



EFSA@10 | THE SCIENCE THAT IS HELPING TO KEEP EUROPE'S FOOD SAFE



Committed since 2002 to ensuring that Europe's food is safe

FOREWORDS

Science and co-operation – the keys to consumer safety and trust



It is difficult to capture concisely the progress over a decade of an organisation with such a broad remit as the European Food Safety Authority. That is why this brochure largely focuses on a number of key areas that demonstrate the impact of the organisation since its inception in 2002. These include crucial public health and consumer protection issues such as the control of *Salmonella* in the food chain and the safety evaluation of food additives as well as the protection of the environment through, for example, the risk assessment and post-market environmental monitoring of GM plants.

EFSA is but one part, albeit a crucial one, of an institutional food safety framework in Europe that was ushered in by the sweeping

changes introduced by Regulation 178/2002. It places science firmly at the centre of food policy-making and gives the Authority the challenging remit of building public trust in European food for which EFSA's remit in risk communication is crucial.

While the European Union has changed significantly since EFSA first opened its doors in Brussels in 2002, the founding principles of the organisation remain constant: scientific excellence, independence, openness, and transparency.

The growth curve of the organisation has been steep and the increase in resources available to it has been matched by the acceleration in the volume of scientific advice the Authority has issued since inception, rising from 174 scientific outputs in 2006 to 658 in 2011. But volume is only one aspect of EFSA's workload: the growing complexity of risk assessments – due to new technologies and the globalisation of the food supply chain, among others – requires new methodologies, more multidisciplinary approaches and the increased engagement of stakeholders.

Furthermore, there is increasing demand on the organisation for the evaluation of applications related to commercial products and claims, important in supporting innovation in the agri-food sector and in realising the vision of the Commission's Europe 2020 Strategy.

All of these factors are taken into consideration in EFSA's Science Strategy 2012-2016 which lays down our vision of how we will continue to support European food safety in the years ahead. The strategy analyses the experience gained in EFSA's first decade and anticipates the future challenges to enable us to plan our resources and prioritise our future work programmes.

None of the activities included here would be possible without the cooperation of the Member States, national food safety agencies, European institutions, stakeholder bodies, scientific organisations and, last but not least, the many experts who contribute to our work every year. We thank them for this essential cooperation as we look forward to another decade of progress in protecting European consumers.

Catherine Geslain-Lanéelle —
Executive Director, EFSA



The fruits of 10 years of the EU food safety system



In its White Paper of January 2000, following the BSE crisis, the European Commission identified a wide range of measures that were needed to overhaul the European Union food safety system. It included the setting up of an independent European Food Safety Authority. The Commission's objective was that the new Authority would become an EU-wide point of reference providing risk assessment for EU legislation. The Food Law (Regulation (EC) No 178/2002) was adopted in January 2002, and EFSA duly commenced its activities in May 2002.

The Founding Regulation gave EFSA the building blocks: scientific excellence, independence, transparency and openness. These essential operating principles are enshrined in the various policies and procedures that EFSA has progressively put in place and implemented: the 2011 *Policy on Scientific Independence* is but the latest example.

EFSA has made a significant contribution to the progress in dealing with crucial food safety areas such as the reduction in *Salmonella*, limitation of exposure to food contaminants, evaluation of pesticides and setting up of safe levels for their residues, or evaluation of food and feed additives. Its work also ensures that European consumers can have confidence that the claims on their food labels have a sound scientific basis.

After 10 years, Europe can clearly see the fruits of its investment. The Union has continued to experience the highest level of food safety and the effective containment of food related incidents over the past decade, both in terms of public health and economic impact. Cooperation on food safety issues has increased, and networks are now in place across Europe to share information, rapidly if needed, and to respond to any kind of emergency.


EFSA has achieved much over the last decade but on the occasion of its 10th anniversary, we need not only to look back over past achievements but also look to future challenges. EFSA as a forward looking organisation is, through its strategic documents, planning for the future. Whilst it is not possible to predict the future issues that EFSA will have to deal with, the drivers are becoming increasingly clear. We have confidence that EFSA will continue to respond to such challenges through its ability to anticipate future developments and be in the forefront of implementing novel and advanced risk assessment approaches to ensure both a high level of consumer safety and economic development.

The ultimate measure of the efficacy of the European food safety system is on the plates of European citizens. EFSA is our trusted partner in this respect - an essential element in the equation that leads to the highest possible food safety standards for all in the EU.

Paola Testori Coggi —
 Director General of the Directorate-
 General for Health and Consumers of
 the European Commission



PROTECT10N



*"About 75%
of the new
diseases that
have affected
humans over
the past 10
years have
originated
from animals
or products of
animal origin"*

Protecting Europe's 500m citizens

Europeans enjoy one of the highest levels of food safety in the world. Securing safe, healthy food for a community that now numbers nearly 500 million citizens has been achieved through the continued commitment and innovation of the EU institutions and its independent agencies.

Over the past 10 years EFSA has underpinned the EU's decisions on food safety through its extensive scientific work – grounded in the most up-to-date knowledge and data – in food and feed safety, nutrition, animal health and welfare, plant protection and plant health.

When EFSA was set up, Europe had endured a series of food-related health crises that had undermined consumer confidence in the food production and distribution system. The most dramatic of these was the BSE emergency but there had also been scares concerning *Salmonella*, dioxins and cancer-causing compounds in animal feed, botulism in tinned food, growth hormones in baby food, and the emergence of a virulent new type of *E. coli*, O157:H7.

In addition to these episodes, consumers were becoming increasingly aware of possible safety issues surrounding modern techniques for processing and packaging foods; the addition of new ingredients to foods; the use in labels and advertising of scientifically unsubstantiated claims about the health benefits of food products; and the widespread use of pesticides and other chemicals in food production.

EFSA's scientific remit covers the full range of consumers' "farm to fork" concerns and the work of its experts has been at the core of the EU's success in tackling many of these issues.

For example:

- The number of cases of BSE in cattle reported across the EU dropped from several thousands in the early 2000s to 44 in 2010. In the UK, where the BSE epidemic reached a peak, the incidence of the human variant CJD (vCJD), has declined from 28 deaths in 2000 to about one diagnosis per year. EFSA's risk assessment and monitoring work has been a continual, strong thread in this story.
- The number of cases of *Salmonella* reported in the EU fell by 50 per cent in five years (see case study). This spectacular fall was achieved largely through an integrated effort involving EFSA and other EU agencies such as the European Centre for Disease Prevention and Control (ECDC) as well as risk managers in Member States and the European Commission.

Research indicates that between one third and one half of all human infectious diseases have a zoonotic origin, that is, are transmitted from animals. About 75% of the new diseases that have affected humans over the past 10 years have originated from animals or products of animal origin. As well as addressing specific diseases such as BSE and *Salmonella*, EFSA monitors and analyses the general situation on zoonoses, zoonotic micro-organisms, antimicrobial resistance and food-borne outbreaks. The data, published in annual reports, supports risk



management decisions taken by Member States and the European Commission.

EFSA has also played a major role in EU rapid responses to food-related emergencies such as the contamination of pork by dioxins in Ireland in 2008 and the *E. coli* outbreaks in Germany and France in 2011.

One area in which EFSA's work has changed significantly over the past 10 years is with respect to the evaluation of regulated products such as food additives, GMOs, pesticides and health claims. This work accounts for more than 60% of EFSA's scientific outputs, and the resources committed to this area doubled between 2008 and 2010, from 20% to 40%.

More than 3,000 health claims had been evaluated by the end of 2011, thus protecting European consumers from misleading labelling and advertising of food products. The Annual Report on Pesticide Residues, which EFSA compiles for the EU, gives an increasingly sophisticated overview of the level of compliance with pesticide safety legislation. The most recent report, for 2009, shows that more than 97% of food samples contained safe levels of pesticide residues.

A CASE OF

SALMONELLA

Beating the bacteria

Salmonella – a bacterium causing salmonellosis in humans – was until 2005 the most common food-borne disease in European Union with almost 200,000 reported human cases that year. It is estimated that the overall economic burden of human salmonellosis for the EU could be as high as €3 billion a year.

Salmonellosis is a zoonosis – a disease or infection that can be transmitted directly or indirectly between animals and humans. The bacterium is commonly found in the intestines of healthy birds and mammals. It can spread to humans through contaminated eggs and meat, most often poultry and pig meat. Usual symptoms include fever, diarrhoea and abdominal cramps.

To combat human salmonellosis it is important to reduce *Salmonella* in animals and derived products so that food is safer for consumers. In 2003, the EU set up comprehensive control measures for zoonoses, considering *Salmonella* as a priority. Enhanced *Salmonella* programmes in poultry were implemented in all EU Member States and targets were set for reducing the bacteria in poultry flocks (laying hens, broilers and turkeys).

To support the reduction of *Salmonella* in the food chain, EFSA has advised on

the risks for public health from infected animals and provided recommendations and advice on control and reduction measures, such as reduction targets in poultry and poultry meat and the use of vaccines and antimicrobials for the control of *Salmonella*. EFSA has also evaluated the impact of different control measures for *Salmonella* in pigs.

EFSA has assisted decision-makers by analysing the results of EU-wide baseline surveys on the prevalence of *Salmonella* in food and food-producing animals, including evaluating the risk factors that contribute to its prevalence in animal populations and food. In addition, the occurrence of *Salmonella* in humans, animals and food is monitored and analysed in EU Summary Reports prepared by EFSA and the European Centre for Disease Prevention and Control each year to provide up-to-date information on the current situation in Europe.

The coordinated approach by all EU actors has had significant results: human *Salmonella* cases have been reduced by almost 50% in the EU over five years (2004-2009). At the same time, the prevalence of *Salmonella* in poultry decreased significantly, especially in laying hen flocks. The reduction of the bacteria in laying hen flocks is likely to be the main reason for the decline of *Salmonella* cases in humans, since eggs are considered the most important source of human infections in the EU.

EFSA and the European Centre for Disease Prevention and Control continue to analyse the data collected from the Member States on a yearly basis to further monitor the situation and the progress made in meeting reduction targets set for *Salmonella* in various animal populations.



A CASE OF

E. COLI

Rapid response in a crisis

Between the beginning of May and the end of July 2011, there was an outbreak of Shiga-toxin producing Escherichia coli (STEC) in Germany. On 24 June 2011, the French authorities also reported an outbreak in the region of Bordeaux.

Across the EU more than 3,100 cases of bloody diarrhoea and more than 850 of haemolytic uremic syndrome (HUS), a serious condition that can lead to kidney failure, were reported during the two outbreaks; there were 53 confirmed deaths. The outbreak in Germany was the country's biggest food-borne bacterial outbreak for 60 years. Initially the outbreak of *E. coli* O104:H4, a rare strain, was linked through epidemiological investigations to the consumption of fresh salad vegetables. Further investigations identified seed sprouts as the most probable source.

EFSA liaised with German risk managers and assessors, the European Commission, and the European Centre for Disease Prevention and Control (ECDC). The Authority issued a joint

statement with ECDC that provided information on STEC infection and transmission modes and advice on how to avoid infection.

EFSA sent senior scientific staff to Germany to provide assistance on data collection and epidemiological analysis. The exchange of information between Member States was facilitated by EFSA through its Advisory Forum and network of Focal Points.

On 6 June, the European Commission asked EFSA to provide scientific assistance and advice on the outbreak. EFSA implemented its established urgent response procedures and published a fast-track risk assessment on the risks to public health from the consumption of raw vegetables.

It also provided advice on options to mitigate the risks of food contamination and human infection. On the same day, EFSA published a technical report with ECDC on the prevalence of STEC in humans, food and animals.

On 24 June, just over a month after the German outbreak had been first reported, the French authorities reported a cluster of cases of patients suffering from bloody diarrhoea. Bacteriological tests identified the probable cause as *E. coli* O104:H4 – the same rare strain that was responsible for the outbreak in Germany.

EFSA's response was two-fold. It jointly prepared with ECDC a rapid risk assessment of the two outbreaks which concluded that fenugreek sprouts were the most likely connection; and, in response to an urgent request from the Commission, it set up a Task Force to trace back the implicated seeds through the EU supply and distribution chain.

The Task Force, which included specialists from Member States and the Commission, and scientists from ECDC, the World Health Organization (WHO) and the Food and Agriculture Organization (FAO), delivered its report on 5 July, concluding that one lot of fenugreek seeds imported from Egypt and used to produce sprouts was the likely link between the two outbreaks.

Based on the Task Force findings, EFSA recommended to the Commission that all efforts be made to prevent further consumer exposure to the suspect seeds and that forward-tracing be carried out in all countries which may have received seeds from the suspect lots. After the Task Force published its report, the EU was able to take immediate measures to protect European consumers.



A CASE OF

FOOD ADDITIVES

Red light to suspect food colours

All food additives used in the EU – such as colours, preservatives or flavourings – have been assessed for safety by EFSA and/or its predecessor, the Scientific Committee on Food, and are included on the official EU list of approved food additives only if they are considered safe for human health. In addition, whenever necessary, previous safety assessments have been reviewed and updated to take into account new scientific information pointing at a possible concern for health.

To bring this process up to date, the European Commission asked EFSA in 2010 to re-evaluate the safety of all previously authorised food additives by 2020, taking into account the latest science. Based on EFSA's scientific advice, the European Commission and Member States may decide together to change the uses of additives or if needed to remove them from the EU list of authorised food additives in order to protect consumers.

Food colours are being re-evaluated first as they were among the first additives to be authorised for use in the EU. Many sweeteners, in contrast, were approved more recently and are scheduled for review after 2015. EFSA, together with the European Commission, can also choose to re-prioritise a food additive in light of new information; for example, the deadline for the artificial sweetener aspartame was brought forward from 2018 to 2012 due to concerns raised regarding recent studies.

EFSA's ability to re-evaluate the safety of a food additive depends greatly on the availability of scientific data. EFSA has already launched more than ten calls for data covering entire groups or classes of food additives and/or specific to one or a small number of related food additives. Through careful planning EFSA screens and organises the scientifically relevant data in advance of their consideration by EFSA's experts.

As of 2012, EFSA has completed the re-evaluation of most food colours and adopted its first non-food colour re-evaluation in 2011: an antioxidant called butylated hydroxyanisole or BHA (E 320). The Authority has made headway in collecting data for the remaining colours as well as for many preservatives, antioxidants, waxes, emulsifiers and gelling agents. However, EFSA is sometimes required to issue further calls for data due to a lack of sufficient information being available.

Among the food additives re-evaluated, EFSA decreased the acceptable daily intake (ADI) for several food colours, since it considered in light of new information that human exposure to these colours is likely to be higher than originally assessed. As a result, in March 2012, the European Commission lowered the maximum levels of three of these colours (E 104, E 110, E 124) that can be used in food. The new rules take effect from 1 June 2013.

Another significant impact from this work was the withdrawal of the colour Red 2G (E 128) from the market in 2007. New scientific evidence made available at that time indicated that use of this food additive could be a safety concern: as well being carcinogenic, Red 2G could also cause damage to the genetic material of human cells. EU decision-makers agreed with EFSA's experts that this food additive could not be regarded as safe for humans and it was subsequently suspended from use in the EU.



A CASE OF

PESTICIDES

Actively reducing risk

Plant protection products are a reality of modern times, given the quantity of food that we need to produce. They are used primarily to protect crops from infestation by pests and diseases, which can severely reduce harvest yields, usually working by killing insects, weeds and fungi. However, the chemicals in pesticides could have serious undesirable effects if they are not strictly regulated.

In the EU no plant protection products can be used unless it has been scientifically established that they have no harmful effects on consumers, workers or bystanders; they do not damage the environment; and they are sufficiently effective.

Crucially, the level of residues found in food must be safe for consumers and must be as low as possible. In the EU this safety threshold is maintained through a system of maximum residue levels (MRLs), which is underpinned by EFSA's scientific evaluations.

Since 2003, EFSA has been responsible for the EU peer review of active substances used in plant protection products. An active substance is the essential chemical component that enables a pesticide to protect a plant.

This task is carried out by EFSA's Pesticides Unit following procedures set out in EU legislation and the latest scientific standards and methods. By December 2008 EFSA's work had enabled the Commission to conclude the review

process for all existing substances – those that were on the market in the EU in 1993 – and draw up a list of those that may be included in plant protection products. EFSA then embarked upon the peer review of “new” active substances (those placed on the market after 1993), for which the Commission had requested advice on the risk assessment.

The review has led to the removal from the market of pesticides which cannot be used safely. Of about 1,000 active substances on the market in at least one Member State before 1993, 26%, corresponding to about 250 substances, passed the harmonised safety assessment. The majority (67%) were removed from the market because dossiers were either not submitted, incomplete or withdrawn by industry. About 70 substances failed the review.

EFSA has also been central to the harmonisation of MRLs across the EU. Legislation that became effective in 2008 repealed the previous fragmentary legislation and replaced all national MRLs with harmonised MRLs across the EU.

To enforce compliance with MRLs, Member States have to carry out official controls on pesticide residues. The results of the controls are reported to the Commission, other Member States and EFSA.

Every year, EFSA publishes an Annual Report on Pesticide Residues in the EU based on the monitoring information received from the EU Member States as well as Iceland and Norway. The EU MRL monitoring programmes are one of the most comprehensive food surveys in the world, covering more than 60,000 food samples which are analysed for up to 800 pesticides. The report also assesses the exposure of European consumers to pesticide residues through their diets.

The 2009 report shows that compliance rates continue to rise, with 97.4% of the samples analysed falling within the permitted MRLs, a rise of about one percentage point since 2008.



A CASE OF

ANIMAL HEALTH AND WELFARE

Driving animal welfare forward: the case of animal transport



In the last 10 years, EFSA has played an important role in improving the welfare of animals in the EU. Led by its Panel on Animal Health and Welfare (AHAW), a group of leading experts with experience in areas such as veterinary sciences and animal behaviour, EFSA provides scientific advice on the welfare of farm animals, including pigs, fish, broiler chickens and dairy cows. It examines a wide range of issues affecting the welfare of each animal species, such as housing and husbandry systems, nutrition and feeding, transport and stunning and killing methods.

The work on the welfare of animals during transport is one example of the important contribution the AHAW Panel has made over the last 10 years. In 2004, the Panel published two scientific opinions on the welfare of transported animals. The first outlined general principles related to all animal species as well as detailed conclusions and recommendations on the transport of individual species. The second looked at factors that affect the micro-climate of animal road transport vehicles, such as temperature and humidity of the air, air velocity or air quality. These factors are known to significantly influence welfare and health of animals if they are not kept within an appropriate range. The advice from both opinions had a direct impact on related EU legislation that came into force in the following year.

More recently, following a 2010 request from the European Commission for

scientific advice, the Panel collected the latest scientific information in relation to welfare risks for transported animals and presented its findings and recommendations in a new scientific opinion. EFSA also organised a technical meeting to exchange views with relevant stakeholders, including transporters, livestock breeders and animal welfare NGOs. This exchange of information proved invaluable to the Panel as it helped to improve its understanding of stakeholder concerns and ensure that its advice and recommendations reflected current operating practices.

Importantly, the opinion also evaluated animal-based welfare indicators and their possible use as an alternative to the assessment requirements set out in the current legislation. Most of the current legislation on the protection of animals focuses on the assessment of factors that impact on welfare rather

than on the animal's response to these factors. In the case of animal transport, such factors might include the length of the journey or the number of times the animal is allowed to rest or take water. An approach using animal-based measures, on the other hand, focuses on the response of the animal to factors in its environment and can be used as an alternative or sometimes complementary approach to assessing the factors themselves. For example, if after inspecting an animal, an inspector believes it is suffering from high body temperature or making abnormal respiratory sounds, he or she could declare the animal unfit for transport.

The rationale for this approach is that animal-based measures aim to directly determine the actual welfare status of the animal and therefore include both the effect of the environment as well as how the animal copes with it. In the last couple of years, EFSA's work in this area has not been confined to animal transport: by the end of 2012, it will have produced a series of scientific opinions on the use of animal-based measures to assess the welfare of the main farm species: dairy cows, cattle, pigs, and broiler chickens.

A CASE OF

TRUST

Trust in the EU food supply chain

The series of food crises in the late 1990s prompted recognition among European public authorities and policy makers that the EU food safety system needed to be recast. The introduction of the General Food Law in 2002 separated the functions of risk assessment and risk management and led to the creation of EFSA. This new approach sought to ensure the highest levels of consumer protection and restore the confidence of consumers and trading partners. Almost 10 years after EFSA published its first scientific opinion, the approach is well established. Today, the advice that the Authority provides to risk managers underpins many of the laws and regulations in place to protect European consumers from food-related risks.

According to a Eurobarometer report on perceptions of food-related risk in 2010, EU citizens have a high level of trust in scientists (73%) and national and European food safety agencies (64%) as sources of information on food risks. There is also broad agreement that public authorities do a lot to ensure that food is safe in Europe, that they are quick to act, base their decisions on scientific evidence and do a good job in informing people about food-related risks. The level of agreement in the 2010 Eurobarometer report is higher than that in a similar survey carried out in 2005. A qualitative research study with EFSA's stakeholders on the image of the Authority carried out in 2010 highlighted the fact that its stakeholders would not want to return to the pre-EFSA food safety system.

Nonetheless, the 2010 Eurobarometer also raised potential areas of concern.

Less than half of EU citizens (47%) think that scientific advice on food-related risks is independent of commercial or political interests. As a risk assessor evaluating the safety of products subject to regulation, for example genetically modified organisms or the active substances found in pesticides, EFSA must pay particular attention to these figures. Indeed, the Authority is acutely aware that public trust in the organisation and its scientific experts is fundamental to the value of the scientific advice that it provides.

An example of EFSA's approach to building trust can be seen in the related actions and decisions it took in 2011. In total, the Authority screened more than 8,000 Declarations of Interest from external experts and staff, scrutinised more than 40,000 agenda items, prevented 356 potential conflicts of interest and initiated

two 'breach of trust' procedures. In the same year, the Authority also adopted a Policy on Independence and Scientific Decision-Making Processes. The new policy, which was subject to a public consultation and discussed at length with stakeholders and interested parties, integrates in one document the wide range of initiatives EFSA has put in place since its creation to foster trust in its work.

Independence and transparency, in particular, are issues that are addressed in depth in this document, for example in proposal to simplify and clarify the rules related to potential conflicts of interest for staff and scientific experts engaged in the Authority's work. It also increases information on how decisions on conflicts of interest are reached, it strengthens procedures concerning breaches of trust and it amends the definition of conflict of interest to better reflect guidelines from the Organisation for Economic Co-operation and Development (OECD).

Over the last 10 years, EFSA has developed and strengthened its approach to building trust and ensuring the highest scientific standards in its work. It goes without saying that the Authority is firmly committed to continuing its efforts in this area over the next 10 years and beyond.



COOPERAT10N



"The Advisory Forum, Focal Points, and dedicated science networks are key vehicles for data and information exchange, consultation, and work-sharing"

Working together, working for Europe's citizens

Scientific cooperation between EFSA and EU Member States is a central pillar of EFSA's Founding Regulation and has therefore been a cornerstone of the Authority's activities since it was set up in 2002. EFSA's relationship with the Member States is critical both from a data collection and information exchange perspective – ensuring that a high calibre of evidence can be applied to risk assessment.



Partners include institutions with whom the Authority has a legal obligation to work, specifically risk managers working within the European Commission, the European Parliament and the Member States, risk assessors, stakeholder groups and individuals or groups who feel they can contribute to the Authority's work. This integrated system, with EFSA at its core, has produced high-profile work such as the EU reports on zoonoses and antimicrobial resistance and, further afield, a harmonised approach to Total Diet Studies, developed with the Food and Agriculture Organization of the United Nations (FAO) and the World Health Organization (WHO).

The Strategy for Cooperation and Networking, adopted in 2006, identified four priority areas:

- exchanging and collecting scientific data and information;
- sharing risk assessment practices;
- contributing to the harmonisation of methodologies for risk assessment;
- promoting coherence in risk communications.

The strategy was reviewed in 2008 and a further "taking stock" exercise was completed in 2010. This process has produced a sophisticated and increasingly valuable system of cooperative endeavour between EFSA and the Member States, including medium-term planning of scientific cooperation activities.

The Advisory Forum, Focal Points, and dedicated science networks are key vehicles for data and information exchange, consultation, and work-sharing between EFSA and Member States. The Advisory Forum connects EFSA with the national food safety authorities of all 27 EU Member States, Iceland and Norway, with observers from Switzerland and the Candidate countries. The Forum advises EFSA on scientific matters, its work programme and priorities, and helps the Authority to address emerging risk issues as early as possible. It acts as a risk assessment "umbrella" for Member States, allowing them to concentrate their energies on national priorities and reducing duplication of effort.

Focal Points act as outreach bodies in the Member States, linking EFSA and the national food safety authorities, research institutes, consumers and other stakeholders, supporting national Advisory Forum members.

EFSA's science networks consist of nationally appointed EU Member State organisations with expertise in the fields covered by the network.

They play an invaluable role in assisting the coordination of activities, the exchange of information (e.g. on recent risk assessment activities or on data collection), the development and implementation of joint projects (e.g. scientific events and workshops), and the exchange of expertise and best practice in

the fields within EFSA's mission.

In addition to these formal ties, the Authority awards grants and issues procurement orders to organisations that have been officially nominated by Member States to help EFSA with tasks such as data collection, preparatory work for scientific outputs, and other forms of technical assistance. EFSA has consistently increased its support to data collection and other scientific cooperation with Member States, allocating in 2012 over €9 million to these activities (an increase of almost €1 million compared to the previous year). Effective pooling of excellence is also supported through EFSA's steadily growing Expert Database, which gives EFSA and Member States access to the best experts available.

EFSA has also developed close links with consumer groups, non-governmental organisations (NGOs) and bodies representing groups such as farmers, food producers and distributors and science professionals. It has built on the requirement in its founding statute to establish "effective contacts with consumer representatives, producer representatives, processors and any other interested parties", most notably with the establishment of its Stakeholder Consultative Platform.

A CASE OF

FOOD CONSUMPTION DATA



Knowing what Europeans eat is essential for protecting consumers

Are intakes of food additives safe for all population groups? Are consumers exposed through their diet to high levels of heavy metals such as cadmium? Which populations groups consume most shellfish? Could these foods include marine biotoxins which may be harmful to health? Does the food we eat provide us with the nutrition we need?

These are some of the many questions that EU risk assessors at EFSA and in Member States address in their work every day. Food consumption habits also differ in EU countries. When a new hazard is found in the food chain scientists must quickly assess who is exposed, through which foods and by how much. Accurate, comprehensive and comparable data on food consumption are crucial to accomplishing this task.

EFSA has made considerable progress in recent years to bring together data on food consumption habits. In 2007, the Authority initiated the collection of data from national dietary surveys in all Member States and its compilation in a new Concise European Food

Consumption Database. This tool provided data on food consumption for adults in EU countries according to broad categories (e.g. milk and dairy-based products) and subcategories (e.g. cheese) and was primarily used for exposure screening (identifying patterns or habits of consumption).

It also served as a starting point for EFSA to develop the Comprehensive European Food Consumption Database which provides more extensive and detailed information for a majority of EU countries in refined food categories and specific population groups, including children. The database enables quick screening and more precise estimates of chronic and acute exposure to substances and possible hazards that may be found in the food chain.

These databases are important tools in EFSA's and other actors risk assessment work. However, EU Member States use different methods to collect food consumption data, which makes it difficult to carry out EU-wide analyses or comparisons between countries.

EFSA has therefore taken steps to harmonise the collection of food consumption data to allow for more comprehensive exposure assessments. The "What's on the Menu in Europe?" (EU Menu) project aims to provide standardised information on what people eat in all countries and regions across the EU. This data will enable even more accurate exposure assessments in Europe and support risk managers in their decision making on food safety.

EFSA continues to extend and update the databases with new data collected by Member States when available. Thanks to this cooperation, food consumption summary statistics for different countries and age groups, previously unavailable at EU-level, are now accessible for use by all food safety and public health experts.

A CASE OF

RISK COMMUNICATIONS

Making it clear, timely and relevant

Communicating on risks associated with the food chain is a key part of EFSA's mandate. By communicating on risks in an open and transparent way based on the advice of its scientific expert panels, EFSA contributes to improving food safety in Europe and to building public confidence in the way risk is assessed.

Fulfilling the Authority's mandate on risk communications and implementing its dedicated communications strategy, presents a number of challenges, not least due to the range and breadth of the audiences with which EFSA communicates. The messages EFSA delivers not only have to be understood by specialist audiences, such as policy-makers, the scientific community and industry but also, on a broader level, to be made relevant to the 500 million consumers of the European Union. It is essential that both these groups have confidence in the decision-making processes underpinning food law, its scientific basis and the structures and independence of the institutions protecting health and other interests.

EFSA cooperates with Member States through its Advisory Forum. The Forum is made up of representatives from each

Member State as well as Iceland and Norway and its members advise the Authority on scientific matters, its work programme and priorities and also address emerging risk issues as early as possible. In addition to scientific risk assessment issues, the Forum also has an important role to play in co-ordinating risk communications and messages. This particular aspect of its work is carried out by the Advisory Forum Communications Working Group (AFCWG), which comprises communications professionals from across Europe with expertise in food-related issues.

Established in 2003, the AFCWG promotes coherence in risk communications and provides a mechanism for exchange of information and experiences between EFSA and the Member States. Members meet regularly to discuss topical or emerging food safety issues. Importantly, it enables EFSA to tailor

its messages to the specific needs of European Member States and regions.

Recently, the network identified the need for a common framework to guide food safety professionals in the area of risk communications. EFSA's AFCWG launched an initiative to develop its own risk communications guidelines. The aim of the guidelines is to provide a framework to assist decision-making about the most appropriate approach to communicating food-related risk. The guidelines have been welcomed by AFCWG members and, as a practical resource and tool, are expected to make an important contribution to the work of European risk communicators.

Another important EFSA network in this area is the Advisory Group on Risk Communications (AGRC). The AGRC is made up of experts in the areas of sociology, consumer science, stakeholder relations, psychology and communications. One of the issues addressed by this group is consumer perception of food and food-related risks. In understanding this more, EFSA is able to tailor communications appropriately to different target audiences to ensure their needs and concerns are met.

To this end, in the last 10 years, EFSA has commissioned two Eurobarometer surveys on risk perception in the EU. The findings of the reports show that most Europeans view national and European food safety agencies as reliable sources of information on possible risks associated with food. The surveys have proved invaluable in guiding and informing EFSA's communications. They underpin the approach we take to communicating on certain issues and the manner in which we seek to engage with our different target audiences.



INNOVAT10N



"EFSA's advice increasingly includes assessment of issues such as environmental impact, occupational health and post-market monitoring"

New tools for the tasks ahead

In the second decade of the 21st century EFSA faces new expectations and demands on its resources which reflect emerging issues such as climate change, the changing demographics of Europe, and the rapid expansion of global trade. The latter development has led to a sharp rise in the range and volume of goods being imported into Europe from emerging markets.

In addition, the EU's 2020 Agenda has re-emphasised the importance of innovation as a means of increasing the competitiveness of Europe. The Commission has also highlighted the need to ensure food security within Europe and internationally, the desirability of environmental, social and economic sustainability, and Europe's obligations to its ageing population.

All of these trends are affecting the nature and volume of EFSA's work and the evolution of its risk assessment methods. EFSA's advice increasingly includes assessment of issues such as environmental impact, occupational health, post-market monitoring, risk comparisons and health benefits.

As outlined in the Strategic Plan 2009-2013 and the Science Strategy 2012-2016, the Authority is increasingly focusing on integrated multi-disciplinary advice in areas such as meat inspection, nutrition and animal welfare. It will continue to ensure it meets the highest standards through the development of state-of-the-art, harmonised methodologies and the collection and analysis of high-quality data.

Major progress has been made during the past decade in developing methodologies, but further harmonisation is required within EFSA, with Member States, with other EU agencies and internationally. EFSA will be at the forefront of this vital work.

A broadening of the scientific discourse can be seen in the work of EFSA on the modernisation of meat inspection, antimicrobial resistance, antimicrobial treatments and feed additives involving several of EFSA's Scientific Panels.

EFSA will also further develop its proactive, integrated approach to identifying and evaluating emerging risks. Greater cooperation at national and international level will be needed to address the risks posed by, for example, increased international trade, global warming, and changes in consumer behaviour.

At an organisational level the Authority will seek to optimise its resources by leveraging its internal scientific expertise and reducing the workload of its external scientific experts related to routine scientific work. The Applications Desk Unit, which is dedicated to handling applications and queries



related to regulated products, should increase efficiency in this growing area of work.

As the organisation enters the next stage of its development it aims to continue protecting Europe's citizens while at the same time providing the science to support a regulatory environment for food producers, processors and distributors that is demanding but predictable. This will foster technological innovation in the economically important agrifood sector and support sustainable growth and development in the Europe of the future.

A CASE OF

MEAT INSPECTION

Making risk a factor in meat inspections

The main purpose of meat inspection is to assure consumers about the safety, sound hygiene and nutritional value of their food. Through checks on the live animal, carcass, offal, abattoirs, equipment, personnel and transport meat inspection can also help to detect and prevent public health hazards such as food-borne pathogens or chemical contaminants in food of animal origin.

Meat inspection also plays an integral part in the overall monitoring of many animal diseases and of compliance with animal welfare standards. Traditional practices in many countries involve sensory checks (by sight, touch and incision) for the presence of gross lesions or flaws such as bruises or broken bones. However, these are not always suitable for detecting food-borne diseases such as campylobacteriosis, salmonellosis and virulent strains of *E.coli*, or contamination by chemical substances such as steroids or veterinary drug residues.

In the light of requests received from Member States, the European Commission

decided that meat inspection practices in the EU should be modernised. Consequently, in May 2010, EFSA was asked for scientific advice on the possible introduction of a risk-based approach to meat inspection, at all relevant stages of the meat production chain.

To fulfil this complex mandate, EFSA is drawing on its expertise in a wide range of fields within its scientific remit (risk assessment and data monitoring of biological hazards, chemical contaminants, animal health and welfare) to deliver scientific opinions and reports for the following six animal species/groups of species: domestic swine, poultry, cattle, domestic sheep and goats, as well as farmed game and domestic solipeds

(single-hoofed animals such as the horse, donkey or ass).

EFSA's role is to: identify and rank public health hazards – biological and chemical – in meat; assess the strengths and weaknesses of the current inspection methodology; recommend methods for spotting hazards not addressed by current meat inspection; and recommend adaptations of methods and/or frequency of inspections based on the hazard rankings and new harmonised epidemiological indicators (which EFSA must also propose). The Authority is also required to consider the implications for animal health and welfare of any proposed changes to current inspection practices.

In October 2011, EFSA made its first major contribution by publishing its scientific opinion on the public health hazards covered by inspection of swine meat, and the accompanying scientific report on harmonised epidemiological indicators for this type of meat inspection.

EFSA's experts concluded that current inspection methods do not enable the early detection of the first three of these hazards and, more broadly, do not differentiate food safety aspects from meat quality aspects, prevention of animal diseases or occupational hazards.

To reduce biological hazards, they recommended the abolition of touch and/or incision techniques in post-mortem inspection of pigs subject to routine slaughter because of the risk of bacterial cross-contamination.

When EFSA and its partners complete this work, risk managers will have the best scientific information and advice possible for establishing a comprehensive meat inspection regime across the EU, potentially bringing far-reaching benefits to consumers.



A CASE OF

ENVIRONMENTAL RISK ASSESSMENT

Protecting humans, protecting the environment

Environmental Risk Assessment (ERA) is a specialised field of science that considers the impact on the environment caused by, for example, the introduction of GM plants, the use of certain substances in food and feed products or the spread of plant pests.

In the case of GM plants, the law requires that GM plant developers carry out an ERA and submit it as part of their application for authorisation on the EU market. EFSA is responsible for evaluating this assessment and makes recommendations to risk managers such as the European Commission (EC) and Member States about the environmental safety of the GM plant in question.

The ERA has to be performed in line with EFSA guidance, which gives GM plant developers clear instructions for this type of assessment. In 2008, the EC asked EFSA to update its guidance to applicants on the ERA of GM plants.

ERA of GM plants is an area which generates significant scientific and political debate, with a wide divergence of opinions among both non-governmental and institutional stakeholders across Europe. Although EFSA has no part to play in the political process concerning the authorisation of GM plants in the EU, in updating its guidance the Authority

sought to ensure that all relevant views from stakeholders and interested parties were considered.

In summer 2009, EFSA held a three-day consultative workshop in Berlin to share its preliminary work on the guidance and to give stakeholders the opportunity to discuss their views and concerns directly with the EFSA GMO Panel. Further stakeholder input was sought towards the end of 2009 during a two-day European conference on “GMO risk assessment for human and animal health and the environment”, where presentations were given by Member State experts, environmental NGOs and industry associations.

The extensive stakeholder feedback gathered through these events was, where scientifically relevant, incorporated by the GMO Panel into its draft ERA guidance document. This was launched for public consultation at the beginning of 2010 and attracted a large number of comments. Key contributors to the consultation were invited by

EFSA to take part in technical meetings, giving the GMO Panel the opportunity to hear again directly from interested parties, including those with differing points of view. Following these technical meetings, the GMO Panel finalised the guidance document which was eventually published in November 2010.

This extensive consultation allowed differing views and opinions to be heard by the GMO Panel and considered in the development of the document. In particular, the series of technical meetings also gave stakeholders and interested parties the opportunity to discuss scientific issues directly with Panel members and to understand more about the possibilities and limitations of the pre-market ERA for GM plants.

The guidance has been complemented by further EFSA guidelines on post-market environmental monitoring (PME). Monitoring is a key feature of the legislative framework on GM plants and, taken together with a rigorous pre-market environmental risk assessment and risk management, forms an important part of the cycle of measures in place to detect and limit possible adverse effects, including those that may occur over a long period of time.

FUTURE DIRECTION

"From its new home and with its new structure EFSA will continue to pursue its risk assessment work to support EU decision-making in key areas for public health"



European Food Safety Authority

Scientific excellence in a changing world

The European Union has changed significantly since EFSA was established in 2002. The number of Member States has risen from 15 to 27 and the EU has become the largest importer and exporter of foodstuffs, especially processed goods, in the world. The admission of 12 new Member States in the first decade of the 21st century increased the total area of the EU to 4.4 million km² and took the population up to around 500 million. At the same time, issues surrounding food production have become ever more complex with the emergence, for example, of new technologies such as “novel foods” and genetically modified organisms.

EFSA has grown and the nature of its work has evolved to reflect this new environment. The number of Scientific Panels has risen from eight to ten and the Scientific Committee plays an increasingly important role in developing and harmonising risk assessment methodologies across the EU. The Authority has also built a sophisticated data-collection capacity and devotes an ever-increasing proportion of its resources to carrying out scientific evaluations of regulated substances, products and claims submitted for market authorisation in the EU.

The Authority marked its 10th anniversary by moving out of its temporary headquarters in Parma to new, purpose-built premises on 5 January 2012. The Authority was fully operational from the first day, and meetings with scientific experts resumed smoothly in the first week of the year.

The new seat is technologically equipped to enhance networking with experts, generate quick response to emerging threats, and guarantee business continuity under all foreseeable conditions, thus reinforcing EFSA's capacity for fulfilling its mission. Remote participation in meetings

will increase cost efficiency, help to strengthen transparency and, importantly, reduce the carbon footprint of EFSA's activities.

EFSA has also carried out a thorough re-organisation programme, to make better use of its resources to reflect an ever increasing workload, strengthen efficiency and provide a higher-quality service to its clients.

From its new home and with its new structure EFSA will continue to pursue its risk assessment work to support EU decision-making in key areas for public health. Central to the Authority's work in the immediate future will be the implementation of the Science Strategy 2012-2016, which highlights how the Authority has grown into its pivotal position within the European food safety system and lays out a vision for further developing EFSA's scientific excellence and strengthening the scientific basis for risk assessment and monitoring across the European Union.

The world has changed since EFSA's inception and EFSA is changing with it. The Authority continues to enjoy the trust of European consumers and stakeholders, trust that reflects the degree to which EFSA has, over the first



10 years of its existence, successfully implemented its core values of scientific excellence, independence, transparency, openness and responsiveness.



