FSA’s response to climate adaptation

The FSA has made targeted efforts to help support sustainability in the food system relevant to the functions it has and with the resources available.

This report highlights three areas of work undertaken in line with the FSA’s strategic ambition to grow its contribution to food that is more sustainable. They are illustrated by examples and case studies.

These three areas are:

- supporting the food industry, businesses and consumers to adapt to climate change;
- generating and publishing evidence on the effects of climate change on the food system; and
- making the FSA as an organisation more sustainable, including the response to Greening Government commitments.

Supporting industry, businesses and consumers adapt to climate change

Businesses and organisations throughout the food system are working to adapt to, or mitigate the effects of, climate change. The FSA supports adaptation efforts related to climate risks while protecting consumers, through publishing guidance for consumers on events linked to changes in weather, collaborating with government, and working with non-governmental organisations.

Consumer guidance

Events linked to climate change, such as heatwaves and floods, are becoming more frequent across the UK. The FSA issues food safety advice for these situations to ensure consumers understand how to handle food safely in extreme circumstances. Following an increase in consumer enquiries and emergency preparedness testing, the FSA published updated guidance on safe food handling during a heatwave, power cut, or after a flood. This guidance helps consumers manage their personal risks around food safety from events linked to climate change.

Cross-government collaboration

The FSA works closely with other UK Government departments contributing to their work to improve climate adaptation. For example, the FSA is a member of the Food Data Transparency Partnership (FDTP), which aims to improve food supply chain data to promote environmentally sustainable food production and sales. The FDTP Eco Working Group, which is led by Defra, focuses on delivering accurate environmental impact data and involves various stakeholders in policy development. It supports initiatives to standardise data collection and improve reporting, with the FSA leading the data workstream.

Collaboration – non-government organisations

The FSA also brings together other parties to address issues in the food system, working with academia, civil society and businesses to support shared goals and objectives. The case study below is an example of this.

Case study: Working in collaboration with climate NGO Waste and Resources Action Programme (WRAP) to reduce food waste

The FSA has worked in partnership with WRAP for over a decade, aiming to support businesses to be more sustainable and reduce food waste. Food waste contributes to greenhouse gas emissions, and wastes the resources that went into producing, processing, storage and transport of the food in the first place.

The FSA is a signatory to the Courtauld Commitment 2030, a series of voluntary agreements supporting collaborative climate related action across the entire UK food chain. Key aims within the Commitment include a 50% per capita reduction in food waste by 2030 (compared to 2007), a 50% reduction in greenhouse gas emissions associated with food and drink consumed in the UK (compared to 2015) and that 50% of fresh food is sourced from areas with sustainable water management. FSA's work with WRAP helps to achieve these aims.

The FSA and WRAP also work collaboratively on specific campaigns and pieces of work, such as collaborative communications in relation to Food Waste Action Week, the annual flagship campaign of WRAP's Love Food Hate Waste campaign. In 2024, the theme was "Choose what you'll use", encouraging people to buy loose fruit and vegetables.

The FSA has supported WRAP's aim of reducing food waste in relation to milk, and through increasing the proportion of fresh fruit and vegetables sold loose without best before dates, which are not a legal requirement. This included jointly branded guidance documents, such as Implementation Resource guidance on surplus food redistribution labelling providing advice for businesses on date labelling and food safety relevant to the redistribution of surplus food. In addition, guidance has been developed to help supply chain businesses identify and implement actions that encourage consumers to reduce their household food waste across a range of food categories.

Market authorisations

The FSA works to protect public health and consumers' wider interests in relation to food in England, Wales and Northern Ireland, alongside the FSS in Scotland. Public safety will always be the FSA's primary concern and responsibility. A crucial way in which it does this is through its the market authorisation process, under which the FSA and FSS assess and makes recommendations to Ministers on certain new food and feed products before these can be placed on the UK market. Examples include authorising new technologies, new genetically modified food and feed, flavourings, feed additives, food contact materials, food additives and novel foods. The market authorisation process is an essential safeguard, ensuring that any food and feed product

is rigorously assessed as safe prior to being placed on the market for sale.

Through the market authorisation process, the FSA can support businesses to adapt to climate change by bringing products which support adaptation safely to market and providing confidence to consumers that these products are safe. For example, precision breeding has the potential to support climate change adaptation. Precision breeding involves making precise changes to the DNA of plants or animals using gene editing methods. Unlike traditional breeding, which can take many years to develop desired traits, precision breeding allows scientists to introduce beneficial traits more quickly and accurately. This can lead to improvements such as increased disease resistance, enhanced nutritional content and better adaptability to environmental changes. The FSA and Defra are working together to establish the regulatory framework for the use of Precision Bred Organisms (PBOs) in food and feed in the UK, which will become operational in 2025.

Evidence generation

As part of its wider evidence generator role, the FSA carries out specific research into impacts of climate change on the food system. This can support organisations across the wider food system to understand the risks and adapt to climate change. Recent publications of note include:

- FSA Science Council (2023), Food Safety in the Net Zero Era, commissioned to investigate the potential food safety implications arising from changes in primary food production;

- FSA Research and Evidence (2024), Impact of Climate Change on the UK Food System, assessing the most likely changes to the UK food system over the next five years resulting from climate change, with a focus on the FSA's remit; and

- FSA Food System Strategic Assessment (2023), which included a section focussed on trends and issues impacted by climate change/environmental factors.

Additionally, the FSA is represented on cross-government scientific panels and working groups, through its Chief Scientific Advisor (CSA), Professor Robin May, and FSA officials. Professor Robin May is also Deputy Chair for the CSA Climate Adaptation Mission. Through this, the FSA can influence discussions on climate adaptation. One example of an advisory committee examining key risks relevant to climate change is highlighted in the case study below.

Case study: The Advisory Committee on the Microbiological Safety of Food (ACMSF) workshop

The Advisory Committee on the Microbiological Safety of Food (ACMSF) is a non-statutory committee of around 20 industry and academia experts which provides expert advice to Government on questions relating to microbiological issues and food. This working group exists to assess the risks to humans from foodborne transmission of antimicrobial-resistant microorganisms and to provide advice to the FSA.

Climate change will directly impact the distribution and growth of microbes that can affect food safety. Pathogenic microbiological contamination is the most common type of hazard involved in food incidents, accounting for 23% of all incidents reported to the FSA in 2023.

The committee sets a five-year programme which includes horizon scanning workshops every one to two years. The 2023 – 2028 programme includes a commitment to elicit expert views on

the impact of climate on the microbiological safety of food at least three times during the period of the programme. The workshop outputs will inform the FSA's activities such as research prioritisation related to microbiological safety of food, and guidance and support for producers and other food businesses to reduce and manage the risk.

A report on the June 2024 workshop was published in December 2024. A key risk identified in this workshop was the likelihood that extreme weather events, particularly droughts and heavy rainfall resulting in flooding, would lead to contamination of arable crops with livestock faecal bacteria. In crops that are then consumed without further cooking, such as leafy green salad leaves, this could lead to extreme sickness and potentially death. There is significant evidence connecting Shiga toxin producing Escherichia coli (STEC) outbreaks to impacts of climate change. Examples of this have already been seen in the UK, e.g. a large outbreak of STEC associated with lettuce in August to September 2022 which affected 259 people, 75 of them requiring hospitalisation.

Climate adaptation within the FSA as an organisation

In 2023, the FSA published its first internal Environmental Sustainability Strategy. The strategy aligns with the UK government's goals of reducing emissions by 78% by 2035 and achieving net zero by 2050. It centres on three primary areas: reducing its carbon footprint, conserving natural resources, and prioritising sustainable procurement.

To reduce its carbon footprint, the FSA aims to cut CO2 emissions from staff travel and estates by 26% from a 2017/18 baseline (prior to COVID-19 distortion) by 2025. This includes promoting remote working, reducing business travel, and enhancing the use of ultra-low emission vehicles. This has been achieved in part by the Our Ways of Working programme launched in 2017 to modernise how staff work. Everyone is encouraged to work flexibly, where possible, and recruitment is no longer office specific.

To conserve natural resources the FSA is minimising waste, enhancing recycling efforts, and using smart technology to reduce energy and water consumption. It aims to reduce the overall amount of waste generated by 20% from the 2017/18 baseline and reduce the amount of waste going to landfill to less than 5% of overall waste.

Sustainable procurement is another key focus, with the FSA committed to evaluating the sustainability credentials of its suppliers and the goods and services it purchases. This includes sourcing materials sustainably and integrating net zero objectives and environmental standards into its procurement process.

The FSA is signed up to the Greening Government Commitments (GGCs). The GGCs set targets for reducing water consumption, lowering greenhouse gas emissions and minimising waste while promoting resource efficiency. It is currently signed up to all the GGCs and report quarterly to Defra. Except for greenhouse gas emissions, the targets are aggregate central government targets and not bespoke minimum performance targets for individual departments. The FSA will continue to engage with future GGC work, particularly on travel emissions (Commitment A), where the FSA generates most of its greenhouse gases.