

What is science governance?

The FSA's core principles include being open, transparent and science- and evidence- based in all our work. Put simply, science governance is what we do to make sure we live up to these principles in practice, and to show how we do this.

Our science governance comprises three parts:

- (i) A framework setting out the key elements of the proper use of science in policy and decision-making, and the roles, responsibilities and relationships of those involved
- (ii) Tools and guidance that support the use of good practice
- (iii) Procedures to check and to demonstrate how the process is operating in practice.

Our Science, Evidence and Information Strategy 2015-20 Delivery Plan sets out our strategic activities and priorities to ensure we gather and use science, evidence and information effectively to deliver food we can trust.¹

Scope

Science governance focuses on how FSA gathers and uses scientific evidence and advice in policy development and decisions. **Corporate governance** covers the FSA's wider work. As a science- and evidence- based organisation, FSA regards science governance as the cornerstone of good corporate governance.

FSA is advised by a number of independent expert scientific advisory committees (SACs). Our science governance covers the provision of SAC advice to FSA from all SACs, and the operation of SACs for which FSA is the sole or lead sponsor.

Principles

The starting point for our science governance is our commitment to our core principles of being open, transparent and science- and evidence- based in all our work. This means:

- basing our policies, decisions and advice on the best available scientific evidence and analysis, including independent expert advice
- being open about the scientific evidence and analysis underpinning our decisions, including uncertainties, gaps and assumptions, and how we have used scientific evidence and analysis, and any other factors, in our decision-making and advice
- ensuring that our scientific evidence and analysis is informed by input, scrutiny and challenge by experts and other stakeholders
- making our evidence and analysis available for further use by the science community and other stakeholders

Science governance is:

'the methods by which we assure and demonstrate that scientific evidence and analysis are sought, obtained, interpreted, used and communicated appropriately and effectively by the FSA'

with 'scientific evidence and analysis' having the definition given in the *FSA's Science, Evidence and Information Strategy*.¹

We follow the established principles for risk analysis, set out in the [Codex Working Principles for Risk Analysis](#)², to ensure that risks and benefits are identified, assessed, managed and communicated properly and transparently.

Roles and responsibilities: risk assessment and risk management

Good science governance relies on having clear, distinct roles for risk assessment and risk management and, more broadly, for independent scientific advice and decision-making. This helps to ensure that scientific aspects of risk assessment are not influenced by risk management considerations, or by risk managers, and that risk assessors do not seek to give decision-makers answers that reflect political objectives rather than scientific factors. However, there must be an informative dialogue between risk assessment and risk management, and between expert advice and decision-making.

In FSA, independent expert advice on risk assessment and on other aspects of our evidence gathering and use of science is provided by [independent Scientific Advisory Committees \(SACs\)](#), supported by in-house experts, other expert advisory bodies and independent experts, as necessary. Some risk assessment is carried out by FSA's experts, where previous independent assessments provide a clear framework for assessment – for example where there is an agreed, relevant guideline value for exposure. We consult with SACs and other external experts where necessary to check our interpretation is consistent with the established assessment.

Decisions on risk management are made by the [FSA Executive and Board](#), drawing on risk assessments, other scientific evidence and advice, and other relevant factors.

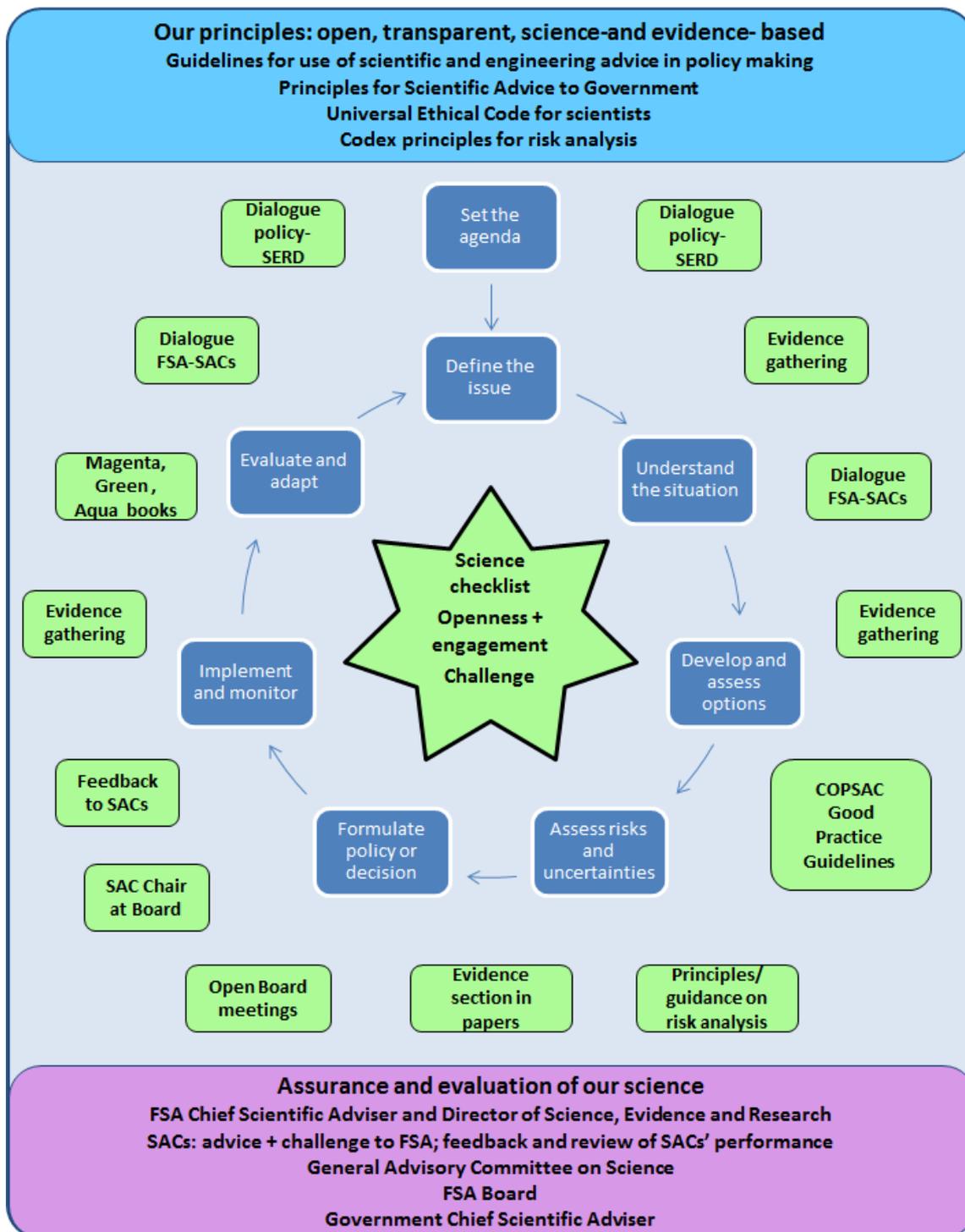
Our [framework for iteration and dialogue between FSA and SACs](#)³ sets out clearly the objectives and boundaries for interaction, ensuring that it is effective, transparent, and respects the roles and responsibilities of risk assessment and risk management.

All parts of this process operate transparently. SACs and the FSA Board each hold meetings in open session, and publish agendas, papers and minutes. The FSA⁴ and the SACs⁵ each follow clear procedures for the exceptional cases in which they may keep information confidential. In these cases we make clear that information is being considered in confidence, and why, and when and in what circumstances it will be made public. The [General Advisory Committee on Science \(GACS\)](#), which also meets in open session, has a wide-ranging remit to advise and challenge the FSA in its use of scientific evidence.

Procedures, tools and guidance for science governance

We follow established principles and guidelines agreed internationally and in the UK, supplemented by procedures and guidelines we have developed ourselves and with the scientific advisory committees that advise us. These are described below. Figure 1 illustrates how these elements map onto the policy cycle (cycle adapted from reference 8).

Figure 1 Main elements of the governance of science in FSA policy-making



Use of science, evidence and analysis in policy

We follow cross-government principles and guidance, including:

- The *Guidelines on the use of scientific and engineering advice in policy-making, Principles for Scientific Advice to Government* and *Code of Practice for SACs (CoPSAC)*⁶
- Guidance on appraisal and evaluation in the *Green book*⁷ and *Magenta book*,⁸ and on quality assurance in the *Aqua Book*⁹
- The *Universal Ethical Code for Scientists*⁶ and the *GSR Code*¹⁰ for the social science professions in government.

In addition we have developed and adopted our own tools and procedures:

*The FSA's Science Checklist*¹¹ is a key tool underpinning our science governance. It sets out the points to be considered in preparing and communicating papers and proposals that deal with science-based issues or draw on advice from the SACs. It provides a framework for assurance and challenge of this work by the FSA Chief Scientist and the GACS, and ultimately by the Board.

*The Good Practice Guidelines for SACs*¹² set out 29 principles of good practice building on the guidance given in CoPSAC and the Principles for Scientific Advice to Government. In addition, some SACs have developed *guidance on risk assessment* and *Committee Codes of Practice* setting out how they work.

Our *checklists for risk assessments in food incidents* highlight the issues to be considered in developing and communicating risk assessment in incidents.

Use of these tools is supported by a number of procedures:

- Discussion between FSA policy leads and Science, Evidence and Research Division (SERD) on needs for and approaches to scientific evidence for new papers and significant policy projects.
- Discussion at the start of new pieces of work requiring SAC input, or initiated by an SAC, between the relevant policy team, the SAC and its Secretariat, SERD and the CSA. This helps to ensure that approaches are clear and consistent.
- An 'Evidence' section in Board Papers and internal policy papers and submissions, setting out the main strands of evidence underpinning the paper, how they were assessed, and any uncertainties or differences of opinion in interpretation.
- The CSA attends FSA Board meetings, and internal Executive management meetings, which discuss policy decisions or management of significant food incidents
- When the Board discusses proposals and makes decisions that draw on advice from an SAC, the Chair of the relevant SAC attends the meeting, to answer questions and comment on the risk assessment. This helps to ensure that the risk assessment advice is properly understood and that it is reflected accurately in the risk management options presented for discussion, and that any unintended consequences of risk management decisions for risk assessment are identified and considered.

Gathering evidence

- **Identifying issues and defining our needs**

We identify the evidence we need through the expertise of our staff and input from SACs, other experts and stakeholders, in regular dialogue, workshops, and peer review of research ideas and requirements. We prioritise our evidence needs centrally using a [common prioritisation framework](#) and publish the results as a [programme of work](#) and a [forward evidence plan](#)¹ setting out the work we plan to commission and inviting comments, before we commission new work, on existing data that can address the identified needs, opportunities for collaboration, and whether we have defined our evidence needs in the best way.

- **Commissioning and gathering evidence**

We ensure the quality of the work we commission by expert peer review of requirements, research proposals, final reports and wider research programmes, and best practice in procuring evidence including a presumption towards open competition wherever appropriate. Our [terms and conditions for research](#) set out our expectation and approach to managing work with to suppliers of our evidence projects.¹³

Our [Guidelines for undertaking surveys](#)¹⁴ set out how we plan, conduct and report food surveys, including our policy on publishing brand information for food samples.

Our [Framework for sharing scientific data or funding with industry or interest groups](#)¹⁵, developed by the GACS, sets out our approach to sharing data or funding with these partners, weighing potential benefits (including improving the evidence base and sharing costs) against the need to ensure the quality and robustness of data, and implications for the FSA's perceived independence.

- **Ensuring the quality of evidence**

We ensure and evaluate the quality of the evidence we commission and gather through quality assurance (including accreditation of methods, Good Laboratory Practice, GSR Code) and performance assessment, including through FAPAS. We require all research we fund to comply with the [Joint Code of Practice for Quality Assurance of Research](#)¹⁶ developed with Defra, the Biotechnology and Biological Sciences Research Council (BBSRC) and the Natural Environment Research Council (NERC).

- **Publication and use**

We publish details of the evidence work that we are funding on our website. We also publish full reports and results of the completed work, after peer review, on our website or, where appropriate, in open access academic journals, or data archives (with links to these included in our website). Our [policy on underpinning data](#)¹⁷ states that underpinning data from our science projects should be made freely available in an accessible format, allowing others to generate added value and enabling re-use, as well as allowing scrutiny and challenge of our work.

- **Evaluation**

We evaluate the quality and the use and impact on policy of our completed projects and programmes, through internal and external peer review. Evaluation of our policies and programmes includes consideration of the use and impact of scientific evidence and analysis, within the framework of policy evaluation.

Assurance and evaluation: how do we know we are getting it right?

The **governance tools and guidance** set out in this document provide the first strand of assurance by setting out a clear framework of the principles and objectives, and the tools and guidance to help us achieve these in practice

The **FSA Chief Scientific Adviser (CSA)**, supported by the Director of Science, Evidence and Research (DSER), champions the use of science, evidence and analysis in the FSA, and provides independent assurance and challenge on how this is done. The CSA is involved in all significant policy decisions by the Executive and attends all FSA Board meetings. The CSA publishes regular reports on FSA science and its impact. He is part of the **network of Chief Scientific Advisers across Government**, which provides a further source of independent expert advice.

The independent **Scientific Advisory Committees** provide advice and help us to identify evidence needs and gaps to ensure our science and its use is robust.

Performance of SACs is assessed through annual feedback, self-assessment, discussion between Members and Chairs, and between Chairs and the FSA Chief Scientist. SACs also review their performance against the Good Practice Guidelines, and publish Annual reports on their work. The FSA carries out regular reviews of the SACs for which it is lead sponsor, and the reports of these and the responses from the reviewed SACs and the FSA are published, as part of the cross-government programme of reviews of Public Bodies.

The **General Advisory Committee on Science (GACS)**¹⁸ is specifically charged with providing independent advice and challenge on how the FSA obtains and uses science, and on the operation of the SACs. The GACS Chair reports in person to the FSA Board annually, at an open meeting, on GACS work and its views on the strengths and areas for development and improvement in the FSA's use of science. GACS also provides short written updates to the Board after each meeting.

Papers for the **FSA Board** set out clearly the scientific evidence and analysis and how this has been used in developing proposals. The science checklist sets out for paper authors and for the Board how this should work in detail. Board decisions are published and set out clearly the scientific evidence and the other information it has considered, and how this has been used, in formulating its decisions and recommendations. The FSA CSA attends all Board meetings. In addition, when the Board discusses proposals and makes decisions that rely significantly on advice from an SAC, the Chair of the relevant SAC attends the meeting.

Underpinning all of these, the FSA's policy of openness ensures that our use of science, evidence and analysis is open to scrutiny and challenge by all.

The **Government Chief Scientific Adviser** provides cross-cutting scrutiny and challenge on all Departments' use of science.¹⁹

References and links to supporting information

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- ¹ <http://www.food.gov.uk/science/sci-gov/scistrat>
 - ² www.codexalimentarius.net/download/standards/10751/CXG_062e.pdf
 - ³ <http://www.food.gov.uk/science/sci-gov/commswork/sac-dialogue>
 - ⁴ http://tna.europarchive.org/20110116113217/http://www.food.gov.uk/aboutus/how_we_work/copop_enbranch/
 - ⁵ An example of an SAC's approach to confidential data:
cot.food.gov.uk/cotmtgs/cotunpublisheddata
 - ⁶ <https://www.gov.uk/government/collections/science-in-government>
 - ⁷ www.hm-treasury.gov.uk/data_greenbook_index.htm
 - ⁸ www.hm-treasury.gov.uk/data_magentabook_index.htm
 - ⁹ <https://www.gov.uk/government/publications/the-aqua-book-guidance-on-producing-quality-analysis-for-government>
 - ¹⁰ <https://www.gov.uk/government/publications/government-social-research-profession-strategy-2015-to-2020>
 - ¹¹ <http://www.food.gov.uk/science/sci-gov/science-governance>
 - ¹² <http://www.food.gov.uk/science/sci-gov/commswork/goodpracticeguidelinessacs>
 - ¹³ <http://www.food.gov.uk/science/researchfunding>
 - ¹⁴ <http://www.food.gov.uk/science/research/surveillance-0/guidefsatechsurv>
 - ¹⁵ <http://www.food.gov.uk/science/researchpolicy/framework>
 - ¹⁶ <https://www.gov.uk/government/publications/joint-code-of-practice-for-research-jcopr>
 - ¹⁷ <http://www.food.gov.uk/about-us/data-and-policies/underpinning-data>
 - ¹⁸ gacs.food.gov.uk/
 - ¹⁹ <https://www.gov.uk/government/people/mark-walport>