the 'Hats' sheet*)
- The blue hat (or facilitator) records all views on the flip chart
- The blue hat sums up the main points and, with the agreement of the group, decides on the conclusion



See further explanations for each hat on the accompanying sheet

## What do the 6 Hats represent?

**Blue:** The blue hat controls or 'chairs' the discussion, keeping everyone on track and making sure all hats contribute and are heard. When the discussion dries up, or if it becomes unbalanced, the blue hat can request input from particular hats to counteract this. The blue hat also looks for ways to move the issue forward. The blue hat directs the summing up process at the end. Where there is no note-taker, the blue hat can fill that role too.

*Q. How can we sum up this discussion? What is the overall conclusion?*

**White:** The white hat represents objective, neutral thinking. It concentrates on facts, figures and information that is known or needed. Past trends are used to predict present and future events.

*Q. What are the facts and figures?*

**Red:** The red hat represents emotional thinking. It concentrates on feelings, gut instinct and intuition. It concentrates on judgements and suspicions as well as how other people will react emotionally to the issue, particularly those who are not familiar with the reasoning behind decisions.

*Q. What is your gut reaction? What feelings are involved?*

**Black:** The black hat represents negative thinking. It concentrates on potential risks, difficulties and reasons why the policy or plan may not work. It concentrates on caution and on potential flaws in the issue under discussion. This helps the group eliminate or mitigate negative and to prepare adequately for risks. This is a very beneficial part of this exercise and helps to 'toughen' up the plan making it more robust.

*Q. Why can't we do this? What prevents us? Any risk?*

**Yellow:** The yellow hat represents positive, optimistic thinking. It concentrates on the benefits and value of the policy or plan and on the reasons why it will work. The yellow hat proposes positive, constructive ideas and suggestions. It helps keep the mood upbeat when things seem difficult.

*Q. How can we do this? Why will it work?*

**Green:** The green hat represents creative thinking. It concentrates on new innovative ideas and creative solutions. It employs little critical thinking and comes up with alternative solutions and ideas.

*Q. How do we overcome the difficulties or weaknesses? Are there additional benefits?*

## Research-Policy Matrix Exercise Template

**Policy goal(s):**

### Steps

- Group agrees on a facilitator from their number
- Group agrees on the policy goals being discussed (these can be written in the space above for convenience)
- Using the matrix template provided as a guide, draw a matrix on the flipchart, filling in the goal and stages (examples are given on the template, but you may need to construct your own depending on the policy goals )
- Participants write research evidence needed on post-its (this can be existing research, current projects they know about, or research that needs to be started/commissioned) which are then placed in the relevant place on the matrix
- Include social/behavioural and economic data. It's a good idea to use different coloured post-its for environmental, economic and social/behavioural research so that they can be mo

**Issue:**

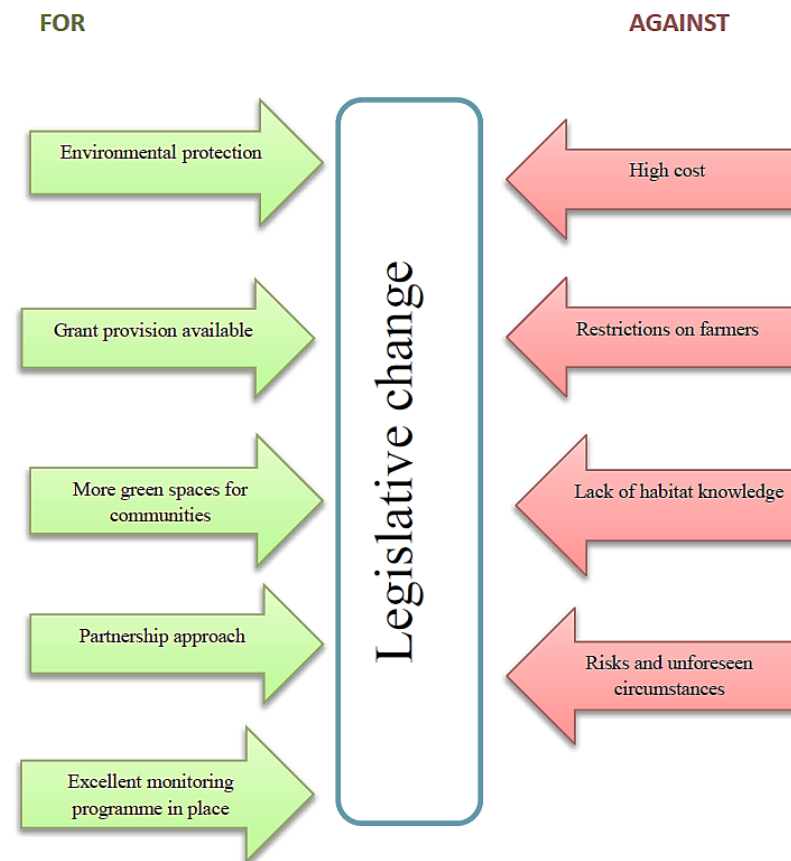
What How	Policy goal 1	Policy Goal 2	Policy goal 3
Stage 1: eg. Identifying the issue		Evidence	
Stage 2: eg. solutions to the issue	Evidence		Evidence
Stage 3: eg. implementing the policy		Evidence	Evidence
Stage 4: eg. monitoring the impacts of the policy			

## Force Field Analysis Exercise Template



## Steps

- Group agrees on a facilitator from their number
- Facilitator ensures that everyone is clear on the issue (this can be written in the box above for convenience)
- Using the template provided as a guide, write the policy change in the centre of the flip chart page. Write **FOR** to the left of the policy change and **AGAINST** to the right
- The participants suggest the main arguments for and against the change
- When all the main arguments have been covered, rate them all on a scale from 1 (low influence/impact) to 5 (high influence/impact)
- Mark the arguments which can be strengthened or weakened by scientific research evidence



## SPI DIY Thesaurus Exercise

### Steps:

- Group agrees on a facilitator from their number
- Facilitator ensures that everyone is clear on the task
- Using the template provided as a guide, draw a table with 3 columns on the flipchart
- Think of terms you use professionally that non-specialists have difficulty with. These can be either policy or science related
- Write these in the first column
- Think of terms encountered in science-policy discussions that are misleading or difficult. Again these can be policy- or science related
- Again write these in the first column
- Go through each term, what does it mean (if anything!) to non-specialists. Write this in the second column
- Discuss and decide on a better term to use; Write it into the third column
- Do this for each term listed

DIY SPI Thesaurus		
Professional term	Everyday meaning	Better choice

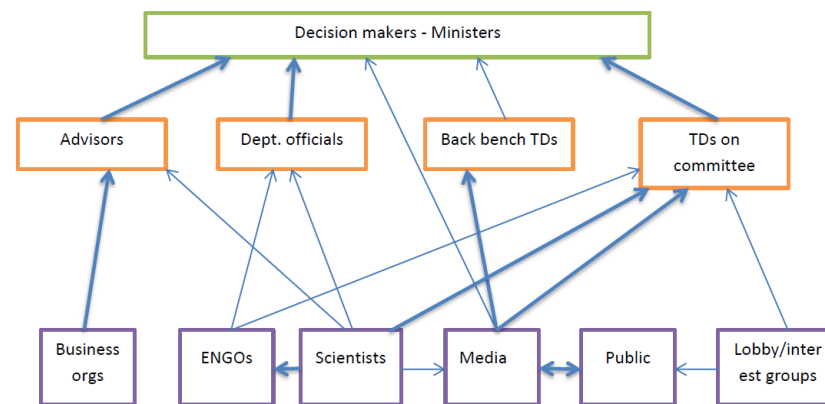
## Influence Mapping Exercise

Issue:

### Steps

- Group agrees on a facilitator from their number
- Facilitator ensures that everyone is clear on the issue (this can be written in the space above for convenience)
- Using a quick brainstorm, make a list of stakeholders related to your scenario (spend no more than five minutes on this)
- From this list, identify the decision-makers related to your scenario (ministers, county managers etc.). Using the template provided as a guide, write these on the top of the flipchart. Include both job titles and names, if possible. This creates the top tier of the chart.
- From the list of stakeholders identify the individuals and organisations that have a direct influence on the decision makers (government advisors, senior civil servants, advisory groups etc.).
- Write these in as the second tier of the chart. Again include both job titles and names, where possible.

- From the remaining stakeholders, identify stakeholders who influence decision-makers in a less direct fashion (Research scientists, media, ENGOs, lobby groups, business etc.)
- Write these in as the third tier of the chart
- When the three tiers are complete, draw arrows to indicate and map the influence relationships between the stakeholders
- Stakeholders may influence each other and a double sided arrow can be used to show this. Also stakeholders can influence have within their own tier as well as between tiers
- Stronger influence levels can be indicated by thicker/different coloured lines.



## SWOT Exercise

Issue:

### Steps

- Group agrees on a facilitator from their number
- Facilitator ensures that everyone is clear on the issue (this can be written in the space above for convenience) and on the understandings of the *strengths*, *weaknesses*, *opportunities* and *threats* that make up SWOT
- Using the template provided for guidance, draw a SWOT grid and fill in the strengths, weaknesses, opportunities and threats relating to the issue under discussion
- Once the grid has been filled in prioritise the strengths, weaknesses, opportunities and threats and indicate the level of impact (low or high) that one will have on the issue (minor factors can be discarded at this stage)

- Going through each section of the grid at a time, discuss how strengths can be built on, how opportunities can be exploited and how weaknesses and threats can be neutralised or mitigated. There may be some overlap here in that strengths could be used to counter weaknesses or threats, and so on.
- Turn ideas discussed in the task above into action points as appropriate for both communication strategy and communication activities.

#### SWOT Analysis Example

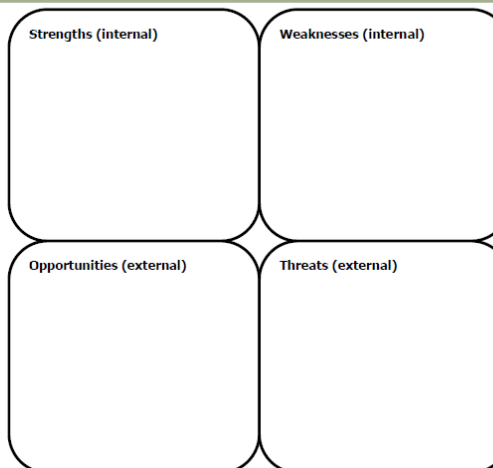
SCIENCE-POLICY COMMUNICATION - BIODIVERSITY

##### Examples

- Resources, Assets, People?
- Skills, abilities?
- Location?
- Philosophy, values, philosophy?
- Existing activities ?
- Partners, contacts ?
- Networks ?
- Time pressures?

##### Examples

- National economy
- Global influences
- Funding
- Political effects
- Legislation
- Innovation
- Technology
- Social media
- Societal trends



## Writeshop Planning Template

**Issue:**

### Steps

- Group agrees on a facilitator from their number
- Researcher briefly explains the research to the group
- Other members of the group ask for clarification where needed and author explains these elements further
- Write the 'science' into the Writeshop Planning Form in plain language
- Group discusses possible policy applications of the research. Facilitator notes the main points on the flipchart
- Write the 'policy implications' into the Writeshop Planning Form
- The group fills in the sections of the Writeshop Planning Form defining their target audience, deciding on the type of document to be produced and so on

Topic	
Science to be communicated	
Policy relevance of science	
Audience	
Headline	
Output document type	
Key points that need to be included	
Other comments or considerations	