

FSS SCIENCE EVIDENCE AND INFORMATION (SEI) STRATEGY

1 Purpose of the paper

1.1 This paper is for **Discussion**.

The purpose of the paper is to outline our proposed future SEI strategy, which is a key enabler to support us in how we deliver our Strategy and Corporate Plan. The SEI and its linked documents will provide a framework for FSS to help direct how we identify and prioritise our SEI needs, assure how we use SEI in our work and how we weigh evidence and balance risks in decision making.

1.2 The Board is asked to:

- **Discuss** FSS's draft Science, Evidence and Information Strategy (Annex A);
- **Agree** our definition of Science, Evidence and Information;
- **Agree** the five principles upon which the SEI strategy is based;
- **Agree** the three SEI strategy themes and underpinning approaches;
- **Agree** the approach and timeline in paragraph 4.6 to finalise and publish the SEI strategy by April 2017;
- **Note** that the SEI strategy will be supported by a number of operational documents including an annual current and forward evidence plan which will be published on our website each March to inform stakeholders and to actively seek input from external experts and potential partners. These other documents are being developed to assure our SEI and support our staff to be efficient and effective including a risk management framework, a science governance statement and a science checklist.

2 Strategic Aims

2.1 FSS's Strategy makes clear that FSS is a science and evidence based organisation. The SEI strategy cuts across our three objectives defined in the Food (Scotland) Act 2015¹ and supports all six strategic outcomes in our corporate plan² through the key enabler of *Our approach to Evidence*. The FSS corporate plan outcome 6 includes commitments to "develop a science and evidence strategy for FSS to underpin how we identify our evidence needs to support our strategic priorities" and "to develop a system of transparency in how FSS deal with uncertainty in evidence, and how we weigh evidence and balance risks and benefits".

3 Background

3.1 FSS was formed in 2015 following a review of food standards and safety in Scotland (www.gov.scot/Resource/0039/00391041.pdf) to allow more flexibility to respond to Scottish needs. The appointment of a Chief Scientific Adviser

¹ http://www.legislation.gov.uk/asp/2015/1/pdfs/asp_20150001_en.pdf

² <http://www.foodstandards.gov.scot/shaping-scotlands-food-future-our-strategy-2021>

(CSA) to FSS in April 2016, together with the formation of a Science Strategy and Analytics branch, has enabled the development of an FSS SEI strategy, and begin developing related documents.

- 3.2 The SEI strategy and its associated documents support the FSS statement of performance of functions commitments including how FSS operates, to ensure that appropriate science governance arrangements are in place to aid the delivery of FSS's vision, policy and strategic priorities. The strategy helps provide a link for our staff between FSS organisational and SEI values and provides three key SEI themes with underpinning approaches.

4 Discussion

- 4.1 FSS is an organisation that manages current and future risks for safety, standards and diet related to food and feed in Scotland. All our SEI informs risk management decisions through a variety of roles as described in Annex A. The strategy provides a proposed definition for SEI and the approach that we propose to take to ensure that FSS has the capability, as well as the processes in place for our CSA to ensure a comprehensive, assured and robust evidence base to inform our policy development and decision making. The Board should consider the appropriateness of our five SEI principles: targeted, high impact, forward looking; trusted and robust and integrated transparently. These principles have been mapped to our corporate values. The Board should also consider the articulation of these principles in our three SEI strategic themes and their underpinning approaches; prioritising our SEI needs, enhancing and communicating the SEI we use and providing governance of our SEI.
- 4.2 FSS requires to use and communicate science internally (by both scientists and non-scientists) and externally to stakeholders and consumers. A key element of the SEI strategy is to highlight the requirement for staff across the organisation to enhance and develop the skills and knowledge to be able to achieve this.
- 4.3 The SEI strategy has no direct financial implications for FSS other than a commitment to undertaking a regular skills audit to ensure that our staff skills and capabilities (i.e. appropriate scientific and analytical disciplines) are in place to help deliver our corporate plan and its outcomes.
- 4.4 An equality impact assessment is not required as the documents are to aid SEI delivery. All FSS staff are recruited and supported through the SG HR equality processes and SEI contracts will have separate consideration of an equality impact assessment on a project by project basis.
- 4.5 Two workshops were held with FSS staff and we have sought comment from a number of critical friends and stakeholders who are involved in developing science strategies, risk management and governance for their organisations or Government departments to provide comment on the draft SEI strategy (FSA, SEPA, SG RESAS, SG CSA office, European Food Safety Authority (EFSA)). Comments provided have been very constructive and positive. The desired outcome is for all staff across FSS to adopt and use the SEI strategy to provide assurance of our SEI for our CSA that our SEI principles are being followed.

- 4.6 FSS will consider any comments that the Board may have today on the draft SEI strategy and place the strategy on citizens space for wider stakeholder consultation for 2-3 weeks in January 2017. FSS will then bring the finalised strategy back to the Board in February 2017 for a final discussion before its publication on the FSS website by April 2017.

5 Identification of risks and issues

- 5.1 The main risks to FSS are failure to adequately protect consumers from the risks related to safety, standards and diet in food and feed in Scotland and the reputational risk of failing to communicate the SEI appropriately which may lead to negative challenge from stakeholders (including the science community) and may confuse consumers.
- 5.2 The FSA/FSS MOU³ specifically on science commits both organisations to co-operate and collaborate with regards to science and evidence gathering to ensure there is a coherent evidence base across Scotland and the rest of the UK to underpin policy development and support incident handling. The implementation of the FSA review of Scientific Advisory Committees (SAC) will be discussed on a regular basis to ensure that FSS has access to the new SAC structure and that it fits our advice needs.

6 European Union considerations (Brexit)

- 6.1 Many of the food safety, diet and food standards challenges are similar across Europe to that of the UK. The course of the UK leaving the EU has the potential to have a significant, but as yet unknown, impact on the UK's future science base which could directly affect the ability of FSS to meet future science and evidence needs to develop policy.
- 6.2 Scottish Government and its Chief Scientist (Professor Sheila Rowan) are actively involved in the Brexit scientific issues on a UK basis and in Europe to ensure Scottish interests are reflected.
- 6.3 In Europe there is EFSA which currently the UK, as a Member State, can influence on particular topics to be investigated. This may not be possible in the future and it therefore may be important to work with FSA to reassess the capability of the UK advisory committees to cover areas of work that may not be picked up by EFSA in future.
- 6.4 Brexit may also create opportunities to look beyond Europe. Again, many of the challenges facing food agencies, for example in North America, New Zealand and Australasia, are similar to within the UK. In the future, there is the potential to develop links and learn from the experiences of these countries and to strengthen ties, in exchange of scientific expertise both in governmental/regulatory arenas as well as through research institutes and academia.

³

<http://www.foodstandards.gov.scot/sites/default/files/Governance%20Document%20-%20FSA%20and%20FSS%20MOU%20Final%20-%201%20April%202015%232.pdf>

7. Discussion

7.1 The Board is asked to:

- **Discuss** FSS's draft Science, Evidence and Information Strategy (annex A);
- **Agree** our definition of Science, Evidence and information;
- **Agree** the five principles upon which the SEI strategy is based;
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- **Note** that the SEI strategy will be supported by a number of operational documents including an annual current and forward evidence plan which will be published on our website each March to inform stakeholders and to actively seek input from external experts and potential partners. These other documents are being developed to assure our SEI and support our staff to be efficient and effective including a risk management framework, a science governance statement and a science checklist.

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ANNEX A

Introduction

Our first strategy Shaping Scotland's Future to 2021⁴ has created our vision to put consumers first and foremost and is grounded by our five key values against which everything we do will be judged.

FSS Vision “ *To create a food and drink environment in Scotland that benefits, protects and is trusted by consumers*”

FSS VALUES

Public service - *having people at the heart of what we do, putting the consumer first;*

Authority – *being a credible, consistent and trusted voice of authority on food matters in Scotland, basing our decisions upon sound science and evidence;*

Openness – *being open and transparent in our dealings with the public, stakeholders and partners;*

Independence - *at arm's length from Ministers, but aligned with the Government's Purpose; and*

Partnership – *collaborating with others to achieve the best outcome for the public.*

The Food (Scotland) Act 2015⁵ defines our objectives:

- To protect the public from risks to health which may arise in connection with the consumption of food;
- To improve the extent to which members of the public have diets which are conducive to health; and
- To protect the other interests of consumers in relation to food and feed.

Our strategy sets out our contribution to the Scottish Government (SG) purpose through linking the national outcomes with our six strategic outcomes. Our six outcomes form the basis of our corporate plan (2016-19), outlining what we will do, through an ambitious and challenging programme.

FSS Strategic Outcomes

1. *Food is safe*
2. *Food is authentic*
3. *Consumers choose healthier diets*
4. *Responsible food businesses flourish*
5. *FSS is a trusted organisation*
6. *FSS is efficient and effective*

⁴ <http://www.foodstandards.gov.scot/shaping-scotlands-food-future-our-strategy-2021>

⁵ <http://www.foodstandards.gov.scot/about-us>

Our approach to risk

FSS is an organisation that manages current and future risks for safety, standards and diet in food and feed in Scotland and as an organisation using the principles of the Scottish Government risk framework.

To manage the risks we use science, evidence and information (including intelligence and emerging data). We are improving further our risk management approach through the development of a framework to show how science, evidence and information (SEI) is integrated into our standard processes that we use to manage risk and uncertainty under different circumstances e.g. in decision making, during incidents and through audit. The processes contained in the framework will complement the SG risk framework and internationally recognised protocols for the use, interpretation and publication of science, evidence and information.

Our approach to risk is underpinned by our published and developing organisational and surveillance strategies (below), which will support activities under our six strategic outcomes.

- **A Regulatory Strategy (RS)** outlining how FSS will fulfil its role as a national regulator in Scotland.
- **A Food Surveillance Strategy (FS)** which will generate the intelligence required to identify the risks to the health of consumers in Scotland and the reputation of Scottish produce.
- **A Communications Strategy (CS)** to influence positive consumer behaviours targeted to the intended population groups based on their particular risk, behavioural and demographic profiles.
- **A Foodborne Illness Strategy (FI)** to target the key pathways that are responsible for the transmission of microbiological, chemical and radiological risks throughout the food chain.
- **Setting the direction for the Scottish Diet (SDSD)**⁶ sets out the key principles and broad measures for FSS action to rebalance the Scottish diet.
- **A Science, Evidence and Information Strategy (SEI)** sets our vision, principles and three themes around how we will, prioritise, enhance and provide governance for the use of SEI to help achieve the corporate outcomes for FSS.

Food Standards Scotland Science, Evidence and Information Strategy

Our Science Evidence and Information Vision

“ We will use science, evidence and information to inform, challenge and evaluate our policies, to tackle risk and promote opportunity in food safety, food standards and diet and nutrition both today and tomorrow.”

Our first Science, Evidence and Information (SEI) strategy will guide FSS on how to use SEI to help deliver our six strategic outcomes, to inform how we manage Scottish public health risks effectively and identify opportunities to improve our diet and food standards.

Our definition of Science Evidence and Information

FSS will use all SEI which is robust and appropriate to inform creation, development and evaluation of policy. However, emerging SEI may be incomplete or uncertain, including during incidents. Throughout the SEI strategy our definitions of science, evidence and information will apply:

- **Science:** physical, natural and social science which apply appropriate and novel methodologies to test theoretical principles;
- **Evidence:** all data and its analysis;
- **Information:** all surveillance, monitoring, market research, opinion (stakeholder, business, political, web analytics, observational data) and intelligence.

Our SEI strategy will be based on five key principles, linked to our FSS values (highlighted in bold) against which we judge everything that we do, and by which all our staff conduct work ensuring that we gather and use SEI effectively, from a variety of sources and use it to create a food and drink environment in Scotland that benefits, protects and is trusted by consumers.

Our Principles for Science, Evidence and Information

The science, evidence and information we commission or collect will be:

- **Targeted** on our strategic priorities to reduce risks associated with food and feed: being informed by stakeholder, business and consumer participation and opinion (**Public Service & Partnership**).
- **High impact** by contributing to those areas that will lead to improving public health: bringing maximum benefits and opportunities for stakeholders, business and consumers (**Public Service & Partnership**).
- **Forward looking** by utilising the latest science, evidence and information and building our capability to provide value (**Authority & Partnership**).
- **Trusted and robust** through rigorous peer review and consultation with stakeholders, businesses and consumers (**Authority & Independent**).
- **Integrated transparently** through using the wider science community and in our decision making and through our risk management framework (**Public Service & Openness**).

The ambitious and challenging program outlined under our six strategic outcomes will be underpinned by three SEI themes:

- Prioritising our science, evidence and information needs;
- Enhancing and communicating the science, evidence and information we use;
- Providing governance of our science, evidence and information.

We are improving further our risk management approach through the development of a framework to enable transparency in how we deal with uncertainty in the evidence (incomplete or emerging data), how we weigh evidence to balance risks and benefits to stakeholders, businesses and consumers and how we make risk-based decisions.

Prioritising our Science, Evidence and Information

Our aim is for all FSS staff to identify, prioritise and investigate the key SEI that we need to conduct or gather on an annual basis as part of the business planning process. This will balance work focused on our immediate priorities and knowledge gaps with more innovative and strategic work.

We will:

- Identify existing, relevant SEI and focus on where additional SEI will have greatest impact on our corporate outcomes and/or to meet current priorities;
- Promote, across FSS, intelligent and shared use of data, information and analytics, to understand existing risks, identify new and changing risks, and to develop more targeted and effective surveillance and regulation e.g. to drive up value from our statutory monitoring and reporting;
- Identify emerging risks that are based on scientific surveillance methods and using the analysis of information linked to our enforcement, operations, audit and food crime activities and our wider partnership working particularly with other Scottish Government regulators such as Marine Scotland and SEPA, with the food and drink industry and with Local Authorities;
- Be forward looking by considering the future food requirements of consumers to ensure that food trends, their interests and concerns are properly understood and protected by FSS (such as population growth, climate change, ageing population, and food behaviors);
- Publish an annual science, evidence and information plan which will provide an updated list of our current research and surveillance projects, specify our datasets and analysis that are publically available and include a section identifying gaps in our knowledge base where we will look to identify potential future work which may need to be undertaken.

Enhancing and communicating our science, evidence and Information

To enhance our SEI we will maintain and develop our scientific capabilities, develop our UK and international strategic science partnerships and communicate our SEI effectively with impact.

Our people and Skills

The nature of food supply and emerging and re-emerging food risks are constantly changing. FSS must continually assess our staff capabilities and capacity to ensure that we can meet current and future challenges related to our strategic outcomes. We will ensure that we have, or have access to, highly skilled scientific staff across a range of

disciplines. We will also foster an environment for interdisciplinary team working across FSS.

We will:

Ensure we can effectively communicate the implications of the relevant SEI to staff, to stakeholders and to consumers by;

- Providing regular seminars for staff and stakeholders on our science and its application for consumers;
- Ensuring staff include a communication plan including an equality impact assessment at the onset of any project where SEI are gathered or used;
- Developing the skills of all FSS staff to enable clear communication of the SEI on which we base our decisions and policies.

Maintain and develop the science capabilities within FSS by;

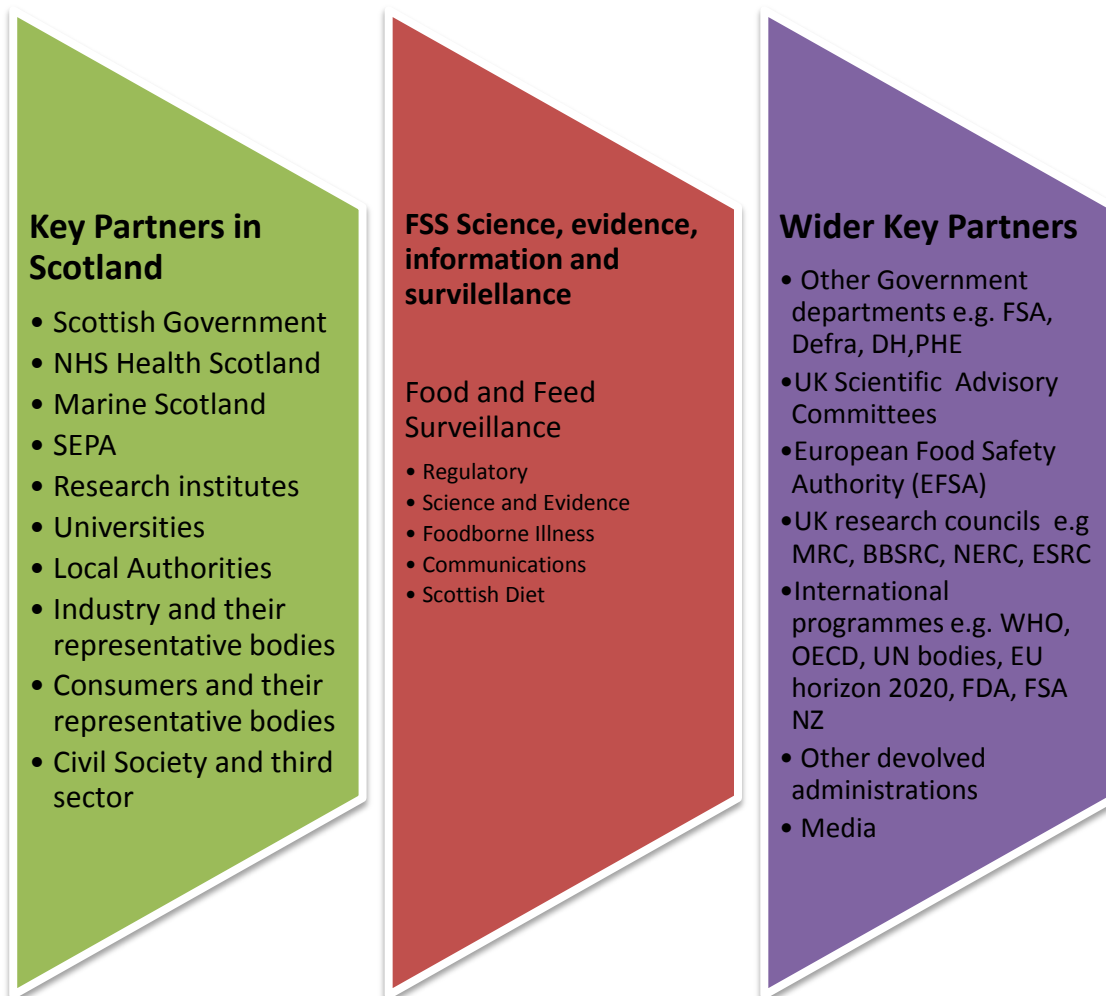
- Providing opportunities for staff development and training, conducting regular skills audits to ensure the scientific expertise is in place to face future challenges (including emerging risks, uncertainties and incidents);
- Being receptive to new science based technologies, innovative approaches and transformational methods of information gathering and analysis;
- Using our skills to make information easy to use and analyse;
- Using our skills, and where appropriate partnership working, to turn data into answers;
- Being well informed, skilled and professional in our approach.

Working with others

We will work with others to increase value, rather than working alone, to achieve the best outcome for Scottish consumers and deliver ambitious objectives and cross-cutting impact through strategic partnerships.

We will

- Work with others to build the capabilities of the science community in Scotland (e.g. research institutes, universities, industry etc.);
- Work across the UK and elsewhere so that expertise, skills and knowledge in our areas of interest will be available now and in the future;
- Utilise a variety of communication techniques (e.g. blogs, twitter, wider media, public talks/education/science fairs etc.) to increase engagement and communication with consumers, the science community, industry and stakeholders;
- Build increased analytical expertise in Scotland, through partnership working, (e.g. with Marine Scotland and SEPA) to add value;
- Understand and work with consumers, food businesses, enforcement partners and others in the food chain to support behaviour change and build on spreading good practice;
- Build and maintain strategic scientific partnerships and networks, through existing collaborations (e.g. with the FSA and other partners across Scottish and UK Governments), through new scientific collaborations and, where possible, with food agencies across Europe and elsewhere in the world and with other science funders to add value to what we do.



Our Science, Evidence and Information landscape

Governance of our Science, Evidence and Information

Our **science and evidence and information governance statement** will help to ensure that our staff are transparent in how we deal with uncertainty in our SEI and will support our risk management framework. Our corporate plan provides our values, principles and key enablers which are linked to our SEI values.

Our **science and evidence checklist** will help us, at the beginning of any new work or project, to consider the appropriate use of the SEI that we plan to collect for example what will it achieve and how will it be communicated- through the development of a communication plan and subsequent policy papers, guidance and proposals which deal with or include science-based issues.

Summary of our science, evidence and information governance statement

Our Science and Evidence Governance	How we will do it	
We will be open and transparent in identifying issues and defining our needs	We identify the evidence we need through the expertise of our staff and input from relevant Scientific Advisory Committees, other experts and stakeholders, through regular dialogue, attending workshops/meetings, and peer review of our research ideas and requirements.	We prioritise our evidence needs annually and publish a forward evidence plan setting out the work we plan to commission and inviting comments on existing data that may exist and can address the identified needs, opportunities for collaboration, and whether we have defined our evidence needs in the best way.
We will use quality assurance in commissioning and gathering science, evidence and information	The guidelines within the <i>Scottish Government Public Sector Procurement in Scotland</i> set out the guidelines that govern our purchasing of goods and services including science, evidence and information. We will procure our science, evidence and information, wherever appropriate and as determined by the financial cost of the project, through open competition.	We will ensure and evaluate the quality of our commissioned science and evidence through appropriate quality assurance (including accreditation of methods). We require all scientific research we fund to comply with the <i>Joint Code of Practice for Research</i> which sets out standards for the quality of science and the quality of research processes that contractors use.
We will ensure evaluation of our science, evidence and information	An evaluation plan for commissioned science, evidence and information will be built in and agreed at the onset of the commissioning process.	We ensure the quality, fitness-for – purpose and impact of the work we commission by peer review of research proposals, final reports and outputs.
We will welcome and seek challenge	We will ensure that our science, evidence, information and analysis is informed by input, scrutiny, challenge by experts and other stakeholders through direct liaison and appropriate consultation.	We will invite comments, annually, on our forward science, evidence and information needs.
Publication and Use of our science and evidence	We will ensure that we publish current details of the science, evidence and information that we are funding.	Wherever possible we will publish, all reports and results on our website at www.food.scot and encourage publication in open access academic journals, as open data, or in data archives.

Science, Evidence and Information informs Risk Management

Our risk management framework⁷ requires science, evidence and information at all stages. The international CODEX principles for risk assessment set the working principles and definitions for risk analysis for food safety for application by Governments which are followed by FSS⁸.

Pre-assessment requires information from surveillance (scientific, intelligence, and/or observational) and from consumers to inform FSS on what the current issues are or will be in the future.

Risk assessment in known and emerging circumstances will generally be science and evidence based and informed by experts in the UK by relevant Science Advisory Committees (e.g. the Advisory Committee on the Microbiological safety of Food and the Scientific Advisory Committee in Nutrition), in Europe by the European Food Safety Authority (EFSA) and internationally by organisations such as the American Food and Drug Administration (FDA).

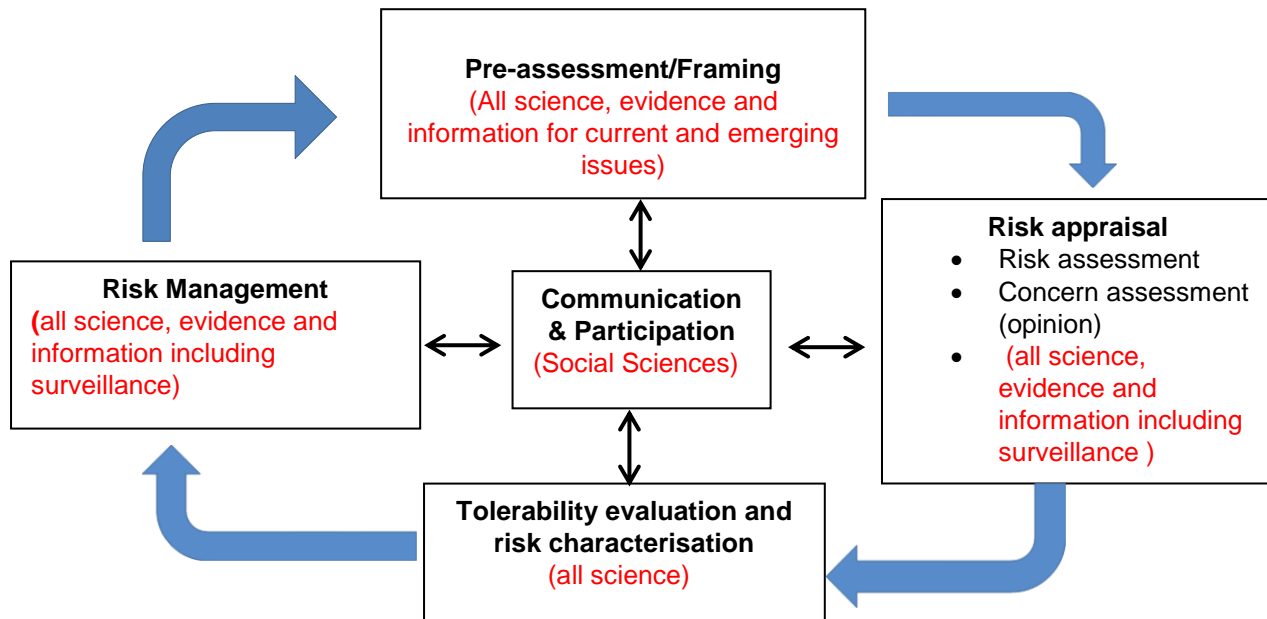
Concern assessment requires the use of social science, to identify the concerns of consumers, stakeholders and the economic and social impacts of the risk.

Risk characterisation and tolerability evaluation is informed by the risk appraisal process, using all available science (including social opinion) but does not acquire new scientific or other information.

Risk Management requires a generated risk assessment and consideration of a combination of other information such as surveillance/observational/intelligence data, stakeholder and business opinion(s), social, economic, political and feasibility aspects to inform the management option(s). For FSS, this includes monitoring and review of option(s) put in place which may require regular review and additional science, evidence and information.

Communication and participation using science, evidence and information to maximise opportunity and target information and opinions throughout the risk analysis process (particularly on hazards and risks, risk-related factors and risk perceptions). FSS must communicate clearly the science, evidence and information related to risk assessment findings and the basis of our risk management decisions within FSS (amongst our risk assessors and managers) and externally (to consumers, food and feed businesses and a variety of other stakeholders).

⁸ <http://www.codexalimentarius.org>



Outlining the roles of science, evidence and information in the risk governance framework.