Annual Report From the Science Council Chair (Financial Year 2021/22)

FSA 23-03-09 - This report gives a summary of Science Council's work over the past year and an insight into future activities.

1. Summary

1.1 This report will provide an overview of the work of the Science Council over the past year and reflect on its successes and challenges as well a forward look into the future activities.

1.2 This year the Council's main focus has been a review of the implications for food safety of changes to achieve net zero carbon. In addition the Science Council has been cooperating in the periodic independent review of SACs that is being led Prof Charles Godfray and Prof Annette Boaz.

2. Introduction

2.1 The FSA's Science Council is an independent expert committee comprising a Chair and seven members. It was established in April 2017 and our role is to provide high-level, expert strategic insight, challenge and advice to the FSA's Chief Scientific Adviser (CSA), the Board and Executive on the FSA's use of science to deliver its objectives.

2.2 Its purpose is to help to ensure that the FSA identifies, sources, integrates and uses the best scientific evidence and expertise from all relevant disciplines to inform and evaluate its work. FSA defines science in a broad and inclusive way, including the natural, physical, social and economic, digital and data sciences. This means the Science Council takes a multidisciplinary approach to deliver and inform its recommendations.

2.3 The Council meets four times a year: two open plenary meetings alternating with two closed project meetings (to track delivery of reviews). Open meetings typically include updates on FSA science activity, updates on the status of reviews, implementation of previous Council recommendations as well as discussion of science questions with the FSA.

3. Recent and Ongoing Work Programme

3.1 In this section I will summarise Science Council activity over the last year.

Working Group 6 on Net Zero Carbon and Food Safety

3.2 The UK has a legal commitment to?reach net zero?carbon (NZC)?emissions by 2050.? This is a topic that has recently been building momentum, with clean growth being one of the?four Grand Challenges set out by the UK Government.?

3.3 The way we grow, process and transport food is a major contributor to climate change, with food production as a whole accounting for more than a quarter of all greenhouse gas emissions.

3.4 Reducing this will require dramatic changes in agriculture, manufacturing and transport. The food we buy is driven by a complex interplay between consumer demand, retail marketing and farm production and all of these will see significant changes in practice and technology over the next decade to help reach that net zero carbon ambition.

3.5 Consequently, the Science Council and FSA CSA agreed that a deeper understanding of potential implications of achieving net zero on food systems (or identifying areas of uncertainty) would be of considerable value to FSA in pre-empting future policy and evidence needs in this area.

3.6 The question to answer is:

- "What are the food safety implications of changes being made to (or affecting) the food system over the next decade to achieve net zero carbon?"

3.7 A Working Group was established, led by Science Council members Mrs Claire Nicholson (WG6 Chair) and Prof Jonathan Wastling (WG6 Deputy Chair). At the ninth Science Council open meeting in June 2021, the Council agreed in its closed session an initial work plan for this review, with Terms of reference established in October 2021. The review is not looking at the likely impacts of climate change, but the implications of **changes to reduce carbon emissions** with the intention of reducing climate change.

3.8 The review is scheduled to publish its final report on 20 April 2023 and is divided into the following phases:

- Phase 1 (Jun-Oct '21) the Science Council interviewed 3-4 experts about the broad landscape of carbon reduction efforts (UK and international) to, or affecting, the whole food system. This was followed by a survey of experts to identify specific NZC activities over the next decade.
- Phase 2 (Oct '21-Apr '22) included a workshop?and follow-up interviews using the survey results to identify activities with food safety implications.? The work focuses on primary production it may propagate issues further down the food chain and allows a staged review approach.
- Phase 3?(Apr-Dec '22) was a deeper investigation of those activities identified in Phases 1 and 2 to ascertain the outstanding issues and questions needed to identify food safety risks and priorities for their resolution. This was via a multifaceted approach (e.g. talking to experts and interrogating existing reviews and grey literature cited by review participants)
- Phase 4?(Sep '22-Mar '23) will run concurrently with phase 3 and draw together findings from phases 1-3 and the final report will contain recommendations for the FSA.

3.9 The final output from this review will be advice for the FSA that will identify key changes to reduce carbon emissions that warrant further investigations to establish whether the potential food safety risks identified will in practice manifest as serious hazards.

3.10 One regret is that we have not been able to robustly establish the relative magnitude and priority of these risks for two main reasons. Where a technology is new (especially in the innovation space), it can be difficult to find a substantial body of peer reviewed literature on their food safety implications. Where an agricultural technique is largely established but the magnitude is increasing or the inputs/outputs/process are being adjusted, there may be existing rules or guidance but there remains a question whether these will continue to be fit for purpose for these new scenarios.

3.11 As primary food production and decarbonisation has cross departmental responsibility we have consulted key departments during the review (Defra, HSE, DHSC, BEIS, DfT and GO-Science). This also means that many of the potential food safety risks highlighted in the report will require FSA to engage cross-departmentally with, for example Defra, to move this work to the next stage and commission work to identify which potential hazards represent genuine risks.

4. Future Direction

4.1 Moving forward the Science Council continues to provide independent advice to the FSA Strategic Insights Team (SIT) to support FSA strategic planning and foresight (and I would like to thank the SIT Team Leader Greg Wasinski for actively engaging with the Council keeping us informed of a range of ongoing or planned FSA reviews and foresight studies and seeking our insight into these).

4.2 Looking to the future of the Science Council, things are hazier than when I have reported to the FSA Board in previous years. We have put development of reviews after Working Group 6 on hold until completion of the periodic review led Prof Charles Godfray and Professor Annette Boaz. I have talked with them and shared the many ways Science Council has had a positive impact on the development of science capability and capacity in the FSA.

4.3 Science Council has always tended to produce reviews on substantive topics, usually at the request of the FSA Board. However, as government departments' budgets tighten it is even more important that advisory committees like Science Council provide not just excellent advice but be agile and give excellent value for money. This was why the Council had started planning mixing in shorter reviews on more discrete topics, such as the guidance for unsolicited third party evidence that does not sit on the FSA website.

4.4 I hope that the periodic review allows us to retain that which is good and effective in how we deliver strategic science advice and helps us build on that foundation new and improved ways to support FSA decision making.

5. Conclusions

5.1 Finally, as you may or may not know I will be stepping down as Chair of Science Council at the end of June this year. This seems an appropriate time as this is when the periodic will report its recommendations on how Science Council can improve its ways of working and where its focus should lie moving forward. It will open the way for a new chair to lead a new Science Council in providing independent strategic scientific advice to the FSA.

5.2 I have found chairing the Science Council to be rewarding and inspiring in that it has given me insight and opportunity to challenge and improve FSA's ways of working in a strategic and practical way. Working with a diverse group of experts to analyse fundamental strategic science questions and issues to support the FSA's vision of protecting consumer interests in food has been one of the most satisfying experiences in my professional career.