COST-EFFECTIVE TOOLS FOR MANAGING THE SCP EVIDENCE BASE

Final Report of project EV0410

Louise Shaxson

Delta Partnership

ANNEXES

29 January 2009

Annex A1 – Short bibliography of evidence-based policymaking literature relevant to this report

Evidence-based policymaking in Defra

These documents trace the development of the Defra framing of evidence based policymaking (Taig, 2004, Defra, 2006) and shows how the model has been implemented (Morgan *et al.*, 2007).

Taig, T. (2004) *The Development and Use of Scientific Advice in Defra.* Project report: http://www.defra.gov.uk/science/documents/papers/2004/SAC%20_04_%2005_Tony_Taig.pdf

Defra (2006) *Our Approach to Evidence & Innovation*. London: Defra. http://www.defra.gov.uk/science/how/documents/EvidenceAndInnovation.pdf

Morgan, M.E., N.A. Smith, N.J. Blakey and D.C. Wilson (2007) Science policy for sustainable waste and resources management: putting principles into practice. Sardinia 2007, *Eleventh International Waste Management & Landfill Symposium, Cagliari, Italy*.

The nature of evidence in policymaking

These publications discuss the different types of evidence that are used in policymaking (policyhub), what makes it robust (Shaxson, 2005) and the factors that constrain the use of research evidence in the policy process (Spangaro, 2007)

Policyhub (no date). http://www.nationalschool.gov.uk/policyhub/evaluating_policy/how_res_eval_evid.asp

Shaxson, L J (2005) Is your evidence robust enough? Questions for policy makers and practitioners. *Journal of Evidence and Policy* 1(1) pp 101-111. Bristol: The Policy Press.

Spangaro, J (2007) Eleven obstacles to translating research into policy on gender-based violence. *Journal of Evidence and Policy* 3(3) pp 553 – 566. Bristol: The Policy Press.

Wider engagement in the evidence base

The Ashridge report (ACBS, 2006) discusses how to construct and manage evidence networks; Mendizabal (2006) provides a useful link between network form and function. Barnett's report demonstrates the need for openness throughout the evidence base.

Ashridge Centre for Business and Society (2006) *Managing the evidence base for SCP from a relational perspective: scoping study for an organisational model for SCP evidence*. Project report, Project SCP021, June 2006. http://www.defra.gov.uk/science/Project_Data/DocumentLibrary/EV02021/EV02021_4604_FRP.pdf

Mendizabal, E. (2006) Building effective research policy networks: linking function and form. *ODI Working Paper 276.* London: Overseas Development Institute. http://www.odi.org.uk/RAPID/Publications/RAPID_WP_276.html

Barnett, J (2007) *Making consultation meaningful: putting consultation in its place*. Report to Defra from ESRC Fellowship. Seen in draft.

Knowledge brokering

The CHSRF was the first organisation set up to specifically broker research evidence into health policy and contains a wealth of ideas. Pielke (2007) usefully outlines four different types of interaction between science and policy, though his analysis lacks the practical suggestions found in Campbell and Schofield (2007) or in Bielak *et al.* (2008).

Bielak, A.T., A. Campbell, S. Pope, K. Schaefer and L. Shaxson (2008) From science communications to knowledge brokering: the shift from "science push" to "policy pull". Chapter 12 in Schiele, B. *et al.* *Science communication in social contexts: strategies for the future*. Springer: in press.

Campbell, A. & Schofield, N. (2007) *The Getting of Knowledge*. Occasional Paper. Canberra: Land & Water Australia. www.lwa.gov.au/downloads/publications_pdf/PR061240.pdf

Canadian Health Services Research Foundation (no date). www.chsrf.ca

Pielke, R.A. Jr (2007) The honest broker: making sense of science in policy and politics. Cambridge: Cambridge University Press.

Annex A2 – Key literature for evidence-based policymaking, drawn on in this report

This is an annotated bibliography which reflects the literature that has been useful over the past four years, not an academic-style list of references.

Key Defra-specific documents relating to evidence-based policymaking

Presented in more or less chronological order, the sum of these documents describes Defra's approach to evidence-based policymaking. The numbers refer to the referencing in the body of this report.

[1] Taig, T (2004) *The Development and Use of Scientific Advice in Defra.* Report of project. Project report: available at http://www.defra.gov.uk/science/documents/papers/2004/SAC%20_04_%2005_Tony_Taig.pdf

[2] Defra (nd) *Five components of robust evidence*. Available at www.defra.gov.uk/science/how/documents/Wallchart.pdf

[3] Defra (2006) *Science Meets Policy 2005: Next Steps for an Effective Science-Policy Interface*. Report of London conference held as part of the UK's Presidency of the European Union, 23-25 November 2005. www.defra.gov.uk/science/publications/documents/SMP2005.pdf

[4] Defra, no date *Looking back at looking forwards: next steps for Horizon Scanning and Futures.* Available at http://horizonscanning.defra.gov.uk/ViewDocument_Image.aspx?Doc_ID=192

[5] Defra 2006 *Our Approach to Evidence and Innovation* London: Department for Environment, Food and Rural Affairs. Available at http://www.defra.gov.uk/science/how/documents/EvidenceAndInnovation.pdf

[6] Science Advisory Council (2006) *End to end review of science into policy in Defra*. Paper SAC(06)22. Available at http://www.defra.gov.uk/science/documents/papers/2006/SAC(06)22EndToEndReview.pdf

The Ashridge & Edson Jones reports helped formulate the more responsive approach to the use of evidence in policymaking. Barnett's report was written concurrently with much of the work on knowledge brokering, and there is a close relationship between them.

[7] Ashridge Centre for Business and Society (2006) *Managing the evidence base for SCP from a relational perspective: scoping study for an organisational model for SCP evidence*. A management report addressed to Defra's SCP evidence team and its Advisory Group, Project SCP021, June 2006. At http://www.defra.gov.uk/science/Project_Data/DocumentLibrary/EV02021/EV02021_4604_FRP.pdf on 15 November 2007

[8] Barnett, J (2007) *Making consultation meaningful: putting consultation in its place*. Report to Defra from ESRC Fellowship. Unpublished document.

[9] Edson Jones, K. 2005 *Understanding risk in everyday policymaking.* Report. London: Department for Environment, Food and Rural Affairs. Available from http://www.defra.gov.uk/Environment/risk/policymaking0509.pdf (page accessed 28 January 2008).

Not technically Defra documents, but these draw directly from Defra's experience. Morgan et al. outline the link between science policy, evidence-based policymaking & work on the waste evidence base: Wilson et al discuss the links between research and policy in the context of developing a waste strategy. Shaxson's article was the basis for the 'five criteria of robust evidence' referenced above.

[10] Morgan, M.E., Smith, N.A., Blakey, N, and Wilson, D.C. (2007). Science policy for sustainable waste and resources management: Putting principles into practice. Sardinia 2007, Eleventh International Waste Management and Landfill Symposium, Cagliari, Italy.

[11] Shaxson, L J (2005) Is your evidence robust enough? Questions for policy makers and practitioners. *Journal of Evidence and Policy* 1(1) pp 101-111. Bristol: The Policy Press.

[12] Wilson, D.C., N.A. Smith, N.C. Blakey & L.J. Shaxson (2007) Using research-based knowledge to underpin waste and resources policy*. Waste Management and Research* **25** (3), pp247-256. DOI: 10.1177/0734242/X07079184

[13] Boaz, A., S. Fitzpatrick & B. Shaw (2008) *Assessing the impact of research on policy: a review of the literature for a project on bridging research and policy through outcome evaluation*. Project report summary. Available at: http://www.psi.org.uk/pdf/2008/bridgingproject_report_with_appendices.pdf

General literature relating to evidence-based policymaking & knowledge brokering

This next group of publications links evidence-based policymaking to knowledge brokering. Some are more theoretical articles, some of more practical relevance to policy. Note that the Canadian Health Services Research Foundation (www.chsrf.ca) and Land & Water Australia (www.lwa.gov.au) are probably the two organisations with the closest focus on knowledge brokering. Pielke's book is a readable analysis of the various relationships between science and policy, though his final framework lacks the practical application found in CHSRF and L&WA documents. Bielak et al. discusses knowledge brokering in the context of environmental policymaking in Environment Canada, Defra and Australia. It offers the fullest description to date of the lines of argument technique. The Snowden document relates directly to the knowledge management framework used as the basis for the knowledge brokering work.

Specific to knowledge brokering:

[13] Bielak, A.T., A. Campbell, S. Pope, K. Schaefer & L. Shaxson 2008 From science communication to knowledge brokering: the shift from 'science push' to 'policy pull'. Chapter 12 in *Science communication in social context: strategies for the future*. Springer: in press.

[14] CHSRF no date *Reader-friendly writing: 1:3:25.* Communication Notes . Ottawa: Canadian Health Services Research Foundation. Available from http://www.chsrf.ca/knowledge_transfer/pdf/cn-1325_e.pdf (page accessed 15 January 2008)

[15] Campbell, A. (2006) *The Australian NRM Knowledge System*. Occasional Paper. Canberra: Land & Water Australia. Retrieved October 10, 2007, from www.lwa.gov.au/downloads/publications_pdf/PR061081.pdf

[16] Campbell, A. & Schofield, N. (2007) *The Getting of Knowledge*. Occasional Paper. Canberra: Land & Water Australia. Retrieved October 10, 2007, from www.lwa.gov.au/downloads/publications_pdf/PR061240.pdf

[17] Campbell, A. & N. Schofield 2006 The getting of knowledge: a guide to funding and managing applied research. Canberra: Land & Water Australia.

[18] Campbell, A. 2007 *Knowledge for sustainability: investing in public science*. PIPSC Symposium for Public Science, Ottawa, 6 September 2007. Accessed on 7 January 2008 from http://www.hyper-media.ca/pipsc/downloads/presentations/01_campbell-e.pdf

[19] Pielke, R.A. Jr 2007 *The honest broker: making sense of science in policy and politics.* Cambridge: Cambridge University Press.

[20] Snowden, D.J. and M.E. Boone 2007 A leader's framework for decision making. *Harvard Business Review* 1 November 2007, pp 1-8. Product No. R0711C.

More general evidence-based policymaking literature

The main portal for evidence-based policymaking in the UK is policyhub (www.policyhub.gov.uk) which references many documents that are not included here. Another key source for information on evidence-based policymaking is The Evidence Network (www.evidencenetwork.org) and the Journal of Evidence and Policy (https://www.policypress.org.uk/journals/evidence_policy/). The publications listed below are a mixture of academic articles, book chapters and practical guidance, many of which are not found on the above websites.

The process of developing the ebpm approach was also informed by discussions with the RAPID programme staff at the Overseas Development Institute (www.odi.org.uk/rapid). A truly comprehensive and international literature review of the links between research and policy is available at http://www.odi.org.uk/rapid/Projects/R0040a/Biblio_Summary.html. A few key ODI publications are picked out here, but there are many more.

[21] Bochel, H. & S. Duncan (eds) (2007) *Making Policy in Theory and Practice*. Bristol: The Policy Press.

[22] Bochel, H. & L. Shaxson 2007 Forward-looking policy making. In Bochel, H. & S. Duncan (eds) 2007 *Making Policy in Theory and Practice*. Bristol: The Policy Press.

[23] Brand, R. & A. Karvonen 2007 The ecosystem of expertise: complementary knowledges for sustainable development. *Sustainability, Science, Practice & Policy* **3** (1) pp 21-31. Accessed on 17 December 2007 from http://ejournal.nbii.org

[24] CCMD Action-Research Roundtable on Science and Public Policy (Canada) (2002). Chair: A.W. May. *Creating Common Purpose: The Integration of Science and Policy in Canada's Public Service*. Ottawa: Canadian Centre for Management Development. 29pp.

[25] CSTA. (1999). Council of Science and Technology Advisors (CSTA) SAGE: *Science Advice for Government Effectiveness* (May 1999) Retrieved October 13, 2007, from www.csta-cest.ca/index.php?ID=90&Lang=En

[26] Cabinet Office (1999) *Professional policymaking for the twenty-first century.* Report by strategic policymaking team, The Cabinet Office. Available at http://www.nationalschool.gov.uk/policyhub/docs/profpolicymaking.pdf

[27] Cabinet Office (1999) *Modernising Government*. CM4310. London: The Stationery Office. Available at http://www.archive.official-documents.co.uk/document/cm43/4310/4310.htm

[28] Campbell, S., S. Benita, E. Coates, P. Davies & G. Penn 2007 *Analysis for policy: evidence-based policy in practice*. London: Government Social Research Unit.

[29] Civil Service (nd) *Capability Reviews.* Available at http://www.civilservice.gov.uk/about/accountability/capability/index.asp

[30] Civil Service (nd) *Professional Skills for Government.* Available at http://www.civilservice.gov.uk/iam/psg/

[31] Clark, W.C. 2005 *How can science most effectively support sustainability?* Policy brief based on presentation to SDRC/RICS Sustainable Development and Quality of Life lectures. London, July 26, 2005. Accessed on 7 January 2008 from http://admin.sd-research.org.uk/wp-content/uploads/2007/04/policybrief_lecture3_sustscience.pdf

[32] Denis, J-L and J. Lomas (2003) Convergent evolution: the academic and policy roots of collaborative research. *J. Health Serv. Res Policy* vol 8 Suppl 2 Oct 2003. S2:1.

[33] ERFF 2007 *Using research to inform policy: the role of interpretation*. ERFF Report No 3, August 2007. Swindon, UK: Environment Research Funders' Forum. Available at http://www.erff.org.uk/reports/reports/reportdocs/interpretstudy070919.pdf

[34] Government of Canada (2000) *A framework for science and technology advice: principles and guidelines for the effective use of science and technology advice in government decision making*. Available at http://www.strategis.gc.ca

[35] McNie, E (2007) Reconciling the supply of scientific information with user demands: an analysis of the problem and review of the literature. *Environmental Science & Policy 10 (2007), pp17-38.*

[36] Mendizabal, E. (2006) Building Effective Research Policy Networks: linking function and form. *ODI Working Paper 276*. London: Overseas Development Institute

[37] Moore, M (1995) *Creating public value: strategic management in Government*. Cambridge, MA: Harvard University Press.

[38] Nutley, S., I. Walter & H.T.O. Davies (2007) *Using evidence: how research can inform public services*. Bristol: The Policy Press.

[39] Office of Science & Innovation (2000) *Guidelines 2000: Scientific Advice and Policy Making.* Available at http://www.berr.gov.uk/dius/science/page15432.html

[40] Owens, S., Petts, J. & Bulkeley, H. (2006) Boundary work: knowledge, policy and the urban environment" *Environment and Planning C*, 24, 633-643

[41] Ramalingam, B. (2006) *Tools for knowledge and learning: a guide for humanitarian and development organisations.* London: Overseas Development Institute

[42] Scott, A., J. Holmes, G. Steyn, S. Wickman & J. Murlis 2005 *Science meets policy 2005: next steps for an effective science-policy interface.* Report of London conference held as part of the UK's presidency of the European Union, 23-25 November 2005. London: Department for Environment, Food and Rural Affairs.

[43] Solesbury, W. (2001) Evidence based policy: whence it came and where it's going. *ESRC UK Centre for Evidence-Based Policy & Practice Working Paper 1*. London: CEBPP

[44] Sorrell, S. (2007) Improving the evidence base for energy policy: the role of systematic reviews. *Energy Policy* 5(3), 1858-1871.

[45] Spangaro, J. 2007 Eleven obstacles to translating research into policy on gender-based violence. *Journal of Evidence & Policy* **3** (4), pp 553-566.

[46] Van Buuren, A & J Edelenbos (2004) Why is joint knowledge production such a problem? *Science and Public Policy 31 (4\), 289-299*

[47] Yankelovich, D (2003) Winning greater influence for science. *Issues in Science and Technology* vol XIX no 4. Dallas: The National Academies and The University of Texas at Dallas.

[48] Weiss, C.H. & E. Lindquist 2003 *In conversation: Carol Weiss and Evert Lindquist on policymaking and research.* IDRC Reports Magazine, 11 November 2003. Ottawa: IDRC. Available from http://www.idrc.ca/en/ev-43607-201-1-DO_TOPIC.html (page accessed 23 January 2008)

[49] Wolf A (1999) Building Advice: the craft of the policy professional. *Working Paper No. 7.* Auckland: State Services Commission. Available from http://www.ssc.govt.nz/display/document.asp?DocID=2893

Knowledge management – theoretical literature

The lines of argument tool draws heavily on to the Cynefin framework of knowledge management, first set out in Kurtz & Snowden. Brown's book chapter clearly articulates the different types of knowledge needed for sustainability and environment (even though it is technically about sustainability and health). Other KM frameworks were examined, but ultimately not used.

[50] Brown, V.A. 2003 Knowing: linking the knowledge cultures of sustainability and health. In *Sustainability and Health* (eds V.A. Brown, J. Grootjans, J. Ritchie, M. Townsend & G. Verinder) pp 131-161. London: Earthscan Publications.

[51] Kurtz, C. F. & Snowden, D. J. (2003). The new dynamics of strategy: sense-making in a complex and complicated world. *IBM Systems Journal* 42, 462-483.

[52] Snowden, D. (2002) “Complex Acts of Knowing: Paradox and Descriptive Self-awareness” *Knowledge Management 6(2).* London: ARK Group.

[53] Snowden, D. (2004a) “The ASHEN model: an enabler of action” Originally published in *Knowledge Management* 3(7), re-edited and updated 2004. Available from www.cynefin.net/kbase/7_Organic_KM_1_of_3_ASHEN.pdf

[54] Snowden, D. (2004b) “Knowledge Elicitation: indirect knowledge discovery” Originally published in *Knowledge Management* 3(9), re-edited and updated 2004. Available from www.cynefin.net/kbase/8_Organic_KM_2_of_3_discovery.pdf

Science policy: more theoretical

This section is really for those with a deep interest in science policy. The main theoretical underpinnings for the knowledge brokering work were derived from Albaek, Hisschemoller & Hoppe, Gibbons *et al*., Jasanoff, Rayner, and Stirling (not necessarily in that chronological order). Combining their insights with those from the Cynefin knowledge management framework gave the underpinning for this report, which was subsequently written up as a critique of the ROAMEF cycle in [64] and with two contrasting case studies in [65].

[55] Albæk, E. (1995) Between knowledge and power: utilization of social science in public policy making. *Policy Sciences* 28: 79-100.

[56] Hisschemöller, M., R. Hoppé (2001) Coping with intractable controversies: the case for problem structuring in policy design and analysis. In *Knowledge,*

participation and power in environmental policy analysis (eds. M. Hisschemoller, R. Hoppe, W.N. Dunn and J.R. Ravetz) pp 47-72. New Brunswick: Transaction Publishers.

[57] Funtowicz, S.O. & Ravetz, J.R. (1993) Science for the Post-Normal Age *Futures* 25:7, 739-755

[58] Gibbons, M., Limoges, C., Nowotny, H., Schwartzmann, S., Scott, P. and Trow, M. (1994) *The new production of knowledge, the dynamics of science and research in contemporary societies* London: Sage.

[59] Jasanoff, S (2005). *Designs on nature: science and democracy in Europe and the United States*. Oxford, UK: Princeton University Press.

[60] Nutley, S.M., W. Walter & H.T.O. Davies (2007) *Using evidence: how research can inform public services*. Bristol: The Policy Press.

[61] Parsons W (2002) From muddling through to muddling up – evidence based policy making and the modernisation of British Government. *Public Policy and Administration* 17 (3): 43-60

[62] Rayner, S (2003) Democracy in the age of assessment: reflections on the roles of expertise and democracy in public-sector decision making. *Science and Public Policy* 30 (3) pp 163-170

[63] Sarewitz, D & R A Pielke Jr (2006) The neglected heart of science policy: reconciling supply of and demand for science. *Environmental Science and Policy* 10 (2007), 5-16

[64] Shaxson, L. (2008) Who's sitting on Dali's sofa? *Evidence-based policy-making*. A PMPA/National School of Government practitioner exchange report. PMPA, October 2008.

[65] Shaxson, L. (in press) Structuring policy problems for plastics, the environment and human health: reflections from the UK. *Accepted for publication in a Theme Issue of Phil. Trans. Royal Soc. B on plastics, the environment and human health.*

[66] Stirling, A (2004) Opening up or closing down? Analysis, participation and power in the social appraisal of technology. In Leach M, I Scoones & B Wynne (eds) *Science, citizenship and globalisation*. London: Zed Books

Annex B: Detailed tools for knowledge brokering

This annex gives detail of the tools that have been developed to support a knowledge brokering approach to evidence-based policymaking. They include:

B1 Guidance on policy-friendly writing
B2 Guidance on preparing a Policy Perspective
B3 Facilitators' notes for the lines of argument and matrix mapping workshops

B1: Policy-friendly writing: guidance for producing a 3:25 report

The SCP evidence base programme is keen to ensure that ongoing policy and strategy discussions are actively informed by the best available knowledge. To do this, we are changing the way that we commission and receive research reports. This means a different style of writing final reports. Writing a research summary for busy policy makers is not the same as writing an academic article – it has a different objective, and needs a different approach. This note sets out how we would like to see final reports structured, and the style of writing we would prefer.

The purpose of commissioning research is to inform the development of policies - for decision by Ministers or to help shape ongoing strategy and policy discussions. It may not be immediately clear what role your research report will play in this complex process, and you should not expect your research to have a direct impact on a particular policy decision. However, you can increase your chances that your voice will be clearly heard by following this guidance.

Other useful guidance on policy-relevant writing can be found at:

- Pannell Discussions (http://cyllene.uwa.edu.au/~dpannell/pd/pdindex.htm): numbers 134 – 137
- Reader-friendly writing (http://www.chsrf.ca/knowledge_transfer/pdf/cn-1325_e.pdf): used as the basis for this guidance

3:25 – WRITING A POLICY-RELEVANT REPORT.

Following acceptance of your final technical report by peer reviewers, the final deliverable for the project will be a policy-relevant report presented in no more than 25 sides of writing, prefaced with a 3-side executive summary. Depending on what is currently at the forefront of policy discussions, you may be asked to work directly with policy clients to summarise their report into a 2-side *Policy Perspective.*

Before writing this policy-relevant report you may be asked to come in and present your findings to a policy audience. This is a chance for you to find out how they are likely to use your findings and to encourage them to think about the implications of your work. It will help you understand how to make your recommendations relevant to policy, without compromising the objectivity and independence of your message.

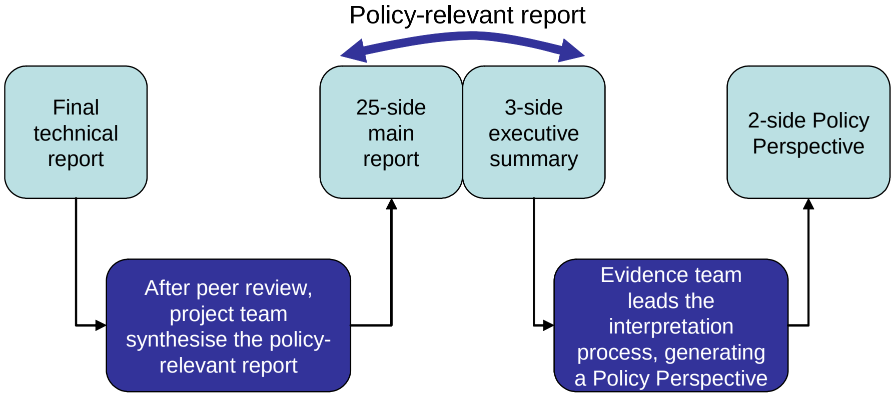

Fig B1: The process of building policy perspectives

25: THE MAIN REPORT
The main report should be 25 sides in total (not counting the cover), in font size 11 and single line spacing. Both the main report and the executive summary should be written in language that a bright, educated but not research-trained person would understand. People move teams regularly, so you cannot assume that the person who receives your final report understands the topic as well as the one who commissioned it. Your report may also be sent to people in other policy areas, or other Departments; while they may not be subject matter specialists they will still be interested in the implications for their work. Do not use acronyms if possible: if you have no choice, they should be explained in full after their first mention. Highly technical material, a detailed methods and a full bibliography should remain in the final technical report, which can be accessed if necessary. They should not contain any important information that is not summarised in the 25-side report.

Context
Set out the policy context for your report, identify the research question and describe how the research was intended to contribute to the policy process. If the policy context has changed during the research period, outline how it has changed and your understanding of what this means for your results (you may want to discuss this with your policy clients before submitting the final version). Highlight how previous research has contributed to the issue, and what this report adds.

Research Objectives
Briefly describe the objectives of the research and how they relate to the policy issue.

Conclusions and interpretation
What conclusions have you come to as a result of your research? How do you interpret them in light of the policy context described above? This section is about identifying themes and key messages policymakers can take from your report. If you believe there are different audiences for the report, this is the place to target them with specific messages.

In a policy context, evidence performs five functions: it can *confirm* what we think we know, *enrich* our understanding, *explain* complex issues, *challenge* received wisdom and *scope* opportunities for change. While you do not need to answer the questions below individually bear in mind that as they read your report, policymakers will ask:
- What do we know about the topic…?
- What are the alternative arguments?
- What works or is most cost-effective in achieving…?
- What are the risks associated with …?
- What are the implications of those risks and to whom…?
- What can we say about the future of…?
- What are the barriers to…?
- What are the trade-offs implied by…?
- Why intervene in this area…?
- What can I learn from the results of previous…?
- What else might I need to know about…?
- If the evidence is uncertain, what does this mean about…?

Methodology and approach
A brief summary of the approach you took and the methods you used. Technical material and other detail should go in an annex: in this section you can explain to non-specialists why you chose this approach rather than any other, and whether it has any implications for what can be inferred from the results.

Results
Summarise your results to show how they support the conclusions you have reached – use tables, graphs and diagrams. Any results that do not directly support your conclusions, but which you would like to submit as part of the peer review process, should be put into a technical annex.

Unanswered questions
Refer back to your description of the policy context. Has your research been able to answer the fullness of the policy question? What suggestions do you have for how to make the evidence base for this particular policy issue more robust? (Refer to the five criteria of robustness attached to this guidance.)

Additional resources
Not for other researchers, though they may find it useful: this is the place to give information on publications, websites and other useful sources of information for policymakers: either issue-specific or more general background information.

References and bibliography
References in the report should use consecutive superscript numbering and be presented as endnotes, not in the body of the text or the foot of the page. This section should be limited to what is mentioned in this 25-side report: a full bibliography, which will form part of the peer review process, should be placed in an annex.

Annexes
These will be circulated to peer reviewers as part of the quality assessment processes, but they will not be circulated within the policy environment unless they are specifically requested. The policy relevance of your work will be judged on the 3:25 final report, which should thus contain all the important information.

3: EXECUTIVE SUMMARY

These are your findings, condensed to serve the needs of someone who wants to know quickly whether the report will be useful. It is not an academic abstract, but is more like a story; grabbing readers' attention at the beginning before going on to describe background and context, with the supporting information and reasoning towards the end. Focus on getting the essence of your research across succinctly but not cryptically – refer to writing guidance issued by your institution, or see The Economist's style guide. Run drafts past your colleagues and non-specialists to ensure that they can follow your line of reasoning.

POLICY PERSPECTIVES

You may then be invited you to help them construct a two-side *Policy Perspective* which summarise policymakers' perspectives on the meaning of your research for that particular policy issue at that particular time. Not being invited to contribute to a Policy Perspective is not an assessment of the quality of your work – policy priorities change because of many factors and it may simply be that the topic of your report is not a policy priority at the moment. This may be the case if the policy context has changed during the life of the research. Equally, if it does become a policy priority, you may be asked to revisit earlier work to produce a Policy Perspective.

There is separate guidance on producing Policy Perspectives.

B2: Constructing Policy Perspectives – guidance notes

Creating Policy Perspectives aims to improve the use of research-based evidence and its application to policy. Policy Perspectives can be created by the evidence team on its own, or as part of an interpretation process between policymakers, the evidence team and researchers. They focus on what the research *means* for policy. Experience points to the need for this to be a facilitated process, to ensure that both sides are heard equally. While the research message may be a strong one, it may be couched in terms that make it difficult for non-specialist policymakers to interpret its relevance to what they are working on.

It helps to have the research team present their draft final report to potential policy clients. This helps researchers understand how to orient their conclusions towards current policy issues, and begins to engage policymakers with the results of the research.

If a facilitated process is needed, be sure that the meeting is led by the needs of the policy teams. It is not a place for the researchers to present their work. Instead, use the following series of questions as a guide to getting discussion going:

- What is the current policy context for this issue? What do we already know about it? What more do we need to know?
- What additional information does the research provide?
- What does this imply for what policy is being asked to deliver?

The next page gives an example of one of the first Policy Perspectives to be created, during the gestation of this project.

Synthesis Review of Public Understanding of Sustainable Consumption

Research Summary

This synthesis review summarises the findings of five independent, qualitative research projects, investigating the Public Understanding of sustainable behaviour across five consumption areas of food, domestic energy use, transport, finance and leisure and tourism. The aims of the review were to draw out the similarities and differences across the five projects, particularly focussing on people's aspirations, motivators and barriers to proposed behaviour goals and people's expectations of government and business. Wherever possible findings were linked to the Defra segmentation model.

Key findings

- A variety myths, incorrect assumptions and negative associations frame public understanding of pro-environmental behaviours. In particular, participants associated pro-environmental behaviour with sacrifice, higher cost and poorer quality.
- Government is recognised as an important educator but is also mistrusted; it is essential that both Government and industry are seen to lead by example.
- Factors affecting whether information is trusted include message source, clarity and consistency as well as audience targeting receptivity: this varies for different segments of the population.
- Factors that motivate some people to engage in pro-environmental behaviour act as barriers to engagement for others.
- Motivators that emerged across the projects included: a desire to save money; level of engagement with sustainability; life stage; product quality (especially food); the provision of information; image; altruism; and health (especially in relation to food).
- Barriers to more pro-environmental behaviour included: cost; time; image; convenience; quality; a sense of entitlement; habit and inertia; and a lack of information.
- There is a general reluctance to change behaviour that will impact on an individual's lifestyle: People are more open to consuming differently.
- There is tacit support for choice-editing and also environmental taxation (if transparently hypothecated)
- People expect government and industry (retailers and producers) to make sustainable choices easy and affordable.
- People were able to cite numerous barriers preventing they themselves (as individuals and citizens) from taking more responsibility for changing towards more pro-environmental behaviour: they were able to recognise the need for change but were keen to protect their everyday lifestyle and freedoms.

Researchers' Recommendations

The review is relevant to all consumer-facing pro-environmental policies, particularly those focused on food, energy, finance, transport and leisure and tourism. It has implications for Defra's Act on $C0_2$ campaign and other communications work, and for the development of Defra's product road maps. There is room for Defra (and OGDs) to work in partnership with industry and delivery bodies to further improve products available to consumers as well as to continue awareness raising of issues surrounding climate change. Work in needed to develop social norms around the behaviour goals to overcome people's fears that their individual action will not make sufficient difference.

Methodology

The project team reviewed all five 'Public Understanding' research reports, drawing out similarities and differences across the projects. The results were analysed according to the Defra segmentation model where applicable. Initial findings were used as the basis for discussion in a half-day consultative workshop, which was attended by researchers from all five projects the results of which contributed to further analysis and interpretation.

Robustness

Findings are robust, given that all five pieces of research engaged large samples (100+). However, the methods of the five projects varied in terms of recruitment and design, reducing the reliability of comparisons drawn across all five projects. Where findings are based on the results of only one or two of the projects, it is clearly stated.

Limitations

Given its nature as a synthesis review, the report's limitations mirror those of the five projects reviewed. As with all qualitative research, the review provides insight and understanding, rather than statistically-robust findings representative of a wider population. Findings relating to the wider behaviour change literature are not drawn into the review.

Identified Research Gaps

The review suggests further research exploring:

- The relationships between the motivators and barriers of pro-environmental behaviours and the ways in which these vary by segment;
- Idols, trendsetters and role models, and the roles of these in influencing behaviour
- Assumptions and misconceptions – investigating commonly held misconceptions about pro-environmental behaviours

In addition, the review called for longitudinal research to effectively explore the long-term impacts of different interventions on behaviour.

Further information:

Summary Author and further contact:
Kate McGeevor, Social Science Research Manager
Kate.mcgeevor@defra.gsi.gov.uk; 020 7238 4448

Research Commissioned by:
Defra SCP Evidence Base, 2006/07 – Ref number EV02065
Full reference:
Dresner, S., McGeevor, K., and Tomei, J. (2007) Public Understanding Synthesis Report: A report to the Department for Environment, Food and Rural Affairs*.* Policy Studies Institute. Defra, London.
Full report available at:
http://www.defra.gov.uk/environment/business/scp/research/themes/theme3/sustain-consump0607.htm

Framework Report fully describing the Defra segmentation model is available at:
http://www.defra.gov.uk/evidence/social/behaviour/index.htm

Summary prepared: Monday 11th February 2008

B3: Lines of argument workshops: facilitators' notes

The lines of argument technique is described in section 5 of the main report.

Objectives of the workshop:

- To create 'lines of argument' which describe the rationale for developing a policies around particular issues
- To use those lines of argument to shape ideas about evidence needs

Outputs of the workshop

- A series of lines of argument supported by lists of evidence needs

10:00 Welcome and objective of the workshop (15 mins)

Lead client for the workshop outputs should explain high level overview of the day and what the desired outcomes are. The point of the workshop is to realign evidence needs around policy goals, so it is important to state that goal very clearly at the outset of the workshop so that people are very clear what will, and what will not, be included in evidence needs.

10:15 Introductions (30 mins)

Participants should be organised into groups of about 8 people per table. Try to ensure that people don't clump together in predictable groups.

As an icebreaker, place a series of objects on each table, and ask people to talk about the objects in relation to the policy area under discussion. Or choose another icebreaker, but try to relate it to the theme of the workshop. No need to report back to the plenary group: this is about building relationships around the table.

10:45 Overview of the process (5 mins)

Lead facilitator explains the heaven & hell exercise – why do backcasting?

- How did we get to where we are now? What are the lessons learned?
- **Given the policy goal that we're working towards**, what would hell look like? What would take us on the path to hell?
- **Given the policy goal that we're working towards,** what would heaven look like? What would need to have happened to get us to heaven?

10:50 How did we get here? (20 mins)

Participants work backwards from today: what are the things that have happened to get us here? Are there any key moments you can identify?

11:10 Hell and paths to hell (20 mins)

For some time in the future (2020 seems reasonable) and for the policy goal that you are working on, describe what hell would be like – what is the worst situation you can imagine? Write descriptions on (red) post-its. Then work backwards from there: what would be the key things that would have happened to get us there?

11:30 Coffee break and marketplace (15 mins)

Participants can wander around and see what's been produced by other groups

11:45 Heaven & paths to heaven (60 mins)

For the time you've identified (2020?) and **for the policy goal on which you are working** – what would heaven look like? What is the best possible situation you could imagine? Describe it in as much detail as you can on (green) post-its. Then ask

- What will need to have happened for us to reach heaven?
- What steps will we have taken to get there?
- In what order will those things need to have taken place?

12:45 Identify themes from paths to heaven (15 mins)

Divide the groups into pairs or trios and ask them to group the issues as seems appropriate. Take the post-its off the paths to heaven and put them on a separate wall, creating larger groups that take information from the different paths to heaven. Don't summarise or lose the information, but create a header post-it that describes what each of the groups is about.

13:00 Lunch (45 mins)

Continue the grouping process over lunch. This is the point where the policy / evidence team can work out which are the important ones to work on (all will probably end up being worked on, but choose the ones you want to ensure are addressed)

13:45 Overview of the lines of argument process (15 mins)

We want to get to an understanding of why we might (or might not) need a policy in each area, before deciding what evidence we need to seek. We use a particular framework to construct the lines of argument so that we can ensure that the search for evidence needs is directed by policy goals.

Step 1: create the line of argument

- Participants should work in trios (preferably) or pairs (not quite so good) and choose one of the (green) post-its from the key themes group
- Using the A3 sheets provided, answer each of the questions in turn and give the evidence (referenced, if you can) that supports your answer.
- For this event / theme:
    - Why is this issue important?
    - Why is change happening?
    - Why do we need to intervene to alter the impact of this change?
    - Why does <u>Government</u> need to intervene?

Step 2: Identify evidence needs

We don't only want evidence that supports the line of argument – we need to look for evidence that does five things:

- Confirms what we think we know
- Enriches our understanding
- Explains complex issues
- Challenges received wisdom
- Scopes opportunities for change

Leave time for questions about the process: and it helps if you have a hypothetical example you can refer to. *If a group disagrees, remind them that we don't want them* *to come to an artificial consensus: better to create two lines of argument that reflect that disagreement.*

14:00 Lines of argument & evidence needs (60 mins)

As above, but working in trios, people can choose the evidence needs they want to work on. Duplicating issues is fine: the more the merrier. People may want to swap groups part way through: that is also fine.

Pin each sheet up on the wall.

15:00 Tea & coffee, and marketplace (15 mins)

Opportunity to review in plenary.

15:15 Workshop close (15 mins)

Be explicit about what happens next: the raw information will be sent back to participants for spellchecking, fact checking, and to let them add any extra information they want to. Explain what will happen next (Matrix mapping? Scrutiny by expert advisory group? Etc.)

15:30 Close, depart (be on time!)

What can go wrong with lines of argument workshops?

1. Not having a clear policy goal for the workshop will give you an unfocused set of evidence needs. You need to be able to articulate a policy goal with sufficient clarity to stop people climbing on hobby horses, bringing favourite pieces of evidence to the table, or bringing in evidence that relates to others' goals. For example, a workshop on sustainable products & materials – which includes aluminium – could have swerved into Department for Transport goals to do with reducing transport, had the focus of the workshop not been very clearly focused on the policy goal of reducing the use and waste of aluminium across all product lifecycles.
2. Assigning people to predetermined groups gives you predetermined answers. The principle behind lines of argument is not to know what different stakeholder groups tend to think about an issue, but to explore as many potential paths as possible.
3. Taking too long over an exercise bores people (general workshop rule). The timing of this workshop was very carefully worked out: far better for people to feel that they have not said enough than to disengage from a process because they've run out of things to say.
4. Having a sample line of argument helps participants clarify what they are being asked to do. This is a very new type of workshop structure for many people, and within each exercise they are given a great deal of freedom: some people need an anchor in the form of an example to which they can refer if they get stuck.
5. Too few facilitators makes it chaotic and tiring: one facilitator per 15 people seems sufficient: four or five will be needed for a workshop of up to 75 people (a workshop of 60 people will generate about 25 sides of evidence needs, set against lines of argument). At least half of the facilitators need content knowledge, but the lead facilitator needs to be someone very experienced in managing a large group of people. S/he needs to work closely with the policy leads to define the resources for the workshop and how it will be written up.

CREATING A LINE OF ARGUMENT FOR POLICY: THE FIVE WHYS

DESCRIBE THE ISSUE ………..
NAMES OF THOSE WORKING ON IT (FOR FACT-CHECKING AFTER THE WORKSHOP)…………………………………………
……

Line of argument	***Supporting evidence***
(please write in full sentences, not bullet points – it makes the argument easier for non-specialists to follow)	
1. Why is this issue important?	
2. What changes are happening around this issue and why?	
3. Why do we need to intervene to change the rate or scale of these changes (i.e. why can't we just let change happen?)	
4. Why does <u>Government</u> need to intervene to change the rate or scale of these changes (i.e. what is Government's role as opposed to that of industry or civil society)?	
5: The line of argument. Please write out the line of argument in full, just as you have constructed it using questions 1-4 above.	Add any other evidence you feel should be considered.

NB: This should be printed out on A3 to give people sufficient space to write

B.1 *Matrix mapping workshops: facilitators' notes*

Objectives of the workshop:

- To review and incorporate the feedback obtained from the Lines of Argument workshop or from any other consultation on evidence needs
- To obtain group views on the clustering and prioritisation of scientific evidence needs

Outputs of the workshop

- A matrix for each theme that shows clear 'chunks' or 'packages' of procurable scientific evidence needs

09:30 Recap of first workshop (30 mins)

Groups: Plenary
Resources: Power-point slides

Lead client – 10 minutes

- Welcome
- Summary of overall support and leadership of the project
- Introduce process, general overview, how it fits into science planning for Department as a whole

Lead facilitator– 20 minutes

- Review of the sources of evidence needs - lines of argument workshop or other sources
- Overview of today: why is the matrix structured in this way, what the row and column headings mean.
- Construct a simple example using hypothetical evidence to show how the matrix works

10:00 Exercise 1: building the matrix (1.5 hours)

Groups: By major theme
Resources: Enlarged blank version of each matrix on the wall
Cards pre-written with 'data points' of evidence, taken from LOA workshop and/or existing evidence programmes
Large pens
Blank white cards
Blu-tack
A3 Photocopies of current matrix

Issue: Taking into account the evidence from the lines of argument workshop and any more views of the groups, to construct a matrix that reflects a reasonable group consensus of how the evidence needs can be presented in programmes.

15 minutes – in whole group - intro
General question and answer session on the matrix

60 minutes – in whole group – populate the matrix
Using pre-populated cards, put the evidence 'data points' on the matrix. Obtain other general thoughts and views.

Review the whole map

- Are there any gaps? If so, why? Should they be filled?
- Are the boxes in the right place?
- Do the boxes cross the correct rows and columns?

15 minutes – whole group
Review suggested changes to the matrix.
Write on new white cards if necessary
Stick boxes onto the matrix on the wall for the market place.

Outputs of this exercise:

Already have:	Evidence needs identified in Lines of Argument workshop, plus evidence needs identified through existing research programmes
This session produces:	Improved matrix that reflects stakeholder participation and some form of group consensus

11:30 Coffee and marketplace

Identify any cross-cutting issues that seem to be appearing: add onto blank blue cards and stick on side of the wall

11:50 Exercise 2: developing clusters of evidence (40 mins)

Groups: By theme
Resources: Revised matrix (from previous exercise)
Green cards
Large black pens
Soft pencils and rubbers

Issue: This is the beginning of the process of consolidation, turning the evidence needs into procurable clusters. Think of a cluster as a package of work covering several boxes on each matrix.

Not everything has to be included in a cluster: individual evidence needs are OK. Don't shoehorn stuff in, but aim for 6 to 10 chunks per matrix.

Two parts to this session: (1) clustering the detailed evidence needs for each area and (2) challenging the clusters that have been developed.

15 minutes – clustering the detailed evidence needs
With a pencil, draw around the boxes on the matrix that could be procured together as part of a package of work (15 minutes: whole group)

30 minutes – initial challenge of the clusters
For each of the chunks, self-organise into trios / pairs to analyse / challenge each cluster. Use the A3 summary tables work further into the rationales for each of the procurable clusters.

15 minutes – Overall review of the clusters
Whole group review the A3 summary tables: do they make sense as a programme of work? What other programmes could they be linked to?

Output of this session:

Already have:	A detailed matrix for each issue area
This session produces:	A list of key ‘packages’ or ‘chunks’
	An initial analysis / challenge for each ‘chunk’

12:30 Review of the morning

In plenary. Facilitator to lead. Focus on the breadth & depth of the evidence matrices:

- What parts of the process this morning went well / not so well
- Have we provided sufficient challenge to ourselves in identifying evidence needs?
- What might we have missed, and who should we involve in the rest of the process?
- Next steps: what will happen to the matrices? Who will review them? What other opportunities are there for involvement?

13:00 Lunch and market place

- Encourage people to capture comments on the matrices, but they will be tired by now, so don’t force it.

13:30 Close, depart

What can go wrong with matrix mapping workshops?

1. Not having clearly defined objectives for the workshop and what will be shown by the matrix. The matrix is a tool which helps to identify potential evidence gaps and to determine potential evidence packages. Creating thinking needs to be encouraged and participants should not get bogged down on detailed issues.
2. Depending on the audience, the matrix can become overly complex. In Defra, 9 columns were used; in another Department this was reduced to three. Judgement is needed about the right level to pitch the matrix to achieve the objectives of the workshop. Care is also needed when assigning the row headings. These can be subject specific (waste, soils, air, products) or business objective specific (technology development, partnership working, better regulation, etc.)
3. Taking too long over an exercise bores people (general workshop rule). The timing of this workshop was very carefully worked out: far better for people to feel that they have not said enough than to disengage in the middle of the process.
4. Having a sample matrix map helps participants clarify what they are being asked to do. This is a very new type of workshop structure for many people, and within each exercise they are given a great deal of freedom: some people need an anchor in the form of an example to which they can refer if they get stuck.
5. Too few facilitators makes it chaotic and tiring: one facilitator per 15 people seems sufficient: four or five will be needed for a workshop of up to 75 people. At least half of the facilitators need content knowledge, but the lead facilitator needs to be someone very experienced in managing a large group of people. S/he needs to work closely with the policy leads to define the resources for the workshop and how it will be written up.

MATRIX MAPPING – SUMMARY TABLE – *NEEDS TO BE RESIZED TO A3 PAPER*

NAME OF CHUNK ↓	LINK TO BUSINESS OBJECTIVES	TIMEFRAME FOR DELIVERY OF RESULTS	COST	BENEFITS: CAN WE ACT ON RESULTS?	COMMENTS / QUALIFIERS	POSSIBLE LINKS TO OTHER PROGRAMMES