



WORKING PAPER 2

# Investing in Evidence:

Lessons from the UK  
Department for Environment,  
Food and Rural Affairs





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## Key messages:

- Over the past ten years the UK's Department of Environment, Food and Rural Affairs (DEFRA) has adopted a systematic approach to improving how it sources and uses evidence to inform policymaking.
- DEFRA implemented two five-year strategy processes that ensured the resources it invested in evidence were better directed towards both long- and short-term policy goals. They also helped improve the transparency of the debates around evidence for environmental policymaking.
- For the third Evidence Investment Strategy, published in 2014, DEFRA worked with a wide range of external organisations that also provide and use evidence, to bring them into the strategy process. This is strengthening relationships between the 'demand', 'intermediary' and 'supply' sides of the relationship between evidence and policy.
- The strategy process is now well embedded throughout the whole Department. It ensures that the skills and resources needed to make evidence-informed policy are allocated efficiently and effectively to helping DEFRA address its policy priorities.

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# Abbreviations and Acronyms

BSE	:	Bovine Spongiform Encephalopathy ('Mad Cow Disease')
CEFAS	:	Centre for Environment, Fisheries and Aquatic Science
CSA	:	Chief Scientific Adviser
DCSA	:	Deputy Chief Scientific Adviser
DEFRA	:	Department for Environment, Food and Rural Affairs
EIS	:	Evidence Investment Strategy
FERA	:	Food and Environment Research Agency
FMD	:	Foot and Mouth Disease
IAH	:	Institute for Animal Health
OECD	:	Organisation for Economic Co-operation and Development
R&D	:	Research and Development
ROAMEF	:	Rationale, Objectives, Appraisal, Monitoring, Evaluation, Feedback ('the policy cycle')
VLA	:	Veterinary Laboratories Agency

# Executive Summary

In 2004, the UK's Department for Environment, Food and Rural Affairs (DEFRA) designed and implemented an Evidence Investment Strategy (EIS). This was an innovative attempt to understand what was really needed for a government department to implement an evidence-informed approach to policymaking.



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Since then, the process has been repeated twice; each time the approach has been further embedded within DEFRA and across its network of linked organisations. The history of the EIS contains many lessons for others trying to adopt a similar evidence-informed approach to policymaking. This case study summarises the lessons learned over the past decade.

The three EIS processes have helped DEFRA ensure that budgets and staff are aligned to deliver an evidence base that helps it achieve its policy priorities. They have improved the evidence base so that it is sufficiently broad to cover the complex environmental issues DEFRA deals with and address both short- and long-term priorities effectively. The processes have been open and transparent, helping improve relationships between DEFRA and its stakeholders.

An EIS involves the entire department so that it delivers value for money across the whole spectrum of departmental policymaking. DEFRA is a large and complex department with multiple stakeholders. Each EIS set off wide-ranging changes in the way DEFRA sourced, handled and used evidence, however it took more than one attempt to develop a robust and repeatable process.

Developing and implementing an EIS requires a department to make a series of conscious choices about:

- which types of evidence are needed now and will be needed in future;
- how to prioritise and budget for those needs;
- how to work with external stakeholders to procure the evidence needed;

- how to broker the evidence into policy so that it is used effectively;
- how to ensure that internal capability and capacity is sufficient to perform all these tasks.

An evidence-based approach to policy-making is truly embedded when it is an integral part of departmental business planning processes and where there is a clear relationship between evidence budgets and program budgets. The EIS processes were led by senior management who communicated the benefits of an EIS both internally and externally.

All three EIS have been based on four principles. The first is that evidence for policy must respond to policy goals and priorities. This means that the evidence base needs to be scoped and managed by policy teams and evidence specialists together; it is not something that can be assigned to a separate team or organisation. Second, policy needs to recognise a range of different types of evidence: statistical data, research, stakeholder and citizen perspectives and evidence from monitoring and evaluation. As well as ‘facts’, the evidence base includes evidence of the uncertainties, risks and ambiguities inherent in a changing policy environment. It needs to pay particular attention to the complex inter-relationships between the environment and society. Third, an effective investment in evidence balances short-term needs with long-term priorities. Evidence is needed to ensure statutory monitoring requirements are satisfied, to respond to ministerial (shorter-term) priorities, and to deliver value in the long term by helping policymakers explore future opportunities, risks and uncertainties. Finally, delivering value from the existing evidence base means a commitment to re-analysing evidence that already exists. In the context of downward pressure on public budgets, it is as important to do this as it is to commission new evidence. An EIS process has helped DEFRA understand how well it is able to address all these needs within current resource limits.

Underpinning these four principles is a commitment to making the evidence base transparent. All policy issues will have a range of stakeholders and a range of views on what evidence is needed and how it should be prioritised. Involving them in developing the evidence base and publishing an evidence strategy document is not only good governance, it enhances wide buy-in to what can be a complex endeavor.

Good governance of the evidence base ensures that both internal and external stakeholders are able to openly discuss what evidence already exists and what evidence is needed to help address policy priorities. DEFRA’s commitment to transparency in the first EIS process saw it open up its entire evidence base for public discussion. This was the first time a department had done this and it was well received by external evidence providers. As the third EIS covers DEFRA and its wider network of organisations, a different balance needs to be sought between its commitment to transparency and its need to retain some confidentiality about working priorities and budgetary allocations.

Over the past ten years, a small core group of staff has continued to learn from one EIS to design and implement the next. Each EIS has raised issues about how the department allocates budgets and staff resources to balance the issues of evidence quality, value for money and relevance to departmental policy goals and priorities. DEFRA currently has tight budgetary control by a central evidence

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directorate and policy teams that define what constitutes policy-relevant evidence, and has embedded evidence specialists who sit within policy teams but report to the central directorate. This seems to balance the three issues effectively. While external consultants were needed to support the central team for the first EIS, the third iteration is now an entirely internal and self-generated process.

Since the late 1990s, the movement promoting evidence-informed policy has gathered strength, however there has been very little practical guidance for government departments to help them understand how to

implement it. DEFRA's three EIS processes have attempted to do just that; balancing short- and long-term priorities, value for money, staff capability and capacity and changing resource levels. Its consistency of approach over the past decade has helped it develop a robust and repeatable process based on principles that are applicable to other policy areas. The EIS is now a routine part of DEFRA's approach to evidence-informed policymaking for the foreseeable future. This case study contains a wealth of lessons for other policymaking departments wanting to improve their use of evidence.

# Introduction

In 2004, the UK's Department for Environment, Food and Rural Affairs (DEFRA), published its first Evidence and Innovation Strategy. This was the first time an entire UK government department had attempted systematically to realign its evidence needs with its policy priorities. Ten years on, the EIS (now called the Evidence Investment Strategy) is in its third iteration. The third EIS strategy document was published on 13 June 2014, and the process is well embedded in DEFRA's approach to strategy and business planning.



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This paper reflects on how the three EIS have been implemented and what they can deliver. The process contains many lessons for others trying to take a strategic approach to managing the evidence base for policymaking. The experience with the development of EIS in DEFRA is relevant to developing countries as it describes the conscious choice by a ministry (called a Department in the UK) to improve and strengthen the consideration and use of different types of evidence in policymaking processes. The EIS documents represent the concrete outputs of a complex process designed to ensure that the full range of departmental evidence needs are addressed and used in support of policy goals.

This introduction sets out some of the core issues all three EIS processes have attempted to address. Section 2 describes the context from which the EIS have emerged, focusing on the policymaking context, the broader institutional context, DEFRA's own internal context and the evidence context. Section 3 describes the process that led to the three EIS being developed by DEFRA so far, and Section 4 closes the paper with an analysis of the differences between the three EIS processes and a short description of what has been learned from each one.

Broadly, DEFRA's three EIS documents set out to describe:

1. An assessment of the longer-term evidence challenges and plans to address them;
2. An overview of the current and planned evidence priorities for DEFRA and any linked organisations;
3. A clear process for prioritising evidence activities in response to new pressures, such as new policy priorities or further downward pressures on budgets;
4. A vision for how DEFRA wants to conduct its evidence activities in future and with whom it will need to partner to gain the evidence it needs.

Underlying these are three central issues that have been at the heart of all the EIS processes. These are touched on throughout this paper.

First, DEFRA recognised early that there was a difference between what could be termed a 'research for science' approach, which prioritises questions of interest to scientists, and an 'evidence for policy' approach, which prioritises questions of interest to policymakers. The two approaches are complementary: as well as addressing policymakers' short-term needs, it is also important to ensure that the evidence base for policy is able to address longer-term issues that scientists believe to be important, such as long-term monitoring of the ozone layer, the marine environment or biodiversity. However, the team designing and implementing the first EIS felt that the balance had shifted too far towards conducting research that was interesting to scientists but did not really answer policymakers' pressing needs.

Second, finding an appropriate balance between 'research for science' and 'evidence for policy' has been integral to all three EIS processes. This may be hard to achieve in the short term, as any change in the current balance will depend on local institutional arrangements between evidence providers (such as government-sponsored research institutes or universities) and evidence users (such as government departments). Thus one of the purposes of an EIS process is to begin to signal, as early as possible, what changes to relationships or institutional arrangements may be necessary to move from a 'research for science' approach to an 'evidence for policy' approach.

Finally, an EIS is a way of communicating to both internal and external stakeholders. As the current EIS says (p. 9): "*We will use our strategy **internally** as the high-level framework to guide our detailed planning, prioritisation and delivery of evidence; and **externally** as a statement of our principles and priorities and a basis for discussion and joint working with potential partners for co-designing and meeting our evidence needs.*" The internal process of producing the EIS document requires a significant amount of internal discussion and debate around several important issues. These include what the long-term evidence challenges are, how they relate to current and planned evidence priorities and what that means for the budgets that are controlled by different teams. An EIS is therefore more than simply a document to communicate priorities; it is the organisational process that precedes and follows the document's publication, a process that needs to be carefully scoped and managed.



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# The Context for Developing the Evidence Investment Strategy

## 2.1. The policymaking context

DEFRA was formed in 2001 with a wide policy remit. It comprised parts of several previous departments; its two main parents being the Ministry of Agriculture, Food and Fisheries, and the Department of Transport and the Regions. The process of bringing together these different policy areas and organisational structures was a challenging one, complicated by the fallout from two crises that had afflicted British policymaking. The first was the Bovine Spongiform Encephalopathy (BSE or 'mad cow' disease) crisis in the mid 1990s, and the second was the Foot and Mouth Disease (FMD) epidemic in the early 2000s. In both cases, the department had been heavily criticised for a poor use of evidence in formulating their policies. Central to the EIS process was a desire to ensure that DEFRA's considerable resources were focused on the department's specific needs to deliver its strategy efficiently and effectively and avoid future evidence-related crises<sup>1</sup>.

The early years of the decade were, for DEFRA, characterised by a real change in terms of thinking about evidence. This was brought about to a certain extent by a good deal of soul-searching about what went wrong in the BSE and FMD crises, concern about how to make policy around genetically modified organisms, and the greater understanding of the UK's global environmental footprint. Policymakers increasingly recognised that many policy impacts are long term, interdisciplinary, and 'owned' by several departments. In addition, the work on science and society, as well as public understanding of science,

<sup>1</sup> Much of section 2, particularly the analysis of the first EIS, is drawn from Shaxson, Harrison & Morgan (2008), which contains the relevant references.

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In 2002, DEFRA's first Chief Scientific Adviser (CSA) was appointed. This started a series of reviews and evaluations about the quality of DEFRA's science and how it was being used.

showed that involving external stakeholders throughout the policy cycle – including in debating the evidence – was a vital part of the policymaking process.

In 2002, DEFRA's first Chief Scientific Adviser (CSA) was appointed. This started a series of reviews and evaluations about the quality of DEFRA's science and how it was being used. DEFRA's two parent departments had very different approaches to managing science, and in 2004 two strategy documents were published to try to bring them together. The first was a five-year departmental strategy which identified five strategic priorities and 18 strategic outcomes<sup>2</sup>. The second was a ten-year forward-looking document that attempted, at a strategic level, to provide guidance for future resource allocation<sup>3</sup>. The challenge for the department was to use these strategic documents to help ensure that its (then) £325m (USD592m in 2004) annual budget for procuring science was aligned with those priorities and outcomes<sup>4</sup>. The purpose of the first EIS was to help the department

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2 These were (1) sustainable consumption and production, (2) protecting the countryside and natural resources, (3) sustainable farming and food including animal health and welfare, (4) sustainable rural communities, and (5) climate change and energy. See also DEFRA 2004a.

3 See DEFRA 2004b.

4 £325m equaled ca USD467m at an exchange rate in April 2002 of 1 USD = 0.6948 GBP (<http://www.freecurrencyrates.com/exchange-rate-history/USD-GBP/2002>). The 2014 document states that DEFRA's evidence budget is now around £200m or USD344m at a recent rate of 1 USD = 0.583337 GBP ([www.xe.com](http://www.xe.com), accessed 1 July 2014).

respond to this challenge by implementing an evidence-based approach to its policymaking.

## 2.2. The broader institutional context

Now, as then, DEFRA operates in a complex landscape of policy delivery organisations, managing research budgets in England and Wales<sup>5</sup>. It operates through a range of different types of organisations, as seen in Figure 1. 'Core DEFRA' is the London-based headquarters with responsibility for policy formulation. Policy delivery is carried out by a network of executive agencies that are sponsored by DEFRA and report back to it, non-departmental public bodies which have their own policy formulation as well as policy delivery responsibilities, and other partner organisations. Collectively, the network has a mix of local, national, European and international responsibilities. DEFRA policymaking is bound by many European conventions and frameworks; an infraction of these (for example around water quality) can result in severe penalties being levied on the UK.

## 2.3. The internal institutional context

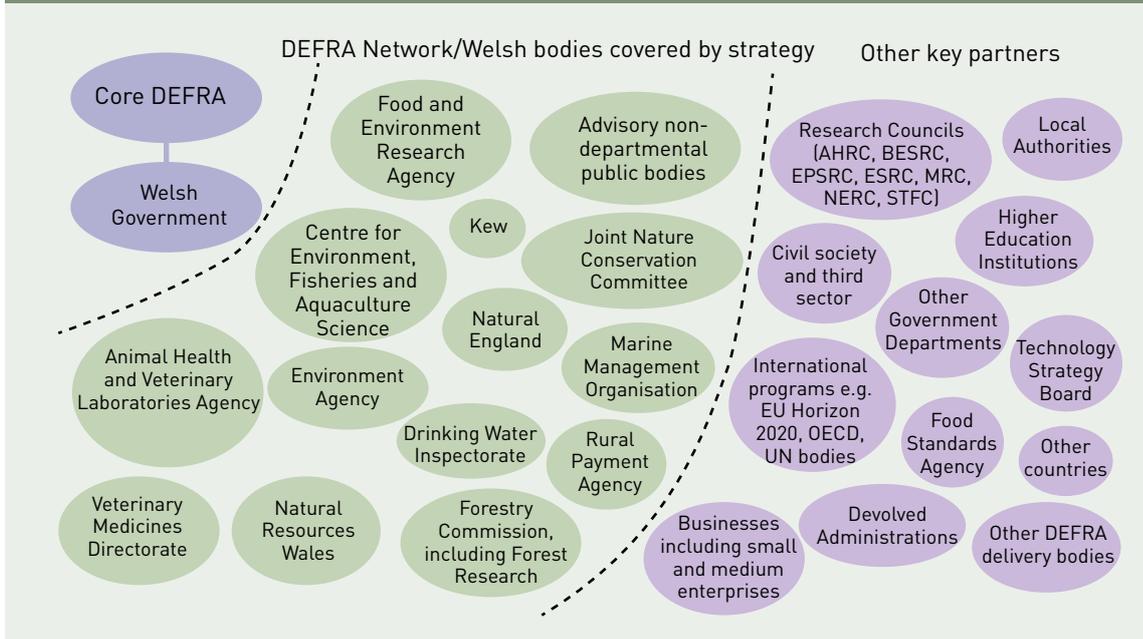
The first EIS emerged from the Science Strategy Team, a small unit led by the Deputy Chief Scientific Adviser (DCSA) who was responsible for the quality of the evidence base. The DCSA reported to the CSA, an externally appointed adviser (not a civil servant) whose remit was to advise ministers on the provision and use of scientific advice. The CSA sat on the Management Board, comprising Directors General from across the rest of the department. This key committee approved the first EIS process and supported it (to some degree) as it progressed<sup>6</sup>.

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5 But not Scotland or Northern Ireland: the United Kingdom has devolved administrations, which means that DEFRA has to co-ordinate environmental policymaking with administrations which control their own budgets and do not necessarily share its policy goals.

6 It is not clear whether the Management Board really 'understood' the principles behind the first EIS; subsequent discussions with one Board

Figure 1: DEFRA's organisational landscape. This is known as 'The DEFRA Network'. Source: DEFRA, 2014b (p 10).



The fact that the EIS team sat within the Science Strategy Team was important for how the EIS was accepted by the rest of the department. Although the process raised challenging questions about how DEFRA procured evidence, it was clear that the EIS was internally driven, not imposed from outside. Having said that, the EIS team grew as the size of the task became apparent, and it was ultimately necessary to contract in several external consultants. The final team comprised two DEFRA staff, two consultants who worked on various aspects of the evidence-based policymaking agenda as well as the EIS<sup>7</sup>, three consultants hired specifically for the EIS process and two interns.

The DCSA engaged with heads of policy divisions to clear the way for the EIS team to work with policy teams and their science advisers to run the workshops, clarify budgets

member indicated that the messages about alignment and value for money never really got through. See Shaxson, Harrison & Morgan 2008.

7 The author was one of these consultants helping design and implement the EIS process. She also worked with a team from the Sustainable Consumption and Production policy area to design and test some of the approaches that were subsequently used or adapted for the main EIS.

and develop the documentation that fed into the EIS itself. The relationships between science and policy varied greatly across the department. Some policy teams already had close relationships with DEFRA's cadre of science advisers, some had more arms-length relationships, and some relied more on external experts to provide their evidence. An important part of the EIS team's early work was to identify who should be involved in the workshops that began the EIS process<sup>8</sup>.

#### 2.4. The evidence context

A considerable amount of work was done to understand the nature of 'evidence for policymaking' as the first EIS was being designed. There was no central government guidance on how to implement an evidence-based approach. The Science Strategy Team reviewed academic literature to understand the key principles and use those to develop and pilot appropriate methods. They used this to develop guidance that contained several key ideas, outlined below<sup>9</sup>.

8 The first EIS process took 11 months, the second and third only six months.

9 See archival guidance at <http://archive.DEFRA.gov.uk/corporate/policy/evidence/index.htm>

### 2.4.1. Using different types of evidence

The first idea was that different types of evidence, from different disciplines, were needed to make effective policy. DEFRA had a strong natural science base but, as the FMD and BSE crises had shown, it had little of the understanding brought by the social sciences. It also had weak strategies for engaging with stakeholders outside formal consultation processes. The first EIS was designed to send clear signals that the evidence base for policy should also include disciplines and types of evidence that had not previously been given sufficient weight, including:

- Economics
- Natural sciences (including engineering and technology)
- Social research
- Statistics

The EIS process coincided with, and reinforced, a wider departmental move to improve the use of social research and methods of stakeholder engagement. This in turn was influenced by the Government's wider agenda around better policymaking<sup>10</sup>.

Prior to the EIS process, DEFRA classified evidence according to the Frascati definitions of research, which are widely used within the Organisation for Economic Co-operation and Development (OECD). These separate out basic research, applied research and experimental development. The Frascati definitions are still used to report on the types of research that are commissioned as they fit with the way that Research Councils and universities report their spend, and thus contribute to an overall view of the UK's research base. However the EIS team believed that they fit more within the 'research for science' approach than the 'evidence for policy' approach. The team therefore developed a new framework for communicating what types of evidence are needed for policymaking, as outlined below.

The first EIS noted that at the level of an

individual policy issue, evidence consisted of research, statistical data and evidence from citizen knowledge. This was done to stress two points – first that 'evidence' was broader than 'research' and second that perspectives and knowledge from citizens and other stakeholders were an integral part of the evidence base. This also signaled the importance of social science evidence, which had, until then, been given much less emphasis than natural science.

By the time of the second EIS, social scientists were much more deeply embedded in the department. The second EIS was therefore able to signal a different set of priorities, which were more heavily focused around risk and uncertainty in the evidence base, as shown in Figure 2.

The third EIS made further changes to how the evidence base is categorised. This is in part because the third EIS covers the whole DEFRA Network, and different organisations within the network collect evidence for different purposes. Regardless of which types of evidence are needed, ministers tend to prioritise short-term evidence needs. This can put pressure on the budgets needed to meet long-term or statutory evidence requirements. DEFRA has many statutory responsibilities for monitoring the environment—either to meet UK legislation or European and international directives<sup>11</sup>. While ministers do not necessarily view statutory evidence collection as particularly exciting, this sort of evidence is viewed by DEFRA staff as 'part of the air we breathe'<sup>12</sup> and takes up a large proportion of the evidence budget, particularly for some organisations in the DEFRA Network such as the Environment Agency.

For the third EIS, DEFRA divided its evidence into three types based on how the evidence is likely to be used (bearing in mind that some policy areas will use all three

<sup>10</sup> See Cabinet Office 1999.

<sup>11</sup> Such as water quality, air quality, biodiversity and many others.

<sup>12</sup> Quote from Ian Davidson, DEFRA's current Deputy Director of Evidence.

Figure 2: Definitions of Evidence in the Second EIS (DEFRA, 2010, p 4)

### What we mean by evidence and innovation

#### What is evidence?

1. For the purpose of this Strategy we have defined evidence as 'reliable and accurate information that DEFRA can use to support sound decisions in developing, implementing, and evaluating policy'.
2. It is delivered by both external and internal sources, and includes the analysis of externally sourced information by in-house or external experts. It involves but is not limited to:
  - Economic social and natural scientific information, including operational research;
  - Analysis, advice, monitoring, surveillance, statistics and research.
3. It includes facts, risks, uncertainties, ambiguities and analysis of the limits to knowledge concerning current and future situations, and the viability of alternative options for future innovative solutions. One of the key goals of the Strategy is to ensure that the evidence we invest in helps to foster innovation.

simultaneously):

- Statutory evidence needs (40% of the total evidence budget), allocated from programs to a specific agency that will perform the monitoring;
- Non-statutory short-term evidence needs that respond to ministerial priorities (40% of the budget). These tend to involve more applied approaches and secondary research;
- Non-statutory long-term evidence needs for more strategic purposes (20% of the budget) working in partnership with Research Councils on more primary academic research and horizon scanning.

While the Frascati definitions are still used to report on spending, the high-level classification between statutory, non-statutory short-term and non-statutory long-term currently drives the EIS. This classification is also useful to signal evidence needs to external providers, particularly academics who struggle to understand what 'policy relevant evidence' really means. It also helps ensure that DEFRA does not become too focused on short-term political priorities and that it can maintain a strong undercurrent of evidence to meet potential future policy needs. To manage the evidence for individual policy issues, the distinctions between citizen knowledge,

research, statistics and evidence from monitoring and evaluation are recognised, though they are not formalised.

#### 2.4.2. Developing a clear line of sight between policy goals and the evidence base

The second idea the EIS team worked with was that an evidence-based approach should clearly show the **line of sight** between strategy, policy and delivery. The five-year strategy document had set out five strategic priorities and 18 strategic outcomes: a core principle of the first EIS was that the evidence base for policymaking should be directed towards helping to achieve those outcomes. This encouraged policy teams to be clearer about how the outcomes could be translated into something concrete, meaningful and achievable—and encouraged scientists to consider what their evidence really meant in terms of helping DEFRA achieve the outcomes. This notion of 'line of sight' became part of the internal branding of the first EIS process and did a good deal to help policymakers understand the shift from 'research for science' to 'evidence for policy'. It remained a key message in the second EIS process<sup>13</sup>, conveying the need

<sup>13</sup> See DEFRA (2010) p32.

for DEFRA to sharpen its focus to deliver the evidence where it was needed most. Arguably the phrase has now done its job: while the third EIS does not use the phrase, the tone of the document reinforces the idea.

### 2.4.3. Quality of process is as important as quality of evidence

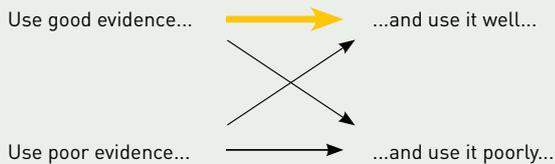
The third idea was that all policies are based on evidence of some form: the question is whether the evidence itself, and the

processes through which the evidence is put to turn it into policy options, are of sufficiently high quality. This emphasis on quality of process was encapsulated in two diagrams: Figure 3, the relationship between the quality of the evidence itself and the quality of the processes through which evidence is used; and Figure 4, which expands on this to outline what those processes are and when they are most appropriately used.

Figure 3: Placing emphasis on the robustness of the processes for using evidence, not simply the robustness of the evidence itself <sup>14</sup>

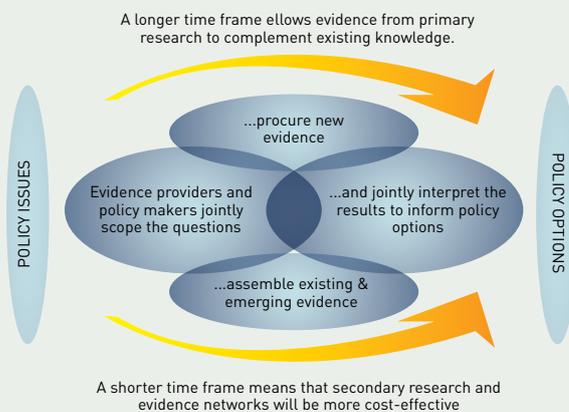
#### The quality of process is as important as the quality of the evidence

There are policies that:



Quality of process is as important as quality of evidence: which means policy teams need to 'own' the scope, size and use of the evidence base for their issue.

Figure 4: The four sets of activities needed for more effective evidence-based policymaking, as set out in the first EIS document. Source: DEFRA, 2006.



14 Adapted from Shaxson, 2005. Published during the first EIS process, this was the result of an attempt to understand what was needed to ensure that evidence was robust enough to inform policy decisions. It resulted in guidance that was used for a time to ensure that policy teams considered the breadth of issues around evidence, not simply its disciplinary quality (see Annex A).

# Developing and Implementing the Three Evidence Investment Strategy

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**T**his section describes in more detail how the three EIS were implemented, the lessons learned and how they led to changes in the second and third strategies.

## 3.1. The first EIS: 2006-2010

The first EIS process followed three steps:

1. Developing statements of the evidence needed for each of the strategic outcomes;
2. Reviewing the allocation of research budgets across DEFRA to ensure that research activities supported DEFRA's strategic priorities; and
3. Summarising the statements of evidence needed in a document that was sent out for stakeholder consultation.

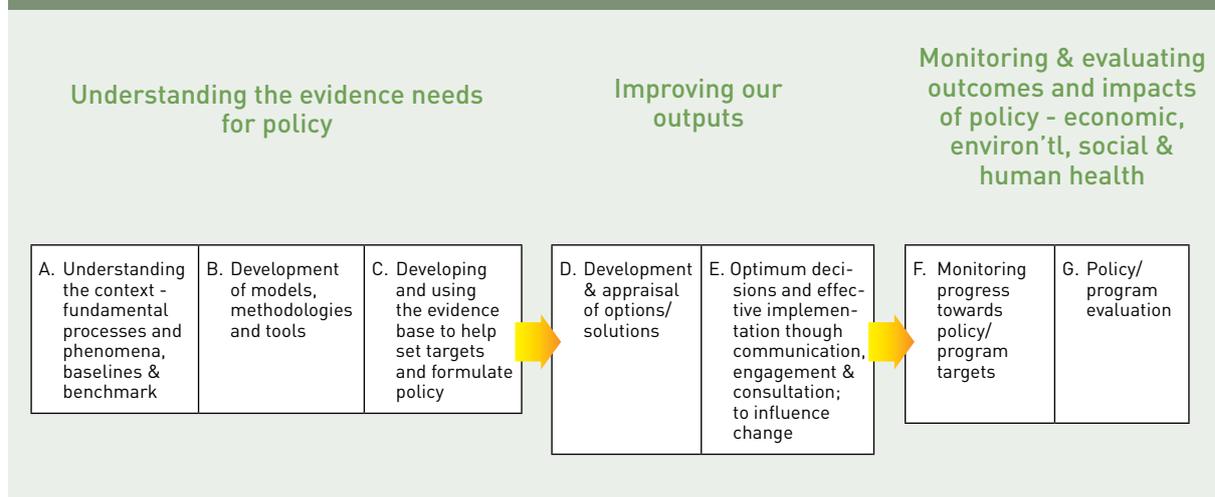
The first step was for each strategic outcome to develop Statements of Evidence Needs. These set out in detail where evidence existed and where further evidence was required. They were drawn up in a series of workshops for each Strategic Outcome, which asked policy teams and their science advisers to set out:

- the strategic outcomes and associated targets;
- the outcomes for individual policy areas and the external drivers that were likely to change things in future;
- what evidence was needed to deliver each of the outcomes, and to cluster those needs appropriately;
- how the clusters of evidence needs were prioritised and what the benefits / value of meeting those needs were to DEFRA; and
- what resources would be required to fund the clusters of evidence needs.

The summary information from the workshops was presented graphically against a series of A-G headings. These were adapted from the standard policy cycle<sup>15</sup> by the EIS team to ensure that all the key reasons for using evidence around the policy cycle were addressed:

Each heading was translated for policy teams as helping to address five ‘big questions’ against which evidence would be needed, the types of evidence that would be needed to address each one, and the processes for collecting the evidence. These are set out in Table 1. There was a purpose to this particular structure: the EIS team felt that policy teams, in general, did not pay enough attention to the trends and drivers that would shape policy in the future. They also felt that policy teams’ understanding of their evidence needs was too reactive to short-term pressures. In addition, it was felt that there was likely to be insufficient attention paid to evidence from evaluations or social and economic evidence more broadly. The five questions were developed to ensure that equal weight was given to all aspects of the evidence base,

Figure 5: Classifying evidence needs according to an ‘evidence cycle’. Shaxson, Harrison & Morgan, 2012, p20.



15 The ROAMEF cycle was in use at that time across the UK government and stood for Rationale, Objectives, Appraisal, Monitoring, Evaluation, Feedback.

however they were phrased in terms that would be more familiar to policy teams than the A-G headings above.

showed that many policy areas were spending most of their resources in categories A and B, with far less being spent to improve their

**Table 1: Rationales for evidence and types of evidence required.**  
Source: Harrison & Shaxson, 2006.

A-G heading	'Big questions'	Rationales for evidence needs	Types of evidence required
A: Understanding the context; fundamental processes and phenomena, baselines and benchmarks	Where are we now?	<ul style="list-style-type: none"> <li>To gather and analyse available / new data</li> <li>To evaluate risks, issues and uncertainties</li> </ul>	<ul style="list-style-type: none"> <li>Reviews of existing knowledge</li> <li>Surveys of social and environmental data</li> <li>Research on causality</li> <li>Risk assessment</li> </ul>
B: Development of models, methodologies and tools	Where are we going?	<ul style="list-style-type: none"> <li>To understand current drivers and trends</li> <li>To predict future drivers and trends</li> <li>To assess implications for policy outcomes</li> </ul>	<ul style="list-style-type: none"> <li>Sensitivity analysis</li> <li>Horizon scanning</li> <li>Forecasting and scenarios</li> <li>Modelling impacts and outcomes</li> </ul>
C: Developing and using the evidence base to help set targets and formulate policy	Where do we want to be over the next 5-10 years?	<ul style="list-style-type: none"> <li>To understand the economic / social value of change</li> <li>To understand the feasibility / cost of change</li> <li>To negotiate goals</li> </ul>	<ul style="list-style-type: none"> <li>Economic and social research</li> <li>Deliberative engagement processes</li> <li>Feasibility and pilot studies</li> <li>Market surveys</li> </ul>
D & E: D: Development and appraisal of options/ solutions E: Optimum decisions and effective implementation through communication, engagement and consultation to influence change	How do we get there?	<ul style="list-style-type: none"> <li>To identify / evaluate current options</li> <li>To identify / develop new solutions</li> <li>To evaluate new / old options</li> </ul>	<ul style="list-style-type: none"> <li>Option / evaluation studies</li> <li>Regulatory impact assessments</li> <li>Interventions to promote innovation</li> </ul>
F & G: F: Monitoring progress towards policy/ program targets G: Policy/program evaluation	How well did we do?	<ul style="list-style-type: none"> <li>To monitor progress</li> <li>To evaluate policies &amp; programs</li> <li>To learn lessons</li> </ul>	<ul style="list-style-type: none"> <li>Interdisciplinary evaluations</li> <li>Deliberative evaluation processes</li> </ul>

For each strategic outcome the policy and EIS teams drew up a detailed map, see below (blue represents currently funded evidence, yellow indicates need for additional knowledge).

The Statements of Needs and the graphical maps formed a consultation document which was sent out to DEFRA's stakeholders<sup>16</sup>. This was the first time DEFRA's entire evidence base had been presented in one document. It

outputs or monitor policy impact. The blue/ yellow colouring allowed teams to look at the balance between existing commitments and areas where spending might be needed, and to see how they aligned with DEFRA's current policy priorities and longer-term goals.

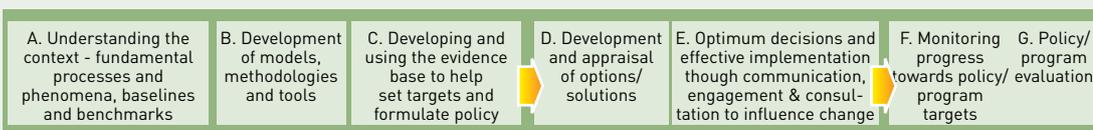
The initial analysis of the graphical summaries showed that, if DEFRA were to achieve its Strategic Outcomes, it would increasingly require:

- "...social and opinion research to help us understand people's attitudes and

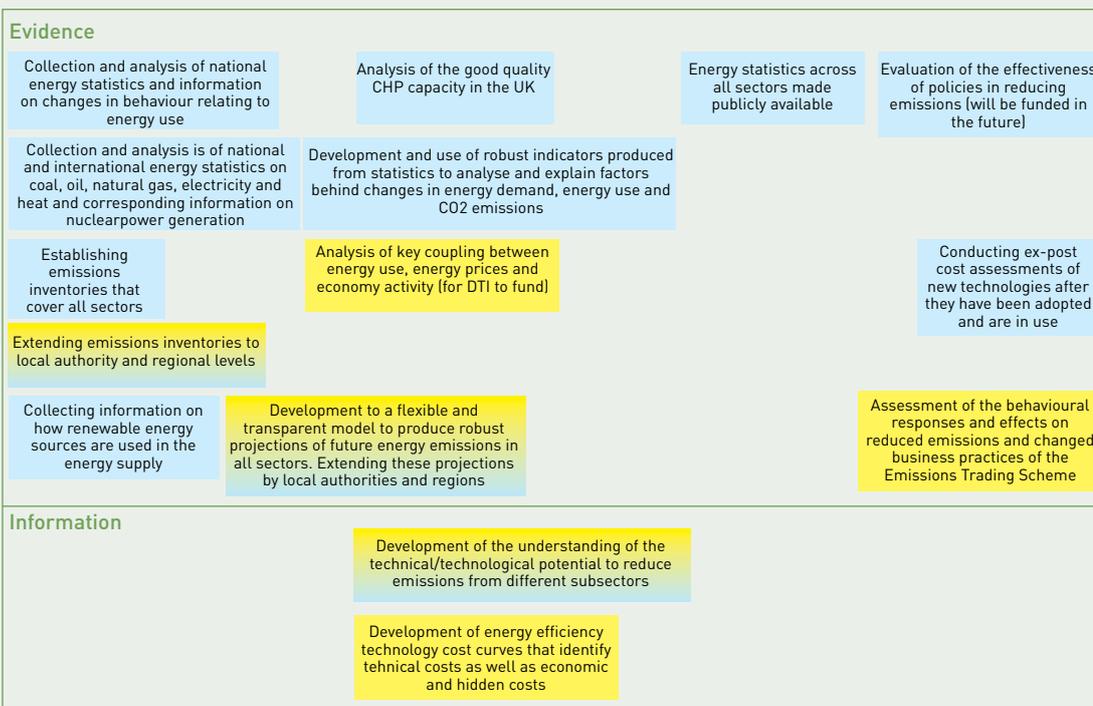
<sup>16</sup> See DEFRA, 2005.

Figure 6: Graphical Presentation of Evidence Needs. Source: DEFRA, 2005.

### Understanding the evidence needs for policy



### Energy supply (including CHP)



### Business (industrial and commercial)



preferences on policy issues, and their likely response to different solution strategies;

- multidisciplinary analysis and assessment to address difficult policy questions (e.g., risk assessment);
- greatly improved levels of evaluation (including social, economic and environmental as well as technical aspects) of issues and solutions; and
- expert specialist support to be broadened from 'delivering outputs of a research project' to include 'advising DEFRA on

the potential application and use of the knowledge so gained" (DEFRA, 2005, p 10).

This analysis, drawn from the policy teams themselves helped reinforce the message from the EIS team about how important it was to use different types of evidence, not just scientific research.

The consultation document noted that the EIS team could see:

- "...a growing emphasis on working jointly with key stakeholders – their shared

views on DEFRA's evidence base are vital to secure its acceptance;

- a need to determine our requirements for primary research against the policy cycle to help us maintain our focus on delivering policy outcomes. In some areas, this may require work with other funding organisations to ensure essential capabilities are maintained<sup>17</sup>; and
- a clear requirement to assess the depth and breadth of the skills base necessary to deliver evidence against DEFRA's complex goals and other priorities (especially on sustainable development and sustainable consumption and production) in the medium to long term" (DEFRA, 2005, p11).

These were not simply reflections on what the EIS process was generating, they were also a way of sending signals to DEFRA's stakeholders that the department was considering making some significant shifts in the way it sourced, handled and used evidence. The initiative to consult on the evidence base was well received by external stakeholders.

The responses to the consultation helped the EIS team to work with policy teams to revise their Statements of Evidence Needs and outline the evidence budgets they would require for the coming years. The first EIS process then became absorbed into ongoing departmental business processes.

The EIS team had hoped that it would promote significant change in how evidence budgets were allocated and managed, and in the relationships between evidence specialists and policy teams. It did, but it proved to be a very challenging process for the department. Once the final EIS document was published, the EIS team was disbanded. Some continued to support the approach in individual policy

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The EIS team had hoped that it would promote significant change in how evidence budgets were allocated and managed, and in the relationships between evidence specialists and policy teams. It did, but it proved to be a very challenging process for the department.

areas, but there was no specific cross-organisational approach to implementing the strategy. The learning was not lost, however. As the next section shows, when the term of the first EIS expired, the lessons learned helped shape the second iteration.

### 3.2. The second EIS: 2010-2013

The first EIS ran from 2006-2010. The second EIS process began in 2009, was published in 2010<sup>18</sup> and updated in 2011 to reflect the new government's priorities<sup>19</sup>.

While the principles that underpinned it were similar to the first EIS, there were several key changes.

First, the EIS was now explicitly linked to departmental business planning processes. DEFRA submits an annual business plan to the Prime Minister's office. It then develops an implementation plan that sets out the department's top policy priorities and, for each priority, a business plan that describes what it intends to do to achieve them. Each business plan details four to five policy activities and the supporting evidence activities that will be required. By 2013, the evidence activities for each policy priority were summarised in Evidence Plans and published on the DEFRA website.

Second, there was a clearer sense of how to embed evidence within policy teams. Prior to the first EIS, science budgets and policy

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17 This related not just to relationships with Research Councils (which are the main source of funding for UK academia) but also to the need to maintain some form of capability and capacity at the laboratories that formed part of the DEFRA family: CEFAS, FERA, IAH and VLA.

18 See [here](#)

19 See [here](#)

budgets had been held separately. There had been a central analytical directorate with a cadre of evidence specialists who did research and analysis on behalf of the department. As policy teams changed, it became harder for this directorate to maintain links with the central directorate. This meant that policy teams began to commission their own evidence without recourse to the directorate's quality assurance processes. In turn the directorate tended to commission work that was not relevant to policy priorities.

To attempt to solve this, all the evidence specialists were embedded in the policy teams and given budgets to procure policy-relevant work. However, this gave rise to the opposite problem; without a central coordinating mechanism the specialists ended up duplicating work. The internal knowledge management processes were insufficiently strong to prevent this, but during the process of embedding the second EIS a compromise was found: a small core team now has control over the evidence budgets, but the specialists themselves are embedded in the policy teams under the supervision of a Deputy Director of Evidence. The budget for evidence goes to each director who has discretion over how it is spent. However the evidence plans are sent to the central unit, which uses them to understand exactly where resources are being spent. Because the central team has responsibility for oversight of the evidence budget, it can spot potential duplication. Getting the link right between where the specialists are located and who has control over the budget for evidence has been important. It also helps distinguish between two types of policy: on the one hand are the mature policy areas with a good

evidence base that just needs to be updated, and on the other are new policy areas where a significant amount will need to be spent on synthesising existing evidence and procuring new evidence. The lesson DEFRA has learned is that combining the evidence budget with the budget for each policy program allows for greater flexibility in what is funded.

### 3.3. The third EIS: 2014-2018

The third EIS process began in 2013 and was published on June 13, 2014. DEFRA now feels that, having gone through three iterations over ten years, it has developed a robust process that would be able to respond in a rigorous way to any significant changes in ministerial priorities. There are now three main stages in the process (this section is taken from DEFRA, 2014):

- Describing the current landscape as the bedrock of the EIS;
- Prioritising future evidence needs; and
- Allocating budgets.

#### 3.3.1. Describing the current landscape

**1. Define what 'evidence' consists of.** The core DEFRA team began discussions across the DEFRA Network about what was meant by evidence. This would ensure that all organisations could begin from the same standpoint. It also helped DEFRA develop a good knowledge of the current landscape of evidence spending—what was being spent on what types of evidence, and for what purpose. This was not necessarily easy. While the Frascati definition of R&D was helpful for a particular part of the evidence base, across the network most evidence collection activities are linked to operational activities. However the people doing the monitoring also provide advice (for example, collecting data on water quality as well as talking to farmers about how to improve it). This makes it difficult to work out exactly how much is being spent on collecting evidence. So the EIS began with a relatively unclear definition of evidence and an unclear understanding

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The lesson DEFRA has learned is that combining the evidence budget with the budget for each policy program allows for greater flexibility in what is funded.

of how much was being spent on different types of evidence. Final figures rely on judgments from senior managers as to what seems reasonable to report.

- 2. Determine how much evidence is procured internally, and from outside organisations.** DEFRA still has a large budget for evidence; currently £200m, or USD344m at current exchange rates. However it collaborates with external providers such as universities, who have their own budgets for research, to meet the full range of its evidence needs. It is important to know the extent of this to understand where and how to build stronger relationships with external organisations.
- 3. Determine how much evidence is procured against each policy issue.** As noted above, the question of who holds how much budget against which policy issue is a difficult one, as some evidence can be procured that is relevant to more than one issue. Again, judgments from senior management are needed to ascertain clarity.
- 4. Link evidence procurement to business planning.** The next step is to determine how the procurement and use of evidence relates to the departmental business plan. Although evidence is now seen as part of the core business of policymaking, in practice it can still be difficult to draw a clear line from evidence procurement to a specific part of the business plan.

While information from the analysis described above is not completely accurate, it does help set out the evidence 'landscape' within the DEFRA Network. This is needed to build the strategic approach: even having a rough idea of the landscape is better than having no idea at all.

### 3.3.2. Prioritise future evidence needs

The major part of the EIS process is this prioritisation, between statutory, non-statutory short-term and non-statutory long-term needs. There are different issues that inform the prioritisation of each of the three types:

## 1. Statutory evidence

### Statutory evidence

Statutory evidence meets legal requirements to report on key policy issues, but does not necessarily inform policy in a direct way. For example, DEFRA has statutory responsibilities to collect information on issues such as the level of pesticide residues in food, evidence to help monitor protected marine areas, the state of the terrestrial freshwater environment, air quality, the presence and levels of animal and plant pests, and disease (see DEFRA, 2014b p.18). These responsibilities are driven by domestic and European legislation rather than by ministerial priorities. Not collecting the evidence can result in heavy penalties being administered to the department.

Because statutory evidence is driven by legal requirements, it is not possible to set priorities. Instead, the issue for DEFRA is how to extract value from something which is a 'sunk cost' to the evidence base—a cost that has to be incurred year on year. It does this by looking for parts of the statutory evidence base onto which it could graft research projects. For example, the statutory obligation to monitor water quality could be linked to a research project on assessing the effects of human and animal pollution on shellfish quality. Doing this would save time for researchers and add value to statutory data collection activities.

## 2. Strategic evidence priorities (non-statutory long-term evidence)

Strategic evidence is evidence that helps set out what areas of evidence DEFRA should be focusing on in the five- to ten-year time horizon, based on current policy priorities. This ensures that evidence collection looks at future opportunities, risks and uncertainties, and helps build collaborations with Research Councils (which fund university research), industry and other stakeholders. Strategic evidence priorities are lightly prioritised

within three main areas. These focus on: a) improving competitiveness and environmental performance; b) improving resilience, risk management and contingency planning; and c) sustainable and equitable management of natural resources. Figure 7 below shows the detail of these areas and the main challenges for which DEFRA believes new evidence will need to be defined and delivered.

### 3. Applied evidence priorities (non-statutory short-term evidence)

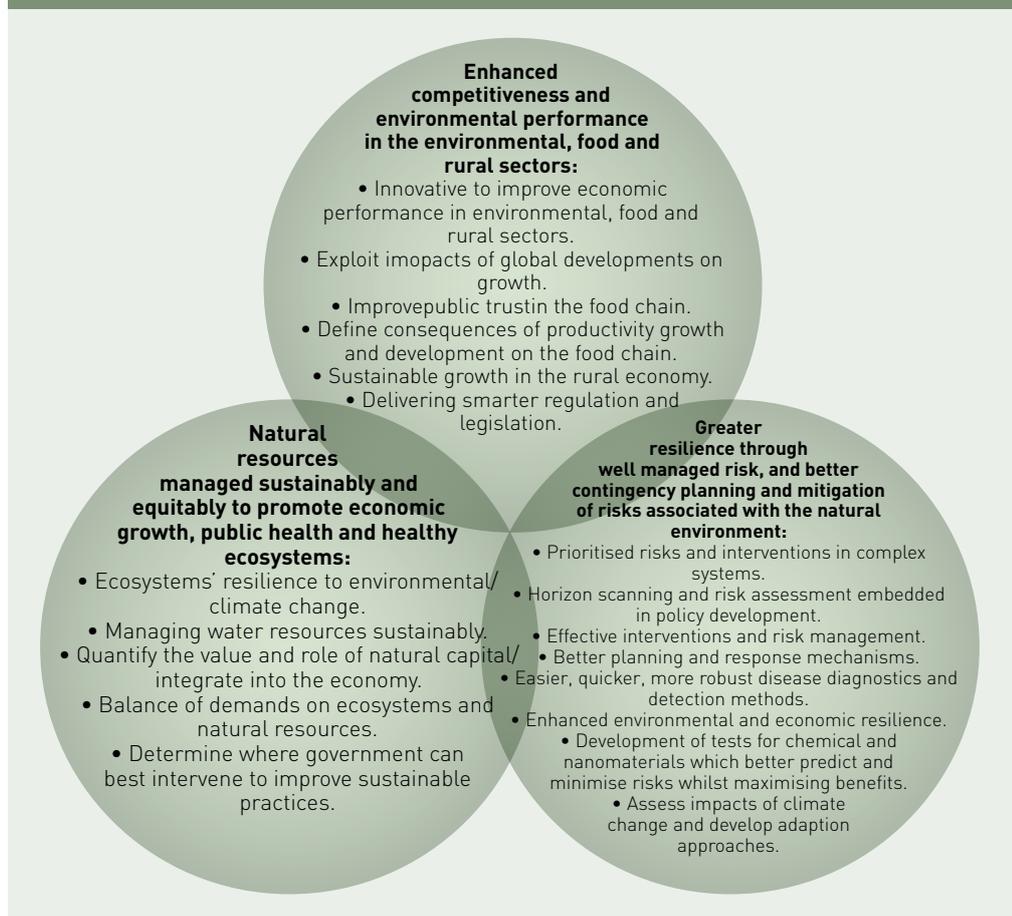
The applied evidence priorities include evidence that is driven by current policy questions, by what ministers believe to be important, and by what is needed to help negotiate policy in Europe. This is the major part of the process. The current departmental priorities fall into four areas:

growing the rural economy, improving the environment, safeguarding plant health and safeguarding animal health.

Policy teams and their evidence specialists ‘bid’ for their evidence needs to be prioritised in order to be funded. The Chief Scientific Adviser’s Office leads a process to prioritise this long list of potential needs. The process scores each bid against a detailed framework that has five sub-steps, each of which relates to the different rationales for using evidence:

- a. **Policy priority:** determining the policy priority for the large themes and thus the general priority to be assigned to particular pieces of evidence. This is a difficult process as all policymakers will claim theirs to be a priority—an attempt to involve ministers in challenging policy teams to ‘prove’ that their needs were

Figure 7: DEFRA’s current strategic evidence outcomes and priority areas. Source: DEFRA 2014b (p 25).



departmental priorities did not work terribly well and the EIS team ultimately had to make a judgment based on recommendations from ministers and senior policy officials on how best to address policy priorities;

- b. Criticality:** for each policy priority, assessing how critical it is to have the evidence (i.e., whether the evidence is 'need to have' or 'nice to have');
- c. Impact and risks of not doing the work:** linked to criticality is a further assessment of how big the gap in the evidence base is between what DEFRA needs to know and what it does know. Risks of infraction of EU directives, or reputational risks, are also considered; not just the risks that a knowledge gap will lead to poor policy decisions;
- d. Strategic capability:** this asks whether the work underpins the strategic capability DEFRA needs to retain in the long-term (e.g., to respond to threats of animal disease outbreaks, flooding, other emergencies). DEFRA owns and sponsors several key laboratories, but in an age of

austerity there are increasing questions about whose responsibility it is to retain strategic capability and what exactly this capability should look like; and

- e. Leveraging:** for every Pound Sterling spent by DEFRA, how much is complemented by funds from Research Councils, industry or non-government organisations? Again, in an age of public sector austerity it is important to understand the leveraging issue to extract maximum value for public money.

Given declining budgets, an important topic for DEFRA to address is to what extent DEFRA 'makes or buys' evidence; whether it funds evidence itself or works in partnership with others. Its own considerable budget means that it has a fair amount of leverage in this issue. This is conceptualised in Figures 8 and 9:

### 3.3.3. Finalise the prioritisation

The answers to each of these are scored against a prioritisation framework, after which there is a lengthy process of moderating the scores across the department, led by the EIS

Figure 8: The first step is to find synergies between priorities and strategies across the DEFRA Network, drawing on expert input and advice. DEFRA HQ sets the strategy drawing on expert input and others' strategies. DEFRA HQ and the network then identify the evidence needs and how to meet them. Source: DEFRA, 2014a.

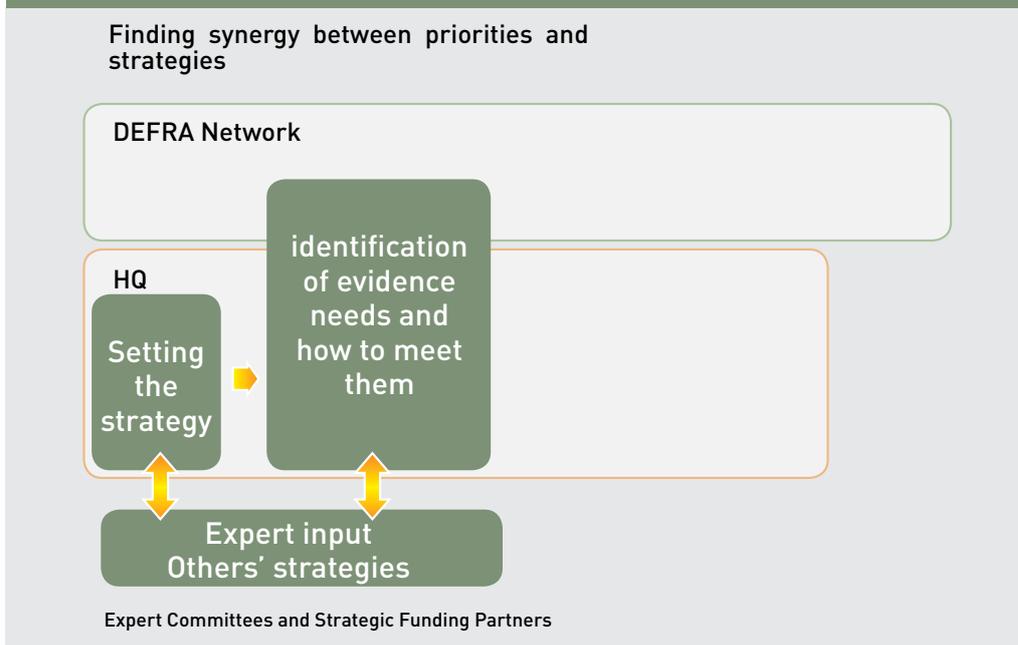
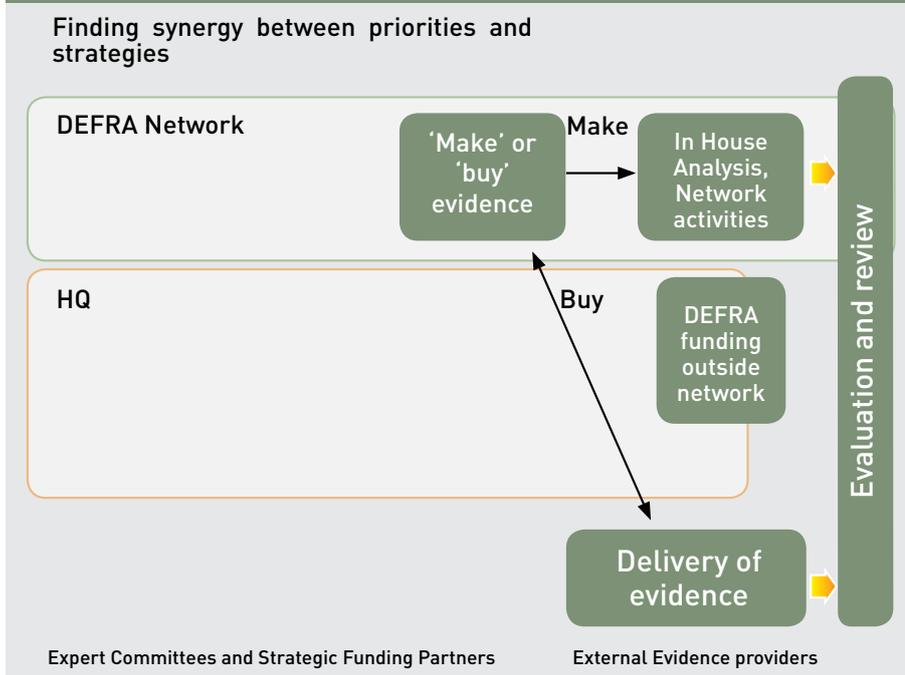


Figure 9: Once the strategies have been clarified, the next question is the extent to which the evidence and subsequent analysis is 'made' by the DEFRA Network, or 'bought' from outsiders such as universities. Sharing buying power in this way improves the overall impact of the spend on evidence. Source: DEFRA 2014a.



Deputy Director. For the third EIS this took at least two months: how it is run depends on how well the policy teams engage in the process (which is often determined by how threatened they feel by the results). A final moderation was held in a one-day workshop (moderated

by the Chief Scientific Adviser) where all the evidence specialists were invited to look across all the scores together. At the time of writing, this score sheet was being taken out to policy directors and their colleagues to finalise the moderation process.

# Conclusions

## 4



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No formal evaluation has been done of the EIS processes, though each individual strategy process has been adapted to account for weaknesses in the previous iteration and changes in the wider environment – including downward budgetary pressures. Rather than attempting to draw conclusions about what an EIS could and should look like, it is perhaps more useful to set out what has stayed the same during the three processes and what has changed (and why).

## 4.1. What has remained constant

### 4.1.1. The principles

A set of four principles was developed during the first EIS. These were based on reviews of the (then emerging) international literature around evidence-based policymaking, and were refined as the EIS was implemented:

- a. **Put policy in the lead:** Managing the evidence base is an integral part of the policymaking process, not something that can be assigned to dedicated science teams. Developing the evidence base for policy should be led by policy goals and priorities and linked to policy and delivery targets.
- b. **Use a broad definition of ‘robust evidence’:** Policy needs to be based on a broad definition of evidence that recognises knowledge from evaluation, monitoring and surveillance activities, knowledge from citizens and stakeholders, as well as knowledge from formal research-based disciplines.
- c. **Focus investment in evidence around long-term priorities:** As well as responding to short-term priorities and statutory requirements for monitoring, use foresight and future work to ensure that evidence delivers value in the long-term by helping policymakers explore opportunities, risks and uncertainties.

**d. Derive value from the evidence that already exists:** To deliver value from the existing evidence base (in the context of downward pressure on public sector budgets), it is as important to analyse existing and emerging evidence as it is to commission new evidence.

Even though they are not explicitly stated, these principles still hold for the current EIS. They have helped DEFRA move from a 'research for science' to an 'evidence for policy' approach. They have also broadened the range of types of evidence, particularly social science evidence which was weak before the first EIS. They have ensured that the evidence base really is focused on delivering DEFRA's complex mix of statutory, short-term and long-term policy priorities, as public sector budgets come under severe strain.

#### 4.1.2. A whole-organisation approach

All Evidence Investment Strategies have involved the entire department in planning evidence investment so it delivers value for money across the whole spectrum of departmental policymaking.

The first EIS broke the mold – previous attempts to rationalise DEFRA's very large science budget had not explicitly linked science spending to policy need. Principles above showed that delivering value for public money meant that it was necessary to really understand what evidence policy teams needed in order to achieve their intended outcomes. This means equal involvement of the policy teams (the evidence users) and the science teams (the evidence providers).

The second EIS embedded this approach across core DEFRA, at the same time experimenting with locating science advisers within policy teams to maximise the professional contact between the two 'sides'. The current situation, with a small central evidence team overseeing a cadre of evidence specialists who are embedded within policy teams is evidence of a continuing

whole-organisation approach.

The third EIS is expanding to cover the DEFRA Network as it attempts to develop Statements of Evidence Needs with its other linked organisations. How this is done will be analysed in another case study later in 2014.

All three EIS have been high-level strategic processes, led by a small team towards the top of the organisation, closely linked to the Chief Scientific Adviser. Their authority to ensure that the EIS is a whole-system approach comes from three things: their position in the organisation; Board-level buy-in to the process; and a well-communicated understanding of the strategic benefit to the department. It has been important to have this authority, as the EIS process can be a challenging one: it is not a process that can be delegated to lower levels, as it is closely linked to budgeting, team structure and composition.

#### 4.1.3. Linking the EIS to business planning

An evidence-based approach to policy-making is truly embedded when it is an integral part of departmental business planning processes, and when there is a clear relationship between evidence budgets and program budgets.

The first EIS struggled to make this argument, in part because the evidence budgets and program budgets were managed completely separately. The second EIS did manage to ensure that evidence planning and business planning were more closely linked (again, supported by the co-location of evidence advisers and policy teams). The third EIS has further integrated the two planning processes. While it is not always possible to assign specific parts of the evidence budget to particular parts of the business plan, the process of attempting to link the two budgets reinforces the idea that procuring and using evidence is a core part of the policymaking process.

#### 4.1.4. Learning from each EIS

There is no single piece of guidance to help

a department implement an EIS. Each iteration learns from the previous one. It is important to retain key staff to ensure that they are able to use their knowledge to continually refine the process.

The small team that led the first EIS has long since moved on, however there is still a small core of people at senior levels in DEFRA who have participated in all three EIS processes. Though their individual positions have changed over the ten years, they have all played key roles throughout each of the EIS cycles. This has ensured that what they have learned has been retained in the organisation.

## 4.2. What has changed

Several things have changed over the three iterations of the EIS.

### 4.2.1. The use of external consultants to implement the EIS process

While the first EIS needed external consultancy support to help implement an unfamiliar process, ultimately it has become a wholly internal process.

The first EIS was led by the Science Strategy Team, but a small team of external consultants was drawn in for much of the implementation. They ran workshops and helped policy teams conduct foresight exercises and draw up evidence budgets. The two departments that had joined to form DEFRA had very different ways of working which meant that the EIS process needed to be flexible, learning lessons rapidly about the different types of relationship between evidence and policymaking and changing the process as needed. An initial attempt to use a large traditional consultancy organisation was not successful as its approach was too standardised. Instead, the EIS used a small 'friendly' team of individual consultants, each of whom spent time building relationships with specific policy teams as they shepherded them through what was sometimes a challenging process. The internal team was then able to spend time ensuring that the EIS's strategic

direction remained consistent. That way, it could engage in internal discussions about what the process implied for the organisation and do the essential management that comes with any organisational change process.

The second EIS only used two external consultants, mainly to conduct forensic analyses of the evidence budgets. The third EIS did not use any consultants at all; the processes and relationships were felt to be sufficiently strong that it could be led entirely from within.

### 4.2.2. Clarity over what constitutes 'evidence for policy'

An EIS process helps ensure that the evidence base for policy consists of statistical data, research evidence, evidence from citizens and stakeholders and evidence from monitoring and evaluation. It clarifies the relationship between statutory and non-statutory needs for evidence and the evidence required for short- and long-term policy priorities.

There are now several different ways of conceptualising 'evidence for policy'. While the Frascati definitions are still used to report spending on evidence, the EIS processes have helped reinforce the idea that the evidence base *for policy* should consist of a mix of data, research, citizen and stakeholder perspectives and monitoring and evaluation evidence. Seeing citizen and stakeholder evidence as part of the evidence base was an important part of the first EIS's attempt to open up the black box of evidence-based policymaking<sup>20</sup>, to make consultations around evidence and what it meant an integral part of the policymaking process itself.

This coincided with (and reinforced) the move to use more social science evidence and to recruit more social scientists as evidence

<sup>20</sup> In response to pressure from influential people to 'open up' policymaking processes. See Stirling, 2008. Andy Stirling was one of the first members of DEFRA's Science Advisory Council, the high-level body providing expert scientific advice to the department.

specialists in a department that was very heavily weighted towards the natural sciences.

The second and third EIS have separated out statutory, non-statutory (long-term) and non-statutory (short-term) evidence needs, helping ensure that ministerial priorities are balanced against longer-term evidence needs and DEFRA's statutory reporting requirements.

#### **4.2.3. Internal organisational issues**

The process of developing an EIS helps a department understand how to create and manage a high-quality evidence balance that remains relevant to changing policy priorities yet represents value for money.

All three EIS processes have attempted to balance the issues of quality, value for money and relevance of the evidence base. Relevance demands close ties to policy teams but can lead to duplication of effort unless someone is able to have a good overview of what is being spent where. Value for money and quality on their own would require a strong central team which can allocate funds most efficiently, but this can come at the cost of understanding what is really relevant to policy teams. DEFRA's current arrangement – of tight budgetary control by a central team, loose control over what constitutes 'relevance' and devolved quality control to the Deputy Directors of Evidence seems to combine all three issues effectively.

#### **4.2.4. Making the evidence base transparent, both internally and externally**

Good governance of the evidence base ensures that both internal and external stakeholders are able to openly discuss what evidence already exists and what evidence is needed to help address policy priorities.

The first EIS took what was then the bold step of putting its entire evidence base for policymaking out for consultation; inviting

comment on its shape, structure and future strategy. This was the first time a department had opened up its evidence base for this sort of scrutiny, and it was well received by external evidence providers. The second EIS built on this commitment to transparency in the evidence base by ensuring that all the individual Evidence Plans were consulted on as they were being developed and put online. The third EIS process has continued the approach to open consultation with workshops and meetings during the strategy process, however it is not yet clear what the final Statement of Evidence Needs will look like and how different they will be from the Evidence Plans. As noted above, they will form the basis of another case study on evidence-based policymaking in DEFRA.

#### **4.3. Final reflections**

In 2004, a small team in DEFRA put in place an ambitious attempt to implement an effective evidence-based approach to policymaking. It was a very challenging process for the department. Ten years later, the EIS has grown into a systematic process helping DEFRA manage its evidence base better, making better use of its resources, and making the debates around the evidence base more transparent. A small group of people now implements the processes, led by senior management who can clearly see the strategic value to the department. The third EIS is only now beginning its implementation phase. Several issues are being debated, such as the Statements of Evidence Need, quality assurance mechanisms and budgetary management. The full implications of the shift to a network-wide EIS will therefore not be seen for several years. However, a regular EIS cycle is now a routine part of DEFRA's approach to evidence-informed policymaking for the foreseeable future.

# References

- Cabinet Office, 1999. *Professional policymaking for the twenty-first century*. Cabinet Office Strategic Policymaking Team, September 1999. Available from <http://dera.ioe.ac.uk/6320/1/profpolicymaking.pdf>
- DEFRA, 2004a. *Delivering the essentials of life: DEFRA's Five Year Strategy*. Available from <http://www.ewc.polimi.it/dl.php?file=DEFRA%205year-strategy.pdf>
- DEFRA, 2004b. *Evidence and innovation: DEFRA's needs from the sciences over the next 10 years*. London: Department for Food, Environment and Rural Affairs. No longer available online, but available in hard copy from the author.
- DEFRA, 2005. *Evidence and innovation strategy 2005-2008: consultation document*. No longer available online, but available in pdf from the author.
- DEFRA, 2006. *Our approach to evidence and innovation*. London: Department for Food, Environment and Rural Affairs. No longer available online, but available in pdf from the author.
- DEFRA, 2010. *DEFRA's evidence investment strategy 2010 to 2013 and beyond*. London: Department for Food, Environment and Rural Affairs. Available [here](#)
- DEFRA, 2011. *DEFRA's evidence investment strategy 2010 to 2013 and beyond – 2011 update*. London: Department for Food, Environment and Rural Affairs. Available [here](#)
- DEFRA, 2014a. *One Business Evidence: presentation to Research Council partners' event*. February 2014. Available from the author.
- DEFRA, 2014b. *Making the most of our evidence: a strategy for DEFRA and its network*. London: Department for Food, Environment and Rural Affairs. Available [here](#)
- Harrison, M. & L. Shaxson, 2006. *Putting evidence-based environmental policymaking into practice: insights from DEFRA's Evidence & Innovation Strategy*. Presentation to Sussex Energy Group, 19 October 2006. Available from the author.
- Shaxson, L. 2005. Is your evidence robust enough? Questions for policymakers and practitioners. *Evidence and Policy* 1(1): 101-111.
- Shaxson, L. M. Harrison & M. Morgan, 2012. *Developing an evidence-based approach to environmental policymaking: insights from DEFRA's Evidence & Innovation Strategy*. SPRU Working Paper 181. Falmer: University of Sussex.
- Stirling, A. D. 2008, "Opening up" and "Closing down": power, participation and pluralism in the social appraisal of technology. *Science, Technology and Human Values* 33: 262-294.

## Annex A:

# Guidance on assessing the robustness of the evidence base, issued during the first EIS process

### EVIDENCE BASED POLICY MAKING

## Five Components of Robust Evidence



#### Do you believe that the way information has been sourced, analysed and synthesised gives you **CREDIBLE** evidence for policy?

- Do you have a sense that best practice has been followed, both in sourcing the information; and in analysing and synthesising it? Can you refer to this?
- Is there a clear line of argument between the evidence and the options?
- Is it presented clearly in language that allows non-specialists to see how you arrived at the options?
- It will strengthen your case if people with different specialisms have contributed to the way the argument has developed. Can you refer to this to support your position?

#### Is the evidence **RELIABLE** enough for monitoring & evaluation, or for impact assessments?

- Have you considered what evidence you might need to collect now that will support future monitoring, evaluation and impact assessments of the policy?
- Have you built on the results of previous monitoring or evaluations?
- If the wider context of your policy is important will you be able to track this sort of information in a regular and meaningful way?
- Can people see how the argument has evolved over time? This is important where you are developing a line of argument – especially if the argument is contentious.

#### Do you believe that the evidence in front of you is **OBJECTIVE**?

- Are you sure that the evidence has been gathered and analysed with the minimum of bias from researchers, policy officials and decision-makers?
- If you feel that the evidence is biased in any way, have you discussed this bias and accounted for it in the way you present the options? Will the bias affect your recommendations? How can you be sure?
- Have any stakeholders suggested that the evidence is biased? How have you dealt with this in presenting the evidence and options?

#### Do you believe that the evidence for this policy is well **ROOTED** in a wider understanding of the issue?

- Have you fully explored the issue or are there other aspects that you could/should have covered? (Be honest with yourself!)
- Have all key stakeholders been involved in a meaningful way? Can you show that they are satisfied with their involvement?
- Does the history of the evidence affect how the policy issue has emerged? Has the history been contentious or relatively easy? Do you need to explain the history?
- People will bring their own perspectives to their reading of the evidence base, which will mean they may ask questions you have not considered. Have you encouraged people with other specialisms to question any assumptions you may have made without realising? For example, would it help to have some social analysis to enrich your line of argument and support the way you have weighted any options?
- Have you presented the evidence clearly so that others are encouraged to use it? Have you set it out in an open manner, so that they can look deeper into the evidence base if they want to?

#### Can you make **GENERALISATIONS** from the evidence you are using?

- Have you discussed the wider context as well as the specifics of the issue? If you do not think this is necessary then please say so and say why.
- Which bits of the context are important, either to the options or to your recommendations? Why? How might the context affect deliverability?
- Are you rolling out after a pilot phase? Are you sure that best practice has been followed in scoping the pilot in relation to the intended roll-out?

Your evidence base is dynamic: it is constructed of **analytical evidence** as well as **data**. If you're unsure of the robustness of your numbers, make sure your analyses are robust. If you're unsure of the robustness of your analyses, make sure that all your key stakeholders are involved in developing them. Use evidence to **confirm** what you think you know, to **enrich** your understanding, to **explain** complex situations, to **challenge** received wisdom, or to **scope** out opportunities for change.



The Knowledge Sector Initiative (KSI) is a joint program between the governments of Indonesia and Australia that seeks to improve the lives of the Indonesian people through better quality public policies that make better use of research, analysis and evidence. KSI is a consortium led by RTI International in partnership with Australian National University (ANU), Nossal Institute for Global Health, and Overseas Development Institute (ODI).

