Department
for Environment
Food & Rural Affairs

Food Chain Evidence Plan

Policy portfolio: Food and Sustainable Economy

Policy area within portfolio: Food policy, competitiveness, growth & food security and standards

Timeframe covered by Evidence Plan: 2013/14 – 2017/18

Date of Evidence Plan: March 2013

This evidence plan was correct at the time of publication (March 2013). However, Defra is currently undertaking a review of its policy priorities and in some areas the policy, and therefore evidence needs, will continue to develop and may change quite rapidly. If you have any queries about the evidence priorities covered in this plan, please contact StrategicEvidence@defra.gsi.gov.uk.

Contents

1. Policy context

What are the key policy outcomes for the policy programme/area?

Food policy objectives support delivery of a sustainable, secure and healthy food supply to address the challenges to our food systems posed by climate change, food security and health as set out in Government's Foresight report on the future of food and farming[1] and the Natural Environment White paper[2]. These are also set within the coalition's principal objectives of deficit reduction and growth as the food and farming sector is vitally important to the UK economy. The agri-food chain contributes £96 billion per year to the economy (2011), supporting 3.8 million jobs.

Sustainable food policy activity is set within the Government's wider policy framework (coalition priorities) to:

- support and develop British farming and encourage sustainable food production;

- enhance the environment/biodiversity to improve quality of life;

- support a strong sustainable economy, including thriving rural communities, resilient to climate change; and

- address coalition objectives of deficit reduction and growth.

Sustainable food policy addresses Ministerial priorities to:

- Improve productivity and competitiveness of food and farming businesses with better environmental performance;

- Encourage a more sustainable approach to the use of materials and management of waste throughout society; and

- Adopt a proportionate approach to regulation and remove unnecessary burdens.

Policy activity and Government intervention is considered in the context of food-related market failures,[3] or on equity grounds. This limits Government action to those areas where it is best placed to deliver. It is important to recognise however that not all Government food policy interventions can be attributed to the existence of market failures. Activity also supports our work in partnership with industry, NGOs and consumers to deliver food policy.

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[1] http://www.bis.gov.uk/assets/foresight/docs/food-and-farming/11-546-future-of-food-and-farming-report.pdf

[2] http://www.naturalengland.org.uk/ourwork/newp.aspx

[3] e.g. imperfect information, externalities, market power, public goods

Key food policy outputs are to:

- **Improve Food chain competitiveness, growth and integrity (FSE1)** by:

  - o implementing the Food Exports action plan to promote export opportunities and support for trade missions and promoting access to innovation through collaborative R&D on food;

  - o dis-engagement from the Covent Garden Market Authority;

  - o taking forward the Gangmasters Licensing Authority Triennial review;

  - o abolition of the Agricultural Wages Board and introduction of a national minimum wage; and

  - o simplifying and mapping food labelling legislation to help SMEs with compliance.

  Promoting competitiveness and exports addresses market failures of imperfect information. Activities on the Gangmasters Licensing Authority, Agricultural Wages Board and food labelling address opportunities to stimulate growth by removing regulatory barriers.

- **Encourage food chain sustainability and resilience, and food and materials security (FSE2)** by:

  - o contributing to the Green Food Project to deliver environmental sustainability of the UK food chain alongside increasing production (by facilitating a stakeholder sustainable food consumption debate);

  - o developing an approach to global food security (linked to the Foresight Report one year on review);

  - o influencing the European Commission on its development of a sustainable food Communication document; and

  - o working in partnership with businesses to improve food chain resource efficiency and resilience of the food supply chain and develop options to mitigate food price spikes.

  Promoting food security and sustainability addresses market failures related to externalities. Activities to address resilience in the food supply chain address market failure in under-provision of public goods.

- **Provide improved food information to the consumer (FSE3) by:**

  - o negotiating EU Food Information proposals;

  - o consolidating existing labelling requirements (red tape challenge);

- o promoting country of origin labelling of food and implementing food labelling and composition legislation effectively.

Improved food information for consumers addresses market failures of imperfect information.

These outputs are short/near term priorities linked to the current Administration policy. However these themes are likely to continue into the future (taking account of any changes in political direction) to address the long-term issues identified in the Foresight Report.

2. Current and near-term evidence objectives

What are the current and near-term objectives for evidence and how do they align to policy outcomes?

The Food Evidence Programme has a post-farm gate focus from primary production (mainly post harvest) to consumers. The five objectives of the programme are set out below.

2.1 Increasing competitiveness, productivity and economic growth in the food and drink sector (FSE 1)

Developing innovative solutions to drive a competitive, efficient and resilient low carbon food chain by:

- increasing resource efficiency in food manufacture, retail, and distribution (reducing energy use, water use, GHG emissions, waste recycling/reduction). Delivered through novel engineering, process design and better systems control (**high priority**);

- enhancing the nutrition, safety and quality of raw food materials, focussing on where food industry growth can be achieved **(high priority**);

- improving opportunities for export through access to innovation (particularly for SMEs) and adoption through knowledge exchange partnerships and collaborative R&D (**high priority**);

- horizon scanning and socio-economic analysis to identify and promote opportunities for export and growth in the food and drink sector to understand business needs, drivers and changes in business environments (food price rises, growth, exports, production, barriers, or added value in the supply chain) (**high priority**);

- mapping market access barriers for food and drink exports to identify competitive advantage, or barriers to trade and identifying innovation opportunities in other sectors (**high priority**);

- providing new evidence on food chain productivity, growth, consumer attitudes and social impacts of food by publishing national annual Family Food Survey Reports and the Defra Food Statistics Pocket Book (**high priority**); and

- evaluating policy through socio-economic analysis to appraise policy action, and their cost effectiveness, including providing Impact Assessments (**high priority**).

2.2 Reducing negative environmental impacts of the food supply chain to support a low carbon food chain (FSE 2)

Engaging industry to improve resource efficiency by:
- developing sector specific plans (e.g. soft drinks road maps) and identifying barriers to best practice to achieve efficiency gains and drive change in the supply chain (**medium priority**);

- strengthening the evidence base on environmental and socio-economic metrics and reducing the environmental and social costs of the supply chain (**medium priority**);

- understanding the environmental, socio-economic impacts of sustainable intensification on the supply chain (**high priority**); and

- carrying out secondary analysis to understand the impacts of food prices on sustainability and how the food chain can contribute to a circular economy (**high priority**).

Outcomes will contribute to the Green Food Project goals to deliver environmental sustainability of the UK whole food chain alongside increasing production.

2.3 Increasing the socio-economic benefits of food production and consumption to promote availability and consumption of quality, healthy food (FSE 2)

Evidence objectives include:

- primary and secondary research to understand factors influencing supply, food chain attitudes, behaviour, practices and impacts, economic issues affecting the sector (including inter-relationships and behaviours) and barriers to food production and processing innovation (**high priority**);

- understanding barriers and drivers for consumers to make sustainable food choices and purchasing decisions. Identifying behaviour change levers (including beyond price and information provision) to promote uptake of healthy affordable food (**high priority**); and

- using research tools to identify research priorities through the Global Food Security Programme to understand and develop information on the sustainability of a healthy

diet to inform Green Good Project sustainable consumption activity (**medium priority**).

2.4 Maintain the security and resilience of the food supply (FSE 2)

Evidence objectives include:

- primary research to understand food chain infrastructure, resilience, awareness and risks (including pinch points or external influences) to the UK food supply chain within a global context to inform risk management options (**high priority**);

- secondary analysis to refine Food Security Assessment indicators to support review of the Foresight Report and develop behavioural indicators and monitoring tools for food poverty (**high priority**); and

- socio-economic analysis/modelling to understand:

  o supply chain vulnerability to food security risks;

  o consumer responses to price changes/volatility or energy shocks; and

  o the impacts of food prices on household food security (food availability, access and affordability) (**high priority**).

2.5 Increase confidence in food and availability of accurate food information to the consumer (FSE 3)

Evidence objectives include:

- developing novel, fit for purpose validated food authenticity methods and reference databases to verify quality, origin and production claims. These will be used to support enforcement of labelling and standards legislation and protect consumers against labelling mis-description. This will be supported by knowledge transfer activities to ensure uptake of methods by Public Analysts (**high priority**);

- engagement through EU projects to support harmonisation and standardisation of methods across Member States (**medium priority**);

- secondary analysis and behavioural research to assess the impacts of de-regulation and consolidation of labelling legislation on the food industry, catering sector and consumers (FSE1); including economic analysis of costs/benefits of policy options and policy evaluation (**high priority**); and

- research to develop tools to support industry and enforcement access to labelling information (**high priority**).

3. Future evidence needs

What are the longer-term evidence needs for the policy area/ programme?

The evidence base on food policy is under-developed. Future activity will build on the needs outlined in section 2 to fill existing gaps in the knowledge base, informed by the Global Food Security programme (GFS) systematic reviews, horizon scanning and Foresight Reports[4]. These will be set against the context of longer-term issues including water scarcity, climate change adaptation, demographic and social change and the impact of these on food systems, food consumption and global food trends.   Evaluation of food policy across the Business Plan outcomes, its rationale, cost-effectiveness (value for money) and benefits and impacts (including of behaviour change interventions) will also be important.

3.1 Increasing competitiveness, productivity and economic growth in the food and drink sector (FSE 1)

To drive a competitive, efficient and resilient low carbon food chain and increase economic growth will require:

- innovative industry-led R&D and technology which is acceptable to consumers to increase food chain resource efficiency. Needs will be driven by industry (large organisations, SMEs) to increase efficiency and socio-economic factors influencing the supply chain informed by horizon-scanning activity and the Agri-tech Strategy (**high priority**); and

- socio-economic analysis defining future productivity and growth goals to understand business drivers, future changing environments, supply-chain attitudes, inter-relationships, behaviours, the impact of regulatory burden, the role of skills and options for mitigating price spikes (**high priority**).

3.2 Reducing negative environmental impacts of the food supply chain to support a low carbon food chain (FSE 2)

To drive long-term change to support a low carbon food chain will require primary and secondary analysis to:

- strengthen metrics and identify where resource efficiency gains can be achieved (**medium priority**); and

- understand supply chain attitudes, behaviours, business drivers, socio-economic issues impacting on food chain and business environments and to carry out an assessment of policy impacts. (**medium priority**);

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[4] http://webarchive.nationalarchives.gov.uk/+/http://www.bis.gov.uk/foresight/our-work/projects/current-projects/global-food-and-farming-futures

3.3 Increasing the socio-economic benefits of food production and consumption to promote availability and consumption of quality, healthy food (FSE 2)

To promote UK sustainable production and consumption policy will require:

- knowledge gathering and primary and secondary analysis to:

    - better understand society's engagement with food production;

    - identify how to achieve sustainable intensification in the supply chain;

    - assess the impacts of production on natural capital and food prices;

    - understand how the supply chain influences agricultural production. (**high priority**); and

- socio-economic analysis to understand how to develop markets for ecosystems services and ecosystems-based models for the supply chain. (**high priority**).

Improving the knowledge base around achieving sustainable healthy diets will require:

- research to understand the implications for the food chain of shifting to these diets and how the food chain can be influenced to encourage uptake of healthy, low impact diets (**medium priority**).

UK and emerging EU policy activity to encourage sustainable behaviour and inform consumer choice will require:

- social science evidence to understand factors driving or preventing sustainable behaviours and how these might change including:

    - communication of information (environmental labelling); and

    - developing harmonised approaches to quantify the socio-economic and environmental impacts of consumer food behaviours on the supply chain (**medium priority**).

3.4 Maintain the security and resilience of the food supply (FSE 2)

To drive change and incentivise investment by industry and consumers to address long-term challenges on water scarcity, climate change and changing demographics will require:

- socio-economic research to define and quantify impacts and understand business drivers, supply chain practices, and behaviours, and risks to the supply chain (**high priority**).

Socio-economic analysis will build on UK Food Security Assessment indicators and household food purchase data/statistics to:

- understand how to support the maintenance of resilience within the food chain; and

- better understand food poverty, its links to food prices and choice (**high priority**).

3.5 Increase confidence in food and availability of accurate food information to the consumer (FSE 3)

European Commission Food Information for the Consumer proposals will continue to require:

- cutting edge transferable analytical methods to verify food quality and origin claims (**high priority**);

- research to support harmonisation and coordination of EU/international methods and databases (**high priority**); and

- knowledge exchange/information networks to promote better engagement between Government Departments, industry, enforcers and consumers **(high priority).**

Activity will be informed by horizon-scanning, intelligence, socio-economic drivers, emerging trends for mis-description, adulteration and food fraud and cutting edge science approaches to food authenticity verification. Socio-economic impacts and uptake of new labelling policy options will be appraised and evaluated.

4. Meeting evidence needs

What approach(es) will be taken to meeting evidence needs?

External evidence needs are identified and prioritised through an established process. To ensure needs are coordinated and multi-disciplinary, priorities are determined through consultation with policy leads across Directorates, specialists (natural and social scientists, economists, statisticians and operational researchers), policy and evidence specialists in other Departments, Agencies, the Waste Resources Action Plan (WRAP), Devolved Administrations, research funders, industry, enforcers, the research community and third sector.

The Programme engages extensively with Technology Strategy Board, Research Councils and other funders via the Global Food Security Programme (GFS) Initiative and Food Research Partnership to coordinate activity using established research tools, and leverage funding targeted at food security, resilience, sustainability and growth. These partnerships include Scottish Government (sustainable consumption, impacts), Welsh Government, Food Standards Agency (joint labelling interests), Department of Health (sustainable diets), levy bodies and industry-sponsored food research associations (innovation, sustainability). At an EU level, the Programme delivers evidence needs on food security as a UK partner through EU Framework food programmes (ERANETS e.g. SUSFOOD, Core-organic) and Joint Programming initiatives (JPI-FACCE).

A Programme Management Group of cross-Defra policy leads and multi-disciplinary evidence specialists meets quarterly to review the existing evidence base and outputs; decide what type of evidence is needed and agree how these should be provided (internal analysis, externally commissioned R&D, co-funding). Decisions take account of emerging priorities and longer term strategic needs, the balance of multi-disciplinary evidence activity across the Food and Sustainable Economy Directorate, other Directorates and externally, programme outputs and resource constraints.   Programme priorities are reviewed and coordinated at a strategic level across Directorates and externally with other funders (e.g. via food-funders coordination group) and through the collaborative evidence programme on waste, resource efficiency and sustainable consumption (WReSCE).

Specialist skills and knowledge are drawn from other Evidence Programmes covering Sustainable Farming Systems, Biodiversity, Crops, Sustainable Water Management, Waste, Agriculture and Climate Change. Economics, statistics, social/behavioural science and food science expertise are mainly from within the Food and Sustainable Economy Directorate. Economists use the Agricultural and Environmental Economics Academics Panels to inform analysis and research direction and social researchers draw on Defra's Social Science Expert Panel. Expert external specialist advice to support labelling policy (analytical methods for authenticity testing) and innovation (food technology) is provided through independent Advisory Groups, steering panels, Programme Advisors and experts in other departments (nutrition) – at all stages of the research process.   The supply base for the Programme is drawn from BBSRC Institutes, Universities, Defra agencies and a wide range of consultancies. Projects also utilise in house expertise and datasets to develop evidence (e.g. Family Food Survey, food statistics).

5. Evaluating value for money and impact

What approach(es) will be taken to maximise and evaluate value for money and impact from evidence?

Evidence is quality assured during its development and delivery through making use of the available evidence/analysis, independent peer-review and expert external challenge (e.g. via steering Groups, and provision of expert advice (e.g. Food authenticity expert working groups, WRAPs Product Research Forum, Advisory Committees) to ensure its fit for purpose and in line with standard Defra procedures. Expert consultation through stakeholder workshops is used regularly to develop and evaluate the scientific, economic and statistical evidence base (e.g. development of UK Food Security Assessment and food sustainability indicators). Contractors are proactively encouraged to publish outputs in peer-reviewed journals and disseminate to the wider community. Primary statistical evidence (including the Defra Family Food Survey) is required to conform to high statistical standards (i.e. national Statistics Code of Practice) which are audited by the UK Statistics Authority. Socio-economic analysis and Impact assessments are quality assured through the Heads of Profession. Independent expert opinion, and challenge on social science is also sought from the academic community through the Sustainable Practices and

Lifestyles Research Groups (joint Defra/ESRC/Scottish Government/ Surrey and Manchester University initiatives).

To ensure a coordinated and multi-disciplinary approach to delivering the evidence and supporting knowledge transfer to the food sector, existing mechanisms for food research coordination with other funders and industry will be exploited to maximise impact and value for money – including the Food Research Partnership and Global Food Security Programme– see section 4. Governance of the Programme through the Programme Management Group (PMG) ensures evidence is prioritised effectively and targeted towards business plan/Ministerial priorities. This group also reviews the impact of evidence outputs on policy. Policy seminars, external workshops, and strategic engagement activities support dissemination of outputs and policy development. The Evidence Programme also supports knowledge transfer activity directly (to industry, enforcers). Programme success measures are defined by a robust evidence base and outputs which contribute directly to a well-defined policy outcome. The programme will also be reviewed to assess scientific quality, policy relevance, collaboration, and value for money.