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Foreword from the Chair of GACS

It is a pleasure to present this seventh Annual Report of the Food Standard Agency’s General Advisory Committee on Science (GACS), covering the period from 1 April 2014 to 31 March 2015.

The members of GACS were pleased that my annual report, presented to the Board of the FSA on 10 September 2014, was well received and the Board reiterated its support for the work of GACS and the other Scientific Advisory Committees (SACs).

During the past year or so, the FSA has introduced changes to its high-level science leadership. The Committee welcomed the opportunity to provide views and advice during the process of designing and implementing this new model. During the period covered in this report GACS has been able to monitor and contribute to the progress made since the appointment of the new Chief Scientific Adviser (CSA), Professor Guy Poppy, and the new Director of Science, Evidence and Research (DSER), Dr Penny Bramwell, both of whom attend GACS meetings. The Committee is pleased to see that the design and implementation of the new model reflect its input, in particular regarding the increased engagement across government and academia.

I should like to highlight three important pieces of work conducted by the Committee last year through its Working Groups as well as discussion at its open meetings.

GACS has been involved in developing FSA’s new Science, Evidence and Information (SEI) Strategy, through a Working Group (formed by Professors O’Brien, Dennis and Murcott) and through the participation of members of GACS in workshops. The Working Group has also advised on the process for developing the SEI Strategy. We welcomed the draft framework for the Strategy agreed by the FSA Board in March 2015, and were pleased to note that it reflected the Committee’s input. We look forward to contributing to the development of the Delivery Plan for the SEI Strategy and the key programmes of work for FSA science in the next five years.

The Joint GACS/SSRC Working Group on Use of Evidence, set up in October 2013 to explore ways to support consistent and transparent decision-making, produced its second report in October 2014. The Committee endorsed the Working Group’s proposals to develop a simple and consistent approach to capturing and communicating the strength, balance and dynamics of evidence in decisions, which could be greatly valuable to the FSA. In view of the wider work on risk and decisions proposed in the SEI Strategy, GACS discussed at its 15th meeting where and how it could have a role in providing advice or challenge on this work. The Committee felt this could include work to find ways to communicate better about risk, to help people make informed decisions, and to clarify key concepts, such as the distinction between a particular

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1 The presentation is available on the FSA website: http://www.food.gov.uk/about-us/how-we-work/our-board/board-meetings/2014/010114/board-meeting-agenda-10-september-2014
negative outcome (hazard) and the probability of that outcome occurring (risk). With this purpose in mind GACS agreed to establish a separate Working Group on Risk to provide advice and challenge on these wider issues.

One of the objectives of GACS, from its inception, was to help SACs to identify issues that straddle the boundaries between committees. I am happy to report that the number of the cross-cutting subjects identified has continued to increase over time. This indicated the useful interaction between SACs that the regular discussion at GACS is fostering. Continuing cross-committee membership and the joint Working Group of GACS and SSRC are good examples of this.

On behalf of the Committee, I should like to thank Dr Ann Prentice, Chair of SACN, who attends our meetings as an invited observer, to maintain the links between food safety and nutrition. GACS members who are SAC Chairs also took part in at the regular meetings between SAC Chairs and Chief Scientific Advisers led by the Government Chief Scientific Adviser, Sir Mark Walport, which led to interesting discussions on effective collaboration not only between committees but between expert advisers and policy makers.

The Committee discussed science skills and capabilities in the FSA at both its meetings this year, reflecting its fundamental importance to all FSA’s scientific work. This discussion was coloured by concern expressed by the chairs of some SACs about the loss of key scientific staff and about the impact of staff shortages on the work of these SACs. We welcomed the considered and positive approach of Guy Poppy and Penny Bramwell to assessing FSA’s needs and capabilities, and their plans to develop these, which addressed specific concerns with regard to the resourcing in some SAC secretariats, but also, importantly, looked more generally at the need for science skills in the Agency in the medium and longer term. GACS decided to set up a small group to advise FSA as it develops its work on skills and capabilities.

The establishment of the new Food Standards Scotland (FSS) has highlighted the need for FSA and FSS to share information and work in concert to assure strong collaboration, including avoiding divergence in risk assessment processes) or advice between the countries of the UK (other than those with a clear and justifiable rationale, such as for example differences in dietary exposure between countries).

GACS has continued to have good engagement with the FSA Board this year, including at the GACS annual spring dinner with members of the Board on 30 March 2015. On that occasion, the Committee also welcomed the opportunity to have as a guest Dr Bernhard Url, Executive Director of the European Food Safety Authority (EFSA), who introduced the topic of ‘Open Risk Assessment’ for informal discussion. GACS is pleased to maintain a close working relationship with EFSA and to share information on several areas of work.

During the second part of 2015, FSA is conducting a Triennial Review of the SACs on which it leads, including GACS. As a Committee whose role is to scrutinise and challenge FSA’s science, we welcome this scrutiny of our own role and operation. We look forward to engaging in the review process to ensure that it is a fruitful exercise.
Professor David Coggon, Chair of COT, stepped down after seven years’ service with GACS on 31 March 2015. On behalf of GACS, I should like to thank him for his excellent work as a GACS member. David has been instrumental in several of GACS significant projects, including leading the development of the Framework for sharing data and funding with industry and NGOs, agreed by the Board in 2012. This gave FSA a sound footing on which to develop data sharing with industry on horsemeat, and it is likely to be useful in other areas in the future.

I welcome the reappointment to GACS of Professor Duncan Maskell. I am grateful to all the members of GACS for their continued commitment and enthusiasm and to the FSA for its openness and positive response to our challenges in developing its work. I should also like, on behalf of all of the Committee, to thank the GACS Secretariat for their support.

Professor Sir Colin Blakemore
Chair of GACS
Introduction

1. This is the seventh Annual Report of the independent General Advisory Committee on Science (GACS), covering the period from 1 April 2014 to 31 March 2015.

2. GACS was established by the Food Standards Agency (FSA) in December 2007, with a remit to provide independent challenge and advice to the FSA on the FSA’s governance and use of science. GACS also advises on cross-cutting scientific issues, especially those arising out of the work of other independent Scientific Advisory Committees (SACs) that advise the FSA, and develops good practice to ensure confidence in the FSA’s scientific evidence and advice. The Committee’s full terms of reference are given in Annex 1.

3. Details of the membership of GACS over the period of this report are given in Annex 2. GACS has 14 independent members, who include a directly-appointed Chair, 4 directly-appointed expert members, 2 directly-appointed lay members, and the Chairs of the 7 individual SACs that advise the FSA, who are members of GACS ex officio. During the year Professor Duncan Maskell, one of the original directly-appointed members, was reappointed. The Chair of the Scientific Advisory Committee on Nutrition (or deputy) also attends GACS meetings as an invited observer, by mutual agreement between the Committees.

4. GACS operates in accordance with the guidelines and procedures established by the FSA and across Government for independent advisory committees and public bodies. Meetings are generally open to the public, and papers, minutes, reports and information about the Committee, including a Register of Interests, are available on GACS’ web pages, at: http://gacs.food.gov.uk/

5. The Committee met twice, in open session, during the period of this report: on 29 October 2014 for its 14th meeting and on 31 March 2014 for its 15th meeting. It also continued to develop its work between meetings, especially, but not solely, through formal Working Groups of GACS members (see Annex 3).

6. GACS follows a work plan under six strategic themes that represent a progression through the stages of using science to inform and evaluate policy:
   
   i. Horizon Scanning: understanding future issues and the wider environment within which the FSA operates
   
   ii. Evidence Base: identifying, prioritising and obtaining the scientific research and evidence needed by FSA
   
   iii. Governance and good practice, including SACs: developing and applying appropriate expertise and governance in interpreting and using scientific evidence and identifying future needs
iv. Engagement and collaboration between SACs, and between the FSA and others, to share good practice and identify opportunities for joint working

v. Measures of success and evaluation: assessing outcomes against clear objectives and measures

vi. GACS governance: ensuring work on areas (i) to (v) above is prioritised and performed rigorously and openly

7. GACS’ work in 2014-15 and its future plans are reported below under each of these themes.
Theme 1  Horizon Scanning

8. One role of GACS is to add value to horizon scanning in the FSA. It does this through advice on good practice and strategies, and by identifying and recommending responses to challenges that are identified through horizon scanning.

FSA strategy

9. The Committee has in previous years contributed to horizon scanning activities to inform development of the FSA’s Strategic Plans and Science and Evidence Strategies. At its 13th meeting the Committee agreed to set up a Working Group to provide advice and input to the FSA’s development of its next Science, Evidence and Information Strategy for 2015-20 (SEI Strategy). Professors O’Brien, Dennis and Murcott agreed to be members of the Group. At the 14th meeting the Committee’s views were sought on the progress made in the FSA’s SEI Strategy and on further plans for engagement with GACS to develop the detail and content. The Committee particularly welcomed the profile given to strategic science (including work on food systems, food security, new technologies, data and analytics), and to FSA taking a lead in working with Research Councils and others to shape agendas and priorities in work on wider food system issues. The Committee highlighted the importance of a clear understanding of and pathway to impact for all the FSA’s scientific work.

10. The Working Group met on 5 February 2015, providing advice on the framework and the approach to developing the SEI Strategy. Several GACS’ members took part in a stakeholder workshop on the SEI Strategy on 19 March 2015, including Professors Colin Blakemore, Anne Murcott, and Colin Dennis and Dr David Lovell.

11. At the 15th meeting, the Chief Scientific Adviser (CSA), Professor Guy Poppy, presented a report outlining the proposed framework for the SEI Strategy agreed by the FSA Board in March 2015. GACS endorsed the draft framework and the outline of key pieces of work, highlighting a number of points which FSA should clarify or highlight as the more detailed Delivery Plan is developed (including highlighting key partnerships and the international reach of FSA’s scientific work). GACS noted that the draft reflected previous input from GACS and the advice of the GACS Working Group on Science Strategy. GACS also welcomed the development of a Strategy Evidence Programme with an initial annual budget of £2 million to fund new strategic projects, programmes, partnerships and initiatives, which will develop further capabilities.

12. A Delivery Plan for the Strategy, setting out in more detail key activities and programmes of work, is now under development and GACS looks forward to contributing to this work.

13. At its 14th meeting, the Committee discussed an update on the FSA’s response to the independent review of the horsemeat incident (Elliot Review). The Committee was assured that its advice had been helpful in informing FSA’s response and plans, including the reports...
from the Working Group on Use of Science in Emergencies\textsuperscript{2} and the GACS framework on sharing data with industry and non-governmental organisations\textsuperscript{3}.

\textbf{Future work}

14. At its 10\textsuperscript{th} meeting the Committee considered the outcome of a pilot by the Social Science Research Committee (SSRC) of an approach to supporting horizon scanning in SACs, which could be adopted by all the SACs to promote useful co-ordinated HS activities. Drawing on the feedback from the SSRC on the pilot, GACS made a number of suggestions for refining the materials and approach before use by the other SACs. FSA work on the refinement and roll-out of the framework to support horizon scanning in the SACs had been deferred due to competing priorities but was picked up again in 2015 with a horizon scanning workshop by the Advisory Committee on Microbiological Safety of Food (ACMSF), which drew on the framework and advice from GACS. Other committees plan further workshops in the coming year and GACS will consider their outputs alongside those from other horizon scanning in the FSA and more widely.

\textsuperscript{2} http://gacs.food.gov.uk/gacsgroups/wg-science-emerg
\textsuperscript{3} http://www.food.gov.uk/science/researchpolicy/framework
Theme 2 Evidence Base: science strategy, research portfolio and priorities

FSA Evidence Portfolio

15. At its 10th and 11th meetings, GACS considered reports on the FSA’s evidence portfolio with a view to this becoming a regular discussion item. The Committee agreed it would consider the portfolio at its spring meetings, allowing it to comment on any high-level gaps and imbalances in the portfolio and any opportunities for collaboration, providing strategic direction to inform subsequent planning cycles. The report at the Committee’s 15th meeting showed a current portfolio similar to the previous year’s, while the future portfolio reflected a period of transition during the development of the new FSA Strategy and SEI Strategy. The Committee considered that SACs’ recommendations for research were broadly reflected in the work outlined in the paper and that the SACs were generally closely involved in the commissioning of new research relevant to their work, to ensure it reflects the Committee’s views. The Committee also welcomed the creation of a new Strategic Evidence Programme, led by the FSA CSA, which illustrates the support from the FSA Board and Senior Executive for funding for strategic science work to develop capabilities and key partnerships.

16. The Committee expressed the view that it would be helpful to reinstate the publication of the Forward Evidence Plan, or an equivalent mechanism that would allow Committees and other external stakeholders to comment on proposals for new work before they are finalised, to help to identify useful existing data, better ways to address or describe the research need, or opportunities for collaboration.

Regular science report to the Committee

17. The Committee receives a report on FSA science activities at each open meeting and is invited to discuss the work presented. This report includes the CSA’s regular report to the Committee. In discussions arising from these reports, GACS has made several suggestions on specific areas of the FSA’s work, including:

i. on the Campylobacter research, advising the need for more detail on the research on surface chilling of chicken and on the Campylobacter retail survey and how it is being carried out;

ii. on the FSA’s proposal to develop a framework for ‘risky’ foods, highlighting the need for the SSRC to be involved to help ensure the work has a strong evidence base on what is considered a ‘risky’ food and on consumer understandings in relation to this;

iii. on Antimicrobial Resistance (AMR), the Committee highlighted the need to consider animal treatment and global movement of livestock in the government response to antimicrobial resistance and the need to consider plant pathogens and their resistance to fungicides as well as animal pathogens and antimicrobial resistance;
iv. Members expressed strong support and praise for FSA’s work and leadership in international initiatives on next generation sequencing.

GACS Drafting Group on Decision-Making Processes on New Research

18. GACS established a Drafting Group, formed by Professors Coggon and Murcott and Mrs Goldberg, to consider matters relating to the decision-making processes in commissioning new research. The Drafting Group reported at the 13th GACS meeting and provided its final report and recommendations at the 15th meeting\(^4\). The focus of the Drafting Group’s recommendations was to provide guiding principles to improve the involvement of expert reviewers in the process for commissioning new research and to encourage the FSA to develop mechanisms to provide access for project officers to appropriate advice on a case-by-case basis.

19. GACS recognised that engaging suitable reviewers for the wide range of projects commissioned by FSA each year can be challenging but considered it crucial to ensure that the reviewers engaged come from a community that understands the methodology proposed and are competent to form a view on how well it is likely to work. GACS endorsed the recommendations and the FSA confirmed they would be accepted and reflected in future arrangements.

Future work

20. The Committee will continue to consider the FSA evidence portfolio at its spring meetings, allowing it to reflect on outcomes of the completed prioritisation round and to consider strategic balance or gaps to feed into planning for the next round.

21. GACS will consider regular reports from FSA on progress in developing strategic and innovative research.

Theme 3  Governance and good practice (including SACs and how the FSA makes use of scientific evidence)

22. GACS was involved in a number of work streams under this theme during the reporting year, including:
   - Advising on the new model for science leadership in the FSA
   - Discussing Science staffing in the FSA
   - Second report of the Joint GACS/SSRC Working Group on Use of Evidence
   - Monitoring the performance of SACs
   - Regular report on actions taken in response to advice from SACs
   - Guidance for declaration of interests for SAC members

Model for science leadership in the FSA

23. In recent years, GACS has been providing its views and advice on the design and implementation of the new high-level science leadership model in FSA. At the 13th and 14th meetings, respectively, GACS welcomed the appointments of the new CSA, Professor Guy Poppy, and the new Director of Science, Evidence and Research (DSER), Dr Penny Bramwell, both of whom attend GACS meetings. At the 15th meeting, GACS was able to monitor the progress made in the new model since its implementation. The Committee was pleased with the progress presented by the CSA and DSER and welcomed the fact that the design and implementation of the new model reflect the Committee’s input, in particular regarding the increased engagement across government and academia. The Committee considered and commented on the FSA’s high level science challenge and assurance model at its 15th meeting on 31 March 2015. In line with its previous advice, GACS reviewed how the new model was working based on 6 months of experience of the new system.

24. The Committee noted that Professor Poppy and Dr Bramwell were clearly working well together and ensuring their respective roles complemented each other particularly in the remits of each relating to advice/challenge, assurance/accountability, and oversight. The Committee highlighted the need to consider how to ensure this continues as and when different people occupy their roles.

Science staffing in the FSA

25. At the 14th meeting GACS received a report on the FSA’s activities and plans for scientific staffing, following concerns raised by the GACS Chair and SAC Chairs with regard to resourcing in some SAC secretariats. The Committee welcomed the initial analysis of issues and plans to address these.

26. GACS underlined the importance of timely and open communication with GACS and with SAC Chairs on changes that affect their Committees and areas of interest, and noted that having the CSA and DSER in post should facilitate this. The Committee noted that the action taken in
response to the issue of SAC secretariat staffing was a good example of how the Committee and Professor Poppy and Dr Bramwell could work proactively together to address issues.

27. At the 15th meeting the Committee received a further report on the outcomes of the skills audit and analysis. GACS welcomed the report’s analysis of the issues and priorities and the programmes of work that had been developed to address these. It particularly underlined the importance of Continuous Professional Development for FSA scientists. The Committee decided to set up a new Consulting Panel to help and advise FSA as it develops its work on skills and capabilities. Professors Murcott, Phillips and Dennis and Dr Brown agreed to join this group.

Joint GACS/SSRC Working Group on Use of Evidence

28. At its 12th meeting, GACS reviewed its work to date and ideas for future work. GACS and the Social Science Research Committee (SSRC) set up a joint Working Group on Use of Evidence to consider the FSA’s approach to the balance of evidence, and the merits and weighting of different strands of evidence used in risk assessment and in risk management decisions, and intended to support effective risk communication throughout the process.

29. The Working Group presented its second report at the 14th GACS meeting. GACS noted that this was a complex and challenging area, but that a simple and consistent approach to capturing and communicating the strength, balance and dynamics of evidence in decisions, as proposed by the Working Group, would be very beneficial. The Committee applauded approaches to making the basis on which decisions are made more transparent and systematic and made several comments to refine the Working Group’s proposed approach.

30. At the 15th GACS meeting, the Committee noted that the work relating to risk and decisions in the SEI Strategy included issues outside the remit of the Joint Working Group, and discussed where and how GACS could have a role in providing advice or challenge on this work. The Committee agreed to establish a separate Working Group on Risk to provide advice on these wider risk issues, formed by Professors Phillips and Jackson, Dr Lovell and Mrs Petré, and commented that the work would additionally benefit from input from external experts and organisations. The Committee highlighted the need to find better ways to communicate about risk in ways that help people make informed decisions, and to set out clearly key concepts such as hazard and risk.

31. GACS also agreed that the Joint Working Group should continue the work set out in its report to the autumn 2014 meetings of GACS and SSRC.

Monitoring the performance of SACs

32. GACS will be subject to a Triennial Review in 2015/16, along with the other five SACs for which FSA is sole or lead sponsor, as part of the government-wide programme of reviews of Public Bodies. The review will consider the ongoing need for the functions provided by the SACs and the best model for delivering those functions that are needed, and will seek to identify any
opportunities for improvements in governance and efficiency in operation. The review will commence in July and report by the end of the year. GACS will engage in the review process and discuss its outcomes and the FSA’s actions to implement the review’s recommendations.

**Actions taken in response to SAC advice**

33. The third report to GACS on ‘Action by FSA in response to SAC advice’, introduced at the 14th meeting, presented a collation of the SAC secretariats’ reports on the FSA’s response to their Committees’ advice and included the six SACs for which the FSA provides the lead secretariat.

34. GACS was pleased to note that overall the FSA provided a clear response to SACs’ advice. Members suggested that it would be useful if the report could focus on the SACs’ advice that had had a clear impact, such as resultant confirmation of or changes to FSA policy. GACS was reassured that individual SACs are receiving regular feedback from their Secretariats and requested to continue to receive these updates regularly. The Committee will continue to consider a regular report on this.

**Guidance for declaration of interests for SAC members**

35. At its 15th meeting, GACS reviewed a set of draft principles that could form the basis of revised guidance for declaration and handling of interests of SAC members. The Committee emphasised the need to clearly discern between the existence of interests and the existence of conflicts of interest. GACS was in favour of keeping the declarations of interests, i.e. potential conflicts, as concise as is compatible with openness on relevant real or potential conflicts, and proposed this could be complemented by a more detailed list of potential interests recorded and held with the FSA. The format for this document might be based on a *curriculum vitae* but would also need to capture financial interests considered potential conflicts.

**Future work**

36. The Committee set up a Consulting Panel that will provide advice on skills and capabilities in FSA.

37. The Joint GACS/SSRC Working Group on Use of Evidence will continue its planned work during next year. Additionally, it will inform and be informed regarding COT work on evaluating and summarising epidemiological evidence.

38. The Committee will continue to provide regular advice and comment on the FSA’s use of science and evidence in policy making and will consider a regular summary of actions taken in response to SAC recommendations.
Theme 4  Engagement and collaboration

39. During the year the Committee continued to facilitate collaboration between SACs on cross-cutting science topics.

Cross-cutting science in the SACs

40. Part of GACS’ role is to facilitate co-ordination of cross-SAC working and input on cross-cutting issues. The Committee decided to give more prominence to this area and from the 5th meeting introduced a main discussion item on cross-cutting scientific issues. This has fostered increased cross-Committee working (including the joint Working Group of GACS and SSRC on Use of Evidence), and GACS has been kept updated on this at each meeting. Examples of such cross-SAC working include:

- Cross-SAC membership -- e.g., an ACAF member co-opted to work on the ACMSF’s Working Group on antimicrobial resistance; an SSRC 
  *ex officio* member to attend ACMSF meetings.

- Cross-committee working -- e.g., COT input to the SACN reviews of Vitamin D, and of dietary advice for infants; and work by ACAF and SACN on iodine.

- Cross committee collaboration between COT and COC to provide a joint response to the EFSA consultation on its draft opinion on acrylamide.

Additionally, COT was involved in joint work with the Veterinary Products Committee and the Advisory Committee on Pesticides on organophosphates.

41. Presentations discussed at the 14th and 15th meetings included:

- Presentation from Professor Sarah O’Brien on the Second Infectious Intestinal Diseases (IID2) attribution study.

Presentation on the second Infectious Intestinal Diseases (IID2) attribution study

42. At the 14th meeting of GACS, Professor Sarah O’Brien, Chair of ACMSF, gave a presentation on the second infectious intestinal diseases attribution study. The IID 2 study provides the key baseline data regarding the incidence and patterns of IID in the UK, which underpins all of FSA’s work on foodborne disease. As lead contractor for this FSA-funded study, Professor O’Brien noted that the aims of the study were to determine the burden of foodborne disease that is UK-acquired and to estimate the burden of foodborne disease caused by contaminated food commodities using a point-of-consumption attribution model. Professor O’Brien highlighted that a need for good data on what is happening in the food chain, particularly on where food has come from and point of origin would bolster the FSA’s surveillance and research capabilities.

ACAF and SACN work on iodine

43. At the 12th meeting the ACAF and SACN chairs noted that both Committees were considering
iodine and agreed that their committees would need to work more closely on this. The SACN Chair provided an update on this at the 15th meeting. SACN is keeping a watching brief on the question of iodine status in the population. Population biomarkers for iodine have been added to the National Nutrition Survey (NDNS) and SACN is waiting for these results. Public Health England (PHE) has commissioned further research to improve the understanding of iodine deficiency in individuals.

Food Standards Scotland (FSS)

44. At the 15th GACS meeting, GACS considered the implications of the establishment of FSS for UK-wide scientific advisory committees. The Committee agreed on the need to assure a proper degree of collaboration between FSA and FSS to avoid divergence between risk assessment processes or advice between the countries of the UK, other than those arising with a clear rationale behind them. GACS agreed to invite FSS to send an observer to GACS meetings to foster awareness and effective communication.

Networking of SAC members

45. GACS members who are SAC Chairs took part in cross-SAC discussions at the regular (roughly bi-annual) meetings between SAC Chairs and Chief Scientific Advisers, led by the Government Chief Scientific Adviser, Sir Mark Walport. These prompted interesting discussions: on the independence of SAC Chairs, and particularly the freedom of communication with the media and the public for members of SACs, described in the Code of Practice on Scientific Advisory Committees (CoPSAC); and on discussions on effective collaboration not only between committees but between expert advisers and policy makers.

GACS Annual Dinner

46. The Committee held its annual dinner on 30 March 2015 and Members welcomed this opportunity for informal interaction with the FSA Board (on this occasion FSA Chair Tim Bennett attended), with the FSA Chief Executive, CSA and Deputy CSA, and guest Dr Bernhard Url, Executive Director of EFSA.

Future work

47. At the 16th GACS meeting, Dr Lovell, Chair of COM, will provide a report on the work of that Committee; at GACS meetings in 2015/2016 there will be the regular report on FSA progress on actions arising from SAC advice; and the standing item on Science in the SACs.

48. Members expressed interest in having a presentation for a future meeting by a scientist in FSA on a relevant science subject.

49. Additional plans for cross-SAC work include interactions between ACAF and ACMSF on the use of recycled manure solids as bedding for cattle and between COT and SACN on the COT’s review on potassium-based sodium replacements.
Theme 5  Measures of success/evaluation

1. The Committee continued its ongoing review of the impact of the FSA’s science work, and noted the importance of focussing on effectiveness. These being key themes of the SEI Strategy, the Committee reiterated the importance of a clear understanding of and pathway to impact for the FSA’s science work. The Committee considered that it is essential that impact and the measures needed to assess it are considered from the outset as an integral part of the FSAs ongoing work.

Future work

50. During the next year GACS will return to discussions on methods to assess the performance of the FSA’s science.
Theme 6  GACS Work Plan, governance and administration

51. GACS considers that, in fulfilling its role of providing advice and challenge on the governance of FSA science, it is essential that it lives up to high standards of openness and governance in its own work. GACS’ self-assessment of its performance against the Good Practice Guidelines over the period of this report is reproduced at Annex 4.

52. In addition to publishing an Annual Report, the GACS Chair reports in person to the FSA Board each year. The GACS Chair’s report provides an independent assessment to complement, and if necessary challenge, the assurance on FSA’s use of science provided by the FSA Chief Scientific Adviser.

53. The GACS Chair presented his last report in September 2014. The Committee also provided two mid-year written updates to the Board. The next report will take place at the Board’s open meeting on 18 November 2015.

54. Working Groups active in the period of the report are listed in Annex 3.
GACS future work

55. GACS will continue to monitor the quality and integrity of the FSA’s science and its dissemination, and examine the effectiveness of its use of research budgets over a period of continued pressure on resources. The Committee’s priorities for the coming year include:

a. monitoring and reviewing the FSA’s new science leadership model

b. GACS will provide its advice on the Delivery Plan for the SEI Strategy

c. the joint GACS/SSRC Working Group on use of evidence

d. a new Working Group on risk

e. a new Consulting Panel will help and advise FSA as it develops its work on skills and capabilities.

f. a strategic overview of FSA’s evidence portfolio and plans, including advice on research funding decisions

g. cross-SAC working and input on cross-cutting science and other issues, including
   
   • horizon scanning in SACs
   
   • actions taken in response to SAC recommendations
   
   • revised guidance for declaration of interests for SAC members

h. GACS is looking forward to engaging in the triennial review process and will consider the outcome of the review and the FSA and Committee’s responses to its recommendations during 2016.
Resource and expenditure

56. GACS is an independent SAC (formally, an advisory Non-departmental Public Body). However it does not have resources of its own, the operation of the Committee being funded by the FSA. In the period of this report, costs for this support (covering Members expenses and fees and administrative costs for meetings) were £10.2k. For comparison, costs in previous financial years were: 2007/08, £41.2k (including recruitment of Members); 2008/09, £16.8k; 2009/10, £30.3k (this included two GACS-sponsored workshops: one for lay members and one on horizon scanning); 2010/11, £9.3k; 2011/12, £11.8k; 2012/13, £13.7k; 2013/14 £14.7k. Information on fee rates and expenses guidance can be found in the GACS Code of Practice

Contacts for further information

57. Further information on GACS is available on the GACS web pages at:

http://gacs.food.gov.uk/

or by contacting the GACS Secretary:

Dr Patrick Miller
GACS Secretary
Room 1C Aviation House
125 Kingsway
London, WC2B 6NH
tel: 020 7276 8277
e-mail: gacs@foodstandards.gsi.gov.uk

http://gacs.food.gov.uk/moregacs/moreaboutgacs (see pages 17-21 of the GACS Code of Practice)
ANNEX 1  Terms of Reference of the General Advisory Committee on Science (GACS)

The overall purpose of GACS is to support the FSA’s Chief Scientific Adviser (CSA) by providing independent challenge and advice to the CSA and the FSA Board on the FSA’s governance and use of science. It will carry out the following tasks:

Providing independent challenge and advice

  on how the FSA obtains and uses independent scientific advice including through the Scientific Advisory Committees that advise the FSA\(^6\)
  
on the FSA’s science governance processes
  
on the FSA’s Science Strategy and its implementation and periodic review

Advising on general and strategic science and research issues

  Undertaking strategic horizon scanning, co-ordinating and building on the work already carried out by the individual SACs
  
  Advising on whether the FSA’s science and research is aligned with the FSA’s overall scientific and strategic aims, including advice on science prioritisation
  
  Providing a forum to discuss issues that cut across the remit of more than one committee and hence formalise interactions between the SACs
  
  Advising on issues that are not covered by an existing SAC or which relate to general principles
  
  Advising on any other matters relating to research, surveys or science policy remitted to the Committee by the FSA’s Board or Chief Scientist

Developing good practice and fit-for-purpose science processes

  Identifying and developing good practice for all of the SACs and encouraging and monitoring its application\(^1\)
  
  Building links with others working on the use and governance of science, to identify, develop and share good practice

The Committee may also suggest relevant issues for discussion.

\(^6\) GACS does not have a role in approving the work of the other SACs. It considers whether the SACs are adhering to the Good Practice Guidelines and other elements of good practice and governance in carrying out their work.
ANNEX 2  Membership of GACS

GACS comprises 14 independent members:

- an independent Chair
- the Chairs of the seven Scientific Advisory Committees (SACs) that advise the FSA (who are GACS members in an *ex officio* capacity)
- four additional independent expert members
- two lay members

**Current membership**

The members of GACS during the period of this report, and their biographies are shown below. During the period of this report Professor Duncan Maskell was reappointed to GACS.

**Professor Sir Colin Blakemore (Chair)**

Professor Blakemore, FMedSci, Hon FSB, Hon FRCP, FRS, studied Medical Sciences at Cambridge and completed his PhD at the University of California in Berkeley. After 11 years in the Department of Physiology at Cambridge University, he was Waynflete Professor of Physiology at Oxford University from 1979 to 2007, and from 1996 to 2003, he directed the MRC Centre for Cognitive Neuroscience at Oxford. His research has been concerned with many aspects of vision, early development of the brain and plasticity of the cerebral cortex. He was Chief Executive of the MRC from 2003 to 2007 and Professor of Neuroscience at Oxford from 2007 to 2013. He is currently Director of the Study of the Senses at the School of Advanced Study, University of London, and Emeritus Professor of Neuroscience at Oxford. He has been President of the British Neuroscience Association, the Physiological Society, the Biosciences Federation (now the Society of Biology) and the British Association for the Advancement of Science (now the British Science Association). He is committed to promoting dialogue between science and the public: is a frequent contributor to radio and TV, and writes about science and science policy for the national press.

**Dr Ian Brown OBE FRCP FFOM (ex officio member as Chair of the Advisory Committee on Animal Feedingstuffs, ACAF)**

Dr Brown is a medically qualified registered specialist and consultant in occupational medicine and toxicology. He is also a graduate in agricultural biochemistry and nutrition and has a wide range of knowledge and experience covering occupational health medicine, toxicology, agriculture and food safety.

Dr Brown was formerly Director of Service and Consultant Physician in Occupational Medicine and Toxicology at Southampton University Hospitals NHS Trust and is now Director of Occupational Health and Head of Department at the University of Oxford. He is also an honorary NHS Consultant
Physician and Clinical Research Fellow at the Nuffield Department of Clinical Neurosciences, Oxford University Hospitals. Dr Brown was formally independent chair of the government’s Pesticide Residues Committee, serving from 2000 until 2011, and remains a member of the Advisory Committee on Toxic Substances of the Health and Safety Executive Board. He is also Chairman of the Advisory Committee on Animal Feedingstuffs, a member of the General Advisory Committee on Science of the Food Standards Agency, and has been appointed as an appraiser of specialist physicians in occupational health medicine.

Professor Sarah O'Brien  
(*ex officio* member as Chair of the Advisory Committee on the Microbiological Safety of Food, ACMSF)

Professor O’Brien is a consultant in Public Health Medicine, and is currently Professor of Infection Epidemiology and Zoonoses at the University of Liverpool. Her research interests include foodborne zoonoses. Previously she was Head of Gastrointestinal Diseases Division at the Health Protection Agency Centre for Infections where she was responsible for assessing data and generating, through surveillance and research, the evidence base for the origins and spread of gastrointestinal infection. She has published widely on these subjects. Professor O’Brien held a number of hospital and health authority appointments, and also lectured, in public health medicine, between 1986 and 1995. She was Consultant in Public Health Medicine at the Scottish Centre for infection and Environmental Health between 1995 and 1998 before joining the Health Protection Agency. She is a member of the Food Standards Agency’s Epidemiology of Foodborne Infections Group and was appointed as Chair to ACMSF in February 2007.

Professor Peter Gregory  
(*ex officio* member as Chair of the Advisory Committee on Novel Foods and Processes, ACNFP)

Professor Gregory is the Chief Executive of East Malling Research and Professor of Global Food Security at the University of Reading. He was Chief Executive and Institute Director of the Scottish Crop Research Institute located near Dundee up until March 2011. His research interests include aspects of food systems and food security with a particular emphasis on environmental change (climate change). He has spent most of his career at the University of Reading undertaking research on the interactions of plant roots with soils, and has worked extensively overseas in Australia, Syria, Nepal and Kenya on various projects seeking to increase crop production.

Professor David Phillips  
(*ex officio* member as Chair of the Committee on Carcinogenicity, COC)

Professor Phillips was appointed as a member of COM and COC in April 2000 and as Chairman of COC in April 2006. Formerly at the Institute of Cancer Research, he moved to King’s College, London in 2011, where he is part of the Analytical and Environmental Sciences Division and the MRC-PHE Centre for Environment and Health. He has internationally recognised expertise in carcinogen-DNA interactions, human biomonitoring and in molecular epidemiology. He has extensive research interests in mechanisms of carcinogenesis, with particular emphasis on environmental factors involved in cancer causation. He is editor-in-chief of the journal Mutagenesis.
Professor David Coggon (ex officio member as Chair of the Committee on Toxicity, COT) (to 31 March 2015)

Professor Coggon OBE is Professor of Occupational and Environmental Medicine at the University of Southampton where he works in the Medical Research Council Lifecourse Epidemiology Unit. He has been engaged in epidemiological research for more than 30 years, concentrating mainly on occupational and environmental causes of disease. He is a Fellow of the Royal College of Physicians and from 2008-11 was President of its Faculty of Occupational Medicine. In 1998, he became a founder Fellow of the Academy of Medical Sciences. From 1998 to 2000 he served on the COT Working Group on Organophosphates and the Independent Expert Group on Mobile Phones (both Department of Health). He has also been a member of the Industrial Injuries Advisory Council (Department for Work and Pensions), the Expert Panel on Air Quality Standards (Department of Environment, Transport and the Regions), the Advisory Group on Non-Ionising Radiation (Health Protection Agency), and the Plant Protection Products and Residues Panel at the European Food Safety Authority, and an expert adviser for the World Health Organization and the International Agency for Research on Cancer. From 2000 to 2005 he was Chair of the Advisory Committee on Pesticides (Defra), and from 2001 to 2007 he chaired the Depleted Uranium Oversight Board (Ministry of Defence).

Dr David Lovell (ex officio member as Chair of the Committee on Mutagenicity, COM)

Dr Lovell is a Reader in Medical Statistics in the Division of Biomedical Sciences at St. Georges, University of London. He was previously Associate Director and Head of Biostatistics Support to Clinical Pharmacogenomics at Pfizer Global Research and Development in Kent, where he provided data management and statistical support to pharmacogenetics and genomics. David has conducted and managed research programmes on genetics, statistics and quantitative risk assessment. Dr Lovell has been a member of COM since 2006. He is an ex officio member of COC. He has been a member of the Scientific Committee of EFSA and a member of the Independent Scientific Advisory Committee, an expert committee of the Medicines and Healthcare Products Regulatory Agency.

Professor Peter Jackson (ex officio member as Chair of the Social Science Research Committee, SSRC)

Peter Jackson is Professor of Human Geography at the University of Sheffield. From 2004 to 2007 Peter served as Director of Research for the Social Sciences at the University of Sheffield. From 2005 to 2008 he led an interdisciplinary programme on ‘Changing Families, Changing Food’ funded by the Leverhulme Trust. He has recently completed a four-year project on consumer anxieties about food (CONANX), funded by the European Research Council and he has just begun a new ERA-Net project on ‘Food, Convenience and Sustainability’ with colleagues in Denmark, Germany and Sweden. Recent publications include Food Words (Bloomsbury, 2013) and The Handbook of Food Research, co-edited with Anne Murcott and Warren Belasco (Bloomsbury, 2013).
Professor Janet M Bainbridge OBE (expert member and Deputy Chair of GACS)

A Professor of Biotechnology and Food Science, Janet is a former Dean of Science and Technology at the University of Teesside. She currently delivers a portfolio of consultancy and non-executive roles. She was a senior specialist adviser (Government and Europe) to One Northeast from 2003 to 2007 and is currently Chair of the Health and Safety Executive (HSE) Scientific Advisory Committee on Genetic Modification (Contained Use), a member of the Borderline Substances review group (MHRA); the New and Emerging Infections Panel and a trustee of the charity Sense About Science. Currently Professor Bainbridge is employed by UK Trade and Invest as a part-time global R&D specialist. From 2006 to 2008, she was a Board member of the Agriculture and Horticulture Development Board (AHDB) and chaired the R&D sub-group of that Board as designate Chair of the Potato Council Limited. She has recently been appointed to the BBSRC Sustainable Agriculture Panel. Former appointments include Chair of the Advisory Committee on Novel Foods and Processes (ACNFP; 1997 to 2003), Member of the Engineering and Physical Sciences Research Council (EPSRC) Council, member of the Advisory Committee on releases to the Environment (ACRE); member of the Chief Scientists GM Expert Group and Chair/member of several Foresight Committees.

Professor Colin Dennis CBE, DL (expert member)

Professor Dennis was director of the Campden BRI group from 1988 to 2009. He currently holds a number of advisory roles in food safety and governance as a consultant and volunteer, including as Chair of the Board of Trustees of IFIS Publishing Ltd (International Food Information Service). He is a Fellow and Past-President of the Institute of Food Science and Technology, a Fellow and President-Elect of the Institute of Food Technologists in the USA and is a Governor of the British Nutrition Foundation and The Royal Agricultural University. He is a Board Member of the National Skills Academy and was previously a Non-Executive Director of the United Kingdom Accreditation Service. His scientific background is in botany, biochemical sciences and food science and technology, and he has an extensive publication record in the area of food microbiology and food safety and its management. He was appointed a Commander of the Order of the British Empire (CBE) for services to the agri-food industry in the 2009 New Year Honours List.

Mrs Pamela Goldberg OBE FRSA (lay member)

Mrs Goldberg was Chief Executive of the medical research charity Breast Cancer Campaign, from 1997 to June 2011. She was involved in establishing the charity's first Scientific Advisory Board and developing its first research strategy as well as setting up governance guidelines for the Trustee Board. She is committed to ensuring that patients and the general public are given information that is evidence-based and that scientific results are communicated effectively to the general public.

She was a Member of the Human Tissue Authority until November 2014 and is a member of the Independent Review Panel for Borderline Products (IRPBP) and Independent Review Panel for Advertising (IRPA) for the Medicines and Healthcare Products Regulatory Authority (MHRA). She is
a Fellow of the RSA (Royal Society for the encouragement of Arts, Manufactures and Commerce and serves on the Board of the International Women’s Forum (UK).

She was appointed an Officer of the Order of the British Empire (OBE) in the Birthday 2013 Honours List.

**Professor Duncan Maskell (expert member)**

Professor Maskell is Head of the School of the Biological Sciences at the University of Cambridge and from August 2015 will be Senior Pro-Vice Chancellor, Planning and Resources. He has been Professor of Farm Animal Health, Food Science and Food Safety at the University of Cambridge since 1996. He leads a research group working on all aspects of bacterial diseases with particular emphasis on the major foodborne pathogens salmonella and campylobacter. He was a Member of the BBSRC Agri-food Committee from 1997 to 2003, and its Chair from 2000 to 2003, and a member of the FSA Advisory Committee on Research from 2002 to 2007. Professor Maskell is a non-executive Director of both the Moredun Research Institute and Genus plc. He is a member of the Scientific Advisory Boards of the Pirbright Institute and the Roslin Institute, and is a Trustee and Director of the Institute of Food Research.

**Professor Anne Murcott (expert member)**

Professor Murcott is Professorial Research Associate at the Food Studies Centre, Department of Anthropology, School of Oriental & African Studies, University of London, Honorary Professor in the School of Sociology and Social Policy at the University of Nottingham and Professor Emerita in Sociology at London South Bank University. She is a past Honorary Professor in Sociology at the University of Leicester and at City University, London. Her research includes pioneering work in the sociology of food, a field in which she has been active nationally and internationally for 30 years. She is the author of numerous articles, has (co)edited and (co)authored ten books, and served as editor of ‘The Sociology of Health & Illness’. She is a Fellow of the Academy of Social Sciences and in 2009 was awarded an honorary Doctorate by the University of Uppsala.

In addition to co-authoring an eleventh book, her activities still include PhD training/ supervision/ examining as well as service as advisor to research projects and postdoctoral work. A member of the FSA Advisory Committee on Research from 2002 to 2007, she served as a member of the Steering Panel for the Government Office for Science’s Review of the Food Standards FSA (2008 to 2009) and as Chair of the Review Panel of the Independent Review of the Controls on Infant Formula and Follow-on Formula, (2008 to 2010).

**Mrs Leen Petré (lay member)**

Leen Petré is Senior Associate at Ofcom. Before joining Ofcom she was Principal Manager for Media and Culture and European Campaigns Manager at the Royal National Institute of Blind People (RNIB) (2000 to 2013). Leen holds a degree in Political and Social Sciences and an MA in European Studies from the University of Leuven. After graduating, Leen built up 10 years of work on a range of international and European consumer issues, including food standards. Leen has
represented consumer interests on various advisory bodies, and is a Fellow of the RSA (Royal Society for the encouragement of Arts, Manufactures and Commerce).

The following contributed to the work of GACS during the period of this report:

Dr Ann Prentice OBE (Chair of the Scientific Advisory Committee on Nutrition, SACN)\(^7\)

Dr Prentice is Director of MRC Human Nutrition Research, Cambridge. Dr Prentice’s main research interests are nutritional aspects of bone health and osteoporosis; dietary requirements for human growth, pregnancy and lactation, and old age with particular reference to micronutrients. She has published extensive peer-reviewed articles, book chapters and reports. Dr Prentice was President of the Nutrition Society (from 2004 to 2007) and has served on a number of national and international advisory committees, including COMA’s Subgroup on Nutrition and Bone Health.

\(^7\) In October 2010 responsibility for SACN transferred to the Department of Health. From that time, the two Committees agreed that the Chair of SACN (or their nominated deputy) would attend GACS meetings as an invited observer and contribute to discussion at the GACS Chair’s discretion.
### ANNEX 3  GACS Working Groups active in the period of this report

_Note: In line with GACS principle of openness, all GACS Working Groups report back on their work to open meetings of the full GACS._

<table>
<thead>
<tr>
<th>Working Group</th>
<th>Role</th>
<th>Members</th>
<th>Reports to GACS</th>
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<tr>
<td><strong>Groups that have completed their work during the period of this report</strong></td>
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| Working Group on FSA science and evidence strategy | To provide advice and input to the FSA's development of its next Science and Evidence Strategy, from 2015. | Professor Sarah O’Brien  
Professor Colin Dennis  
Professor Anne Murcott | Established in principle at 13th meeting; activated at 14th meeting. Advice reflected in report to 15th meeting. |
| Drafting Group on decision-making processes for new research | To consider matters relating to the decision-making processes in commissioning new research, including the peer-review of specifications and proposals, and what the SACs’ role is and should be in this | Professor Coggon  
Professor Murcott  
Mrs Goldberg | Established at the 12th meeting of GAC. (Recommendations at the 15th meeting). |
| **Groups whose work is ongoing** | | | |
| Joint GACS/SSRC Working Group on Use of Evidence | To consider how the balance and strength of evidence in the conclusions of assessments (assessments of risk and of other factors) can be captured more clearly to support transparent decision making | **GACS members:**  
Professor Colin Blakemore  
Professor Peter Jackson  
Professor Janet Bainbridge  
Professor Sarah O’Brien  
Professor Colin Dennis  
Professor David Lovell  
Professor Anne Murcott  
Mrs Pamela Goldberg  
**SSRC members:**  
Professor Richard Tiffin  
Ann Williams  
Joy Dobbs  
Professor Lynn Frewer | Established at 12th meeting. 1st report at 13th meeting. 2nd report at the 14th meeting. |
ANNEX 4  GACS self-assessment against the Good Practice Guidelines

Twenty nine principles of good practice have been developed by the SACs that advise the FSA. These were reviewed and updated in 2012. Different committees have different duties and discharge those duties in different ways. Therefore, not all of the principles set out below will be applicable to all of the committees, all of the time. This list of principles is considered by each committee annually as part of the preparation of its Annual report, and is attached as an Annex to it.

Response for GACS for the period of its seventh Annual Report (from 1 April 2014 to 31 March 2015)

1. The role of GACS is to provide independent challenge and advice to the FSA on how the FSA gathers and uses scientific evidence and expertise. It does not carry out risk assessments or detailed investigations of scientific dossiers on specific risks, products or processes. It does, however, look at how these processes are conducted and make recommendations on good practice. In carrying out its work GACS does look at evidence - for example regarding current practices, developments in science and its governance - both from within the FSA and externally, and in doing so, it seeks to abide by the principles of good practice developed by the FSA and elsewhere.

2. One of the priorities in the GACS work plan is specifically to review the processes and tools for governance and good practice in FSA science, including the good practice guidelines, and the operation of the Scientific Advisory Committees, in light of experience and of developments and challenges. GACS also has a role in providing an independent view on the performance of the SACs in providing advice to the FSA.

http://www.food.gov.uk/science/sci-gov/commswork/goodpracticeguidelinesacs
## Defining the problem and the approach

1. The FSA will ensure that issues it asks an SAC to address are clearly defined and take account of stakeholder expectations in discussion with the SAC Secretariat and where necessary the SAC Chair. The SAC Chair will refer back to the FSA if discussion suggests that further iteration and discussion of the task is necessary. Where an SAC proposes to initiate a piece of work the SAC Chair and Secretariat will discuss this with FSA to ensure the definition and rationale for the work and its expected use by the FSA are clear.

   **Complies?** Yes

   **Notes/Comments** The FSA’s Chief Scientific Adviser, Professor Guy Poppy, and the Director of Science, Evidence and Research, Dr Penny Bramwell, attend GACS meetings and can be challenged by GACS to clarify definitions. In 2012/13 the GACS Working Group on Science Communication and Engagement made recommendations to FSA in relation to taking account of stakeholder expectations and approaches to science engagement activities more generally.

## Seeking input

2. The Secretariat will ensure that stakeholders are consulted at appropriate points in the SAC’s considerations. It will consider with the FSA whether and how stakeholder views need to be taken into account in helping to identify the issue and frame the question for the committee.

   **Complies?** Yes

   **Notes/Comments** GACS has identified a need to develop its engagement activities, which, among other things, support the requirement to take account of stakeholder expectations. GACS held a public panel debate in tandem with its first meeting, to help inform its work looking at good practice in the collection and use of evidence. GACS meetings are held in public. Working Groups do not meet in public, but report their work to full meetings in open session. GACS dinners are private events, but issues arising in discussion are reported to the next open meeting of GACS. GACS publishes notes of Q&A sessions alongside formal minutes.

3. Wherever possible, SAC discussions should be held in public.

   **Complies?** Yes

   **Notes/Comments** GACS meetings are held in public. Working Groups do not meet in public, but report their work to full meetings in open session. GACS dinners are private events, but issues arising in discussion are reported to the next open meeting of GACS. GACS publishes notes of Q&A sessions alongside formal minutes.

4. The scope of literature searches made on behalf of the SAC will be clearly set out.

   **Complies?** N/A

   **Notes/Comments** During 2013/14 the GACS Working Group on data exploitation commissioned a light touch literature search to inform its work. The Working Group was consulted on the scope of the search, which was completed by FSA staff and the secretariat. The scope of information gathering has been made clear in GACS papers.

5. Steps will be taken to ensure that all available and relevant scientific evidence is rigorously considered by the committee, including consulting external/additional scientific experts who may

   **Complies?** Yes

   **Notes/Comments** GACS does not routinely consider detailed primary scientific documents but it does examine rigorously the evidence that is presented. Members are expected to bring relevant additional materials to the
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<tr>
<td>6.</td>
<td>Data from stakeholders will be considered and weighted according to quality by the SAC.</td>
<td>Yes</td>
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<td>7.</td>
<td>Consideration by the Secretariat and the Chair (and where appropriate the whole SAC) will be given to whether expertise in other disciplines will be needed.</td>
<td>Yes</td>
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<td>8.</td>
<td>Consideration will be given by the Secretariat or by the SAC, in discussion with the FSA, as to whether other SACs need to be consulted.</td>
<td>Yes</td>
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<tr>
<td>Issue</td>
<td>Complies?</td>
<td>NOTES/COMMENTS</td>
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<td>Validation</td>
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<td>9. Study design, methods of measurement and the way that analysis of data has been carried out will be assessed by the SAC.</td>
<td>9 to 13: GACS complies, to the extent these criteria apply to its work.</td>
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<td>10. Data will be assessed by the committee in accordance with the relevant principles of good practice, e.g. qualitative social science data will be assessed with reference to guidance from the Government’s Chief Social Researcher.</td>
<td>9 to 13: GACS does not generally consider the type of detailed reviews and analyses of scientific data that are the primary focus of these criteria. However, it does look to ensure that the information that is presented in support of its discussions has appropriate assurance.</td>
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<td>11. Formal statistical analyses will be included wherever appropriate. To support this, each SAC will have access to advice on quantitative analysis and modelling as needed.</td>
<td>GACS set up a Working Group to consider how the FSA can make better use of existing data from other sources outside the published literature – for example from industry or NGOs – while maintaining proper independence, openness and assurance of the quality and robustness of the data. The Committee produced a draft framework in March 2011 for the FSA to use when developing such partnerships. This was revised in November 2011 in light of results from a public consultation.</td>
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<td>12. When considering what evidence needs to be collected for assessment, the following points will be considered:</td>
<td>GACS set up a Working Group on Use of Evidence to advise the FSA on whether and how it could be more consistent and transparent in the way it uses evidence in decisions. The Working Group reported in October 2014 and March 2015 and its activities are ongoing.</td>
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<tr>
<td>• the potential for the need for different data for different parts of the UK or the relevance to the UK situation for any data originating outside the UK; and</td>
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<td>• whether stakeholders can provide unpublished data.</td>
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<td>13. The list of references will make it clear which references have been subject to external peer review, and which have been peer reviewed through evaluation by the Committee, and if relevant, any that have not been peer reviewed.</td>
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<tr>
<th>Issue</th>
<th>Complies?</th>
<th>NOTES/COMMENTS</th>
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<tr>
<td>Uncertainty</td>
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<tr>
<td>14. When reporting outcomes, SACs will make explicit the level and type of uncertainty (both limitations on the quality of the available data and lack of knowledge) associated with their advice.</td>
<td>14 to 17: GACS complies to the extent these criteria apply to its work</td>
<td>14 to 17: GACS does not generally consider the type of scientific data to which formal uncertainty applies, although it will consider evidence on e.g. current practices, and reviews and commentaries on these, and in doing so weighs and communicates the (un)certainty of the evidence and consequently of the conclusions drawn from it. GACS qualifies its advice with reference to the information available and asks for further information where gaps exist. GACS has highlighted the assessment and communication of uncertainty and of the range of opinions (and the apparent trends in these) as key issues to consider in development of good practice and governance. GACS has provided input to work by the COT and SSRC on evaluating and expressing uncertainty. The terms of reference for the new Joint GACS/SSRC Working Group on use of evidence are relevant to these guidelines; it was set up at the 13th meeting and reported on the 14th and 15th meetings.</td>
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<td>15. Any assumptions made by the SAC will be clearly spelled out, and, in reviews, previous assumptions will be challenged.</td>
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<td>16. Data gaps will be identified and their impact on uncertainty assessed by the SAC.</td>
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<td>17. An indication will be given by the SAC about whether the evidence base is changing or static, and if appropriate, how developments in the evidence base might affect key assumptions and conclusions.</td>
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31
### Drawing conclusions

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<tr>
<th>Rule</th>
<th>Description</th>
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<tr>
<td>18.</td>
<td>The SAC will be broad-minded, acknowledging where conflicting views exist and considering whether alternative interpretations fit the same evidence.</td>
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<tr>
<td>19.</td>
<td>Where both risks and benefits have been considered, the committee will address each with the same rigour, as far as possible; it will make clear the degree of rigour and uncertainty, and any important constraints, in reporting its conclusions.</td>
</tr>
<tr>
<td>20.</td>
<td>SAC decisions will include an explanation of where differences of opinion have arisen during discussions, specifically where there are unresolved issues, and why conclusions have been reached. If it is not possible to reach a consensus, a minority report may be appended to the main report, setting out the differences in interpretation and conclusions, and the reasons for these, and the names of those supporting the minority report.</td>
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<tr>
<td>21.</td>
<td>The SAC’s interpretation of results, recommended actions or advice will be consistent with the quantitative and/or qualitative evidence and the degree of uncertainty associated with it.</td>
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<td>22.</td>
<td>SACs will make recommendations about general issues that may have relevance for other committees.</td>
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<tr>
<th>18 to 22 GACS role</th>
<th>GACS role is explicitly concerned with challenge to and advice about the FSA’s science and it will apply this principle to its own work.</th>
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<tbody>
<tr>
<td>GACS does not carry out assessments of risks and/or benefits as such. It will consider the advantages and disadvantages of different options in making its recommendations.</td>
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<td>This is covered explicitly in the GACS Code of Practice.</td>
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<td>GACS aims to follow this principle.</td>
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<td>GACS role is to make recommendations about cross-cutting issues; it also has a role in facilitating the consideration and communication of such issues by and between other Committees.</td>
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<tr>
<td>Issue</td>
<td>Complies?</td>
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| Communicating committees’ conclusions                               | 23 to 29: GACS complies to the extent these criteria apply to its work. See comments. | GACS has identified clear and effective communication as a key issue for its work and in advising on the work of FSA science more generally.  
GACS papers make clear the origin of issues under discussion. It puts its conclusions in the context of other work where appropriate.  
GACS makes clear the basis for its recommendations and any assumptions and caveats.  
GACS does not carry out risk assessment or assessment of detailed scientific data of the type that is the focus for this criterion. However, GACS is committed to making the basis for its discussion including supporting information and references clear and accessible.  
GACS follows this criterion.  
This does not apply directly, since GACS does not carry out risk assessments or detailed reviews of scientific evidence. The GACS Chair reports annually to the FSA Board at an open Board meeting, covering GACS’ work and the FSA’s science, and providing an independent commentary on FSA science. One of the recommendations from the GACS Working Group on Science Communication and Engagement is that FSA should ensure that SAC Chairs are kept informed of the use of their Committee’s advice in Board Papers, during their development and before they are published. Where it is not possible for the SAC Chair to attend an open FSA Board meeting where the SAC’s advice is considered, the FSA Executive should inform the SAC Chair of the Board’s discussion and decision as soon as possible (and in any event before publication) to allow the SAC Chair to understand the reasoning behind the Board’s decision. |
| 23. Conclusions will be expressed by the SAC in clear, simple terms and use the minimum caveats consistent with accuracy. |                                                                          |                                                                                                                                                                                                              |
| 24. It will be made clear by the SAC where assessments have been based on the work of other bodies and where the SAC has started afresh, and there will be a clear statement of how the current conclusions compare with previous assessments. |                                                                          |                                                                                                                                                                                                              |
| 25. The conclusions will be supported by a statement about their robustness and the extent to which judgement has had to be used. |                                                                          |                                                                                                                                                                                                              |
| 26. As standard practice, the committee secretariat will publish a full set of references (including the data used as the basis for risk assessment and other committee opinions) at as early a stage as possible to support openness and transparency of decision-making. Where this is not possible, reasons will be clearly set out, explained and a commitment made to future publication wherever possible. |                                                                          |                                                                                                                                                                                                              |
| 27. The amount of material withheld by the SAC or FSA as being confidential will be kept to a minimum. Where it is not possible to release material, the reasons will be clearly set out, explained and a commitment made to future publication wherever possible. |                                                                          |                                                                                                                                                                                                              |
| 28. Where proposals or papers being considered by the FSA Board rest on scientific evidence produced by a SAC, the Chair of the SAC (or a nominated expert member) will be invited to the table at the Open Board meetings at which the paper is discussed. To maintain appropriate separation of risk assessment and risk management processes, the role of the Chairs will be limited to providing an independent view and assurance on how their committee’s advice has been reflected in the relevant policy proposals, and to answer Board Members’ questions on the science. The Chairs may also, where appropriate, be invited to provide factual briefing to Board members about particular issues within their committees’ remits, in advance of discussion at open Board meetings. |                                                                          |                                                                                                                                                                                                              |
29. The SAC will seek (and FSA will provide) timely feedback on actions taken (or not taken) in response to the SAC’s advice, and the rationale for these.

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<td>At the 9th meeting the Committee asked that a regular report on actions taken by FSA in response to advice from the SACs be included in future discussions on Science in the SACs, in order to track FSA performance on this. The first of such reports was considered at the 10th meeting, with subsequent reports at the 12th and 14th meetings. The Committee found the format and level of detail in the report useful and felt that each SAC should receive such updates regularly from its Secretariat, with GACS taking an overview to consider gaps/cross-cutting issues.</td>
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