



Towards building a global risk assessment community: a European perspective

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What is EFSA?

European

- The European reference body

Food

- Covers the entire food chain

Safety

- Assess, advise, communicate

Authority

- Independent, trusted, based on sound science

- **EFSA formally set up in January 2002** as an independent source of scientific advice and communication on risks associated with the food chain:

REGULATION (EC) No 178/2002 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 28 January 2002 laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety

- Created as **part of a comprehensive programme** to:
 - improve EU food safety
 - help ensure a high level of consumer protection
 - restore and maintain confidence in the EU food supply

Scientific advice from farm to fork

Plant Health



Plant Protection



Genetically modified organisms



Biological hazards



Animal health and welfare



Animal feed



Chemical contaminants



Food additives

Food packaging



Nutrition



What do we do?

- ◉ **Provide independent scientific advice** and support for EU law/policies on food and feed safety
- ◉ **Provide independent risk communication**
- ◉ **Promote scientific cooperation**
 - ◉ **Networking**
 - ◉ **Monitoring**



Risk assessment: dedicated to scientific excellence

- ❑ > 3300 scientific outputs (> **2330 scientific opinions**)

- 500th opinion - 2007
- 1000th opinion - 2009
- 2000th opinion - 2012

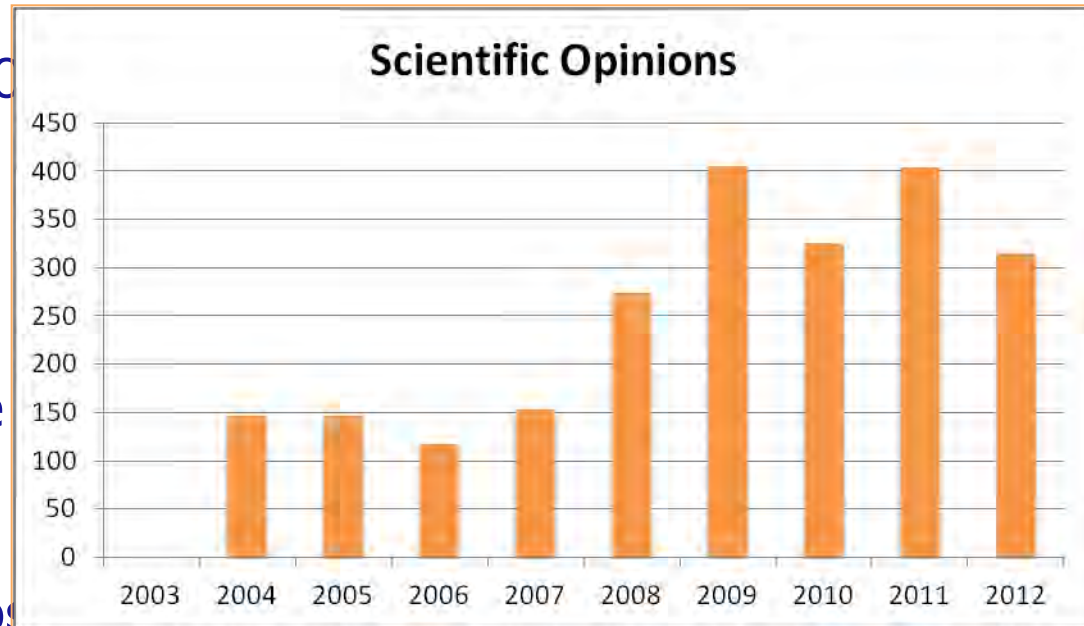
- ❑ **Wide remit:**

food and feed, nutrition,
animal health and welfare
and plant health

- ❑ **Scientific expertise across Europe**

- ❑ **Impartiality of scientific advice**

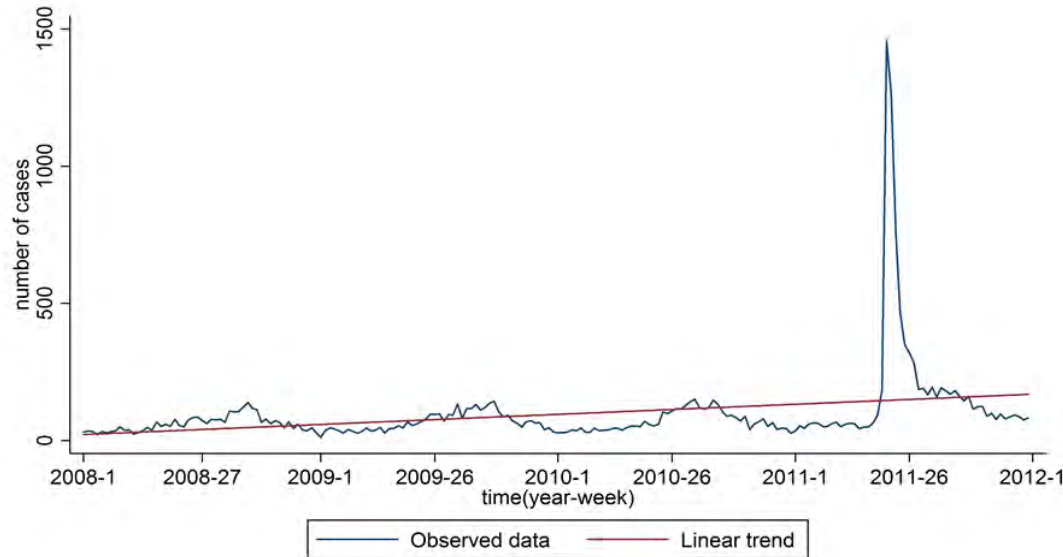
- ❑ **EFSA Journal, Scientific Colloquia, international cooperation...**



Urgent requests received for scientific advice

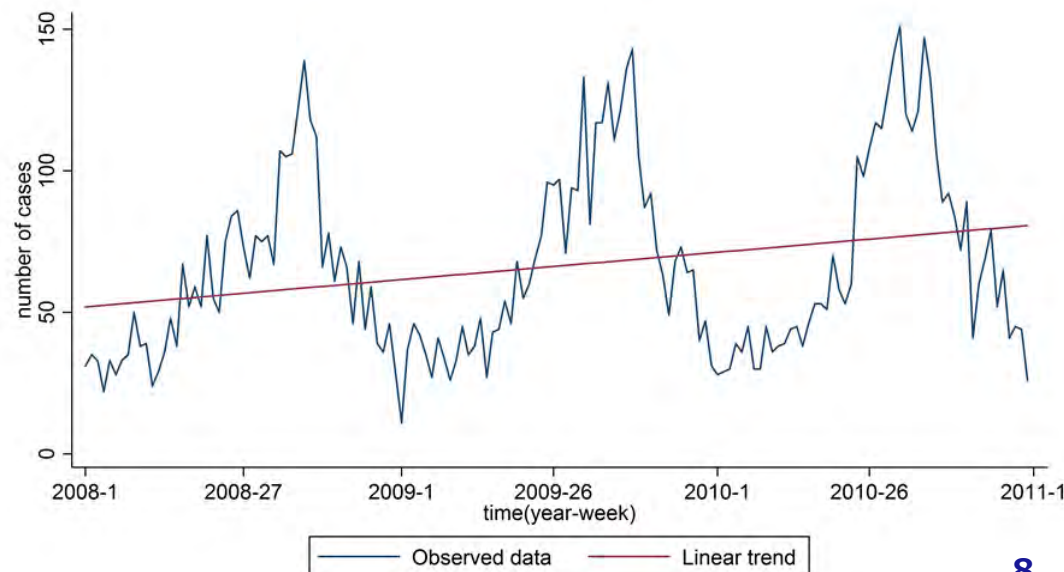
| | Response (days) |
|--|--------------------|
| Melamine in food and feed (2007) | 30 |
| Mineral oil in sunflower oil (2008) | <1 |
| Melamine in infant milk (2008) | 5 |
| Dioxins in pork meat (2008) | 2 |
| 4-methlybenzophenone in breakfast cereals (2009) | 13 |
| Nicotine in wild mushrooms (2009) | 10 |
| Chlormequat in table grapes (2010) | 1 |
| Volcanic ash (2010) | 6 |
| STEC in vegetables (2011) | 3 |
| "Schmallenberg" virus (SBV) (2012) | 10 |

VTEC cases in humans in EU, 2008-2011



There was a statistically significant ($p < 0.001$) **increasing EU trend** of confirmed VTEC cases in 2008–2011, both including (on the left) and excluding (on the right) the 2011 STEC/VTEC outbreak.

Enterohemorrhagic *Escherichia coli* or EHEC are often referred to by their toxin producing capabilities, verocytotoxin producing *E. coli* (VTEC) or Shiga-like toxin producing *E. coli* (STEC).



Human *Salmonella* cases in EU, 2010-2011

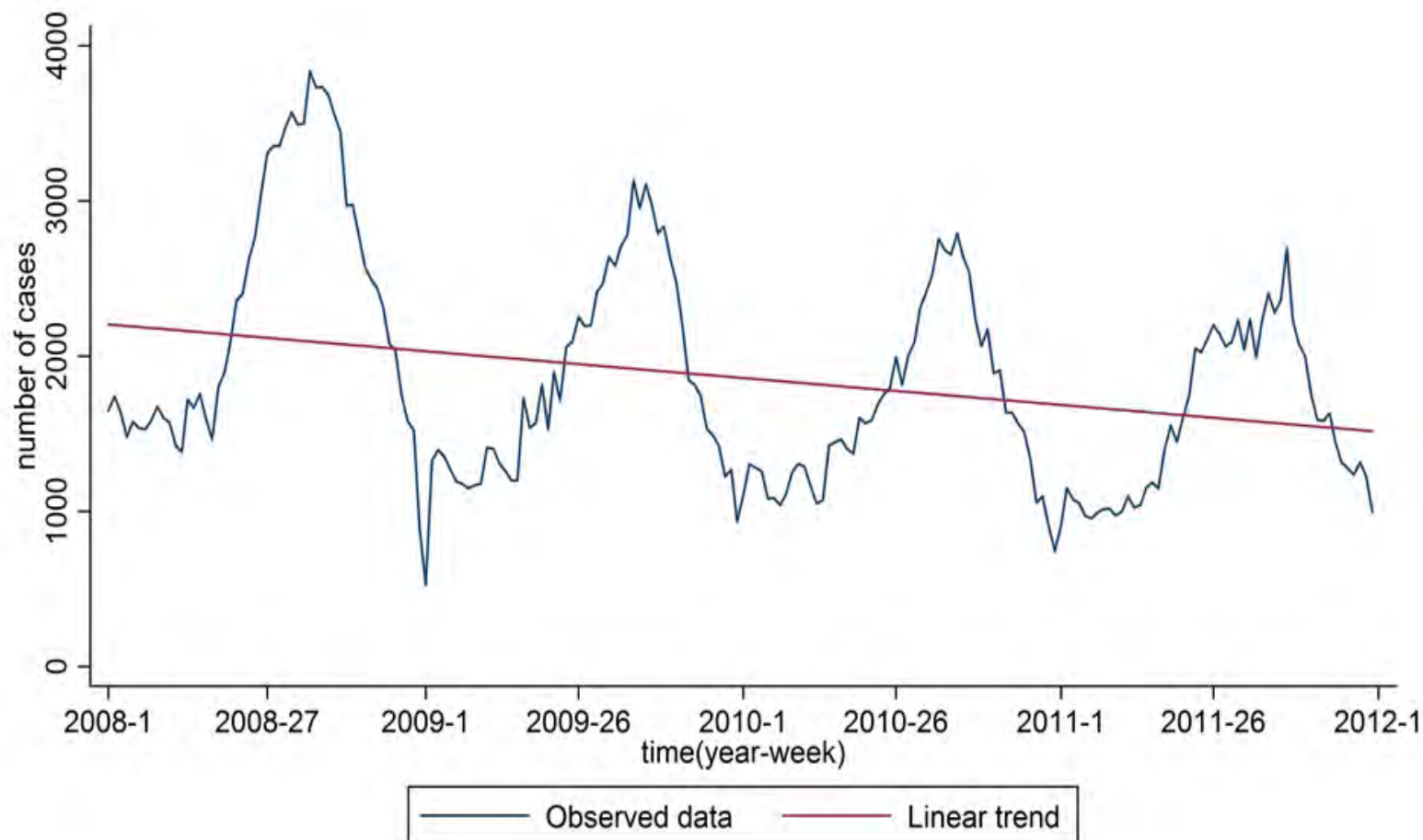
Distribution of reported confirmed cases of human salmonellosis by serovar (ten most frequent serovars) in the EU, 2010–2011

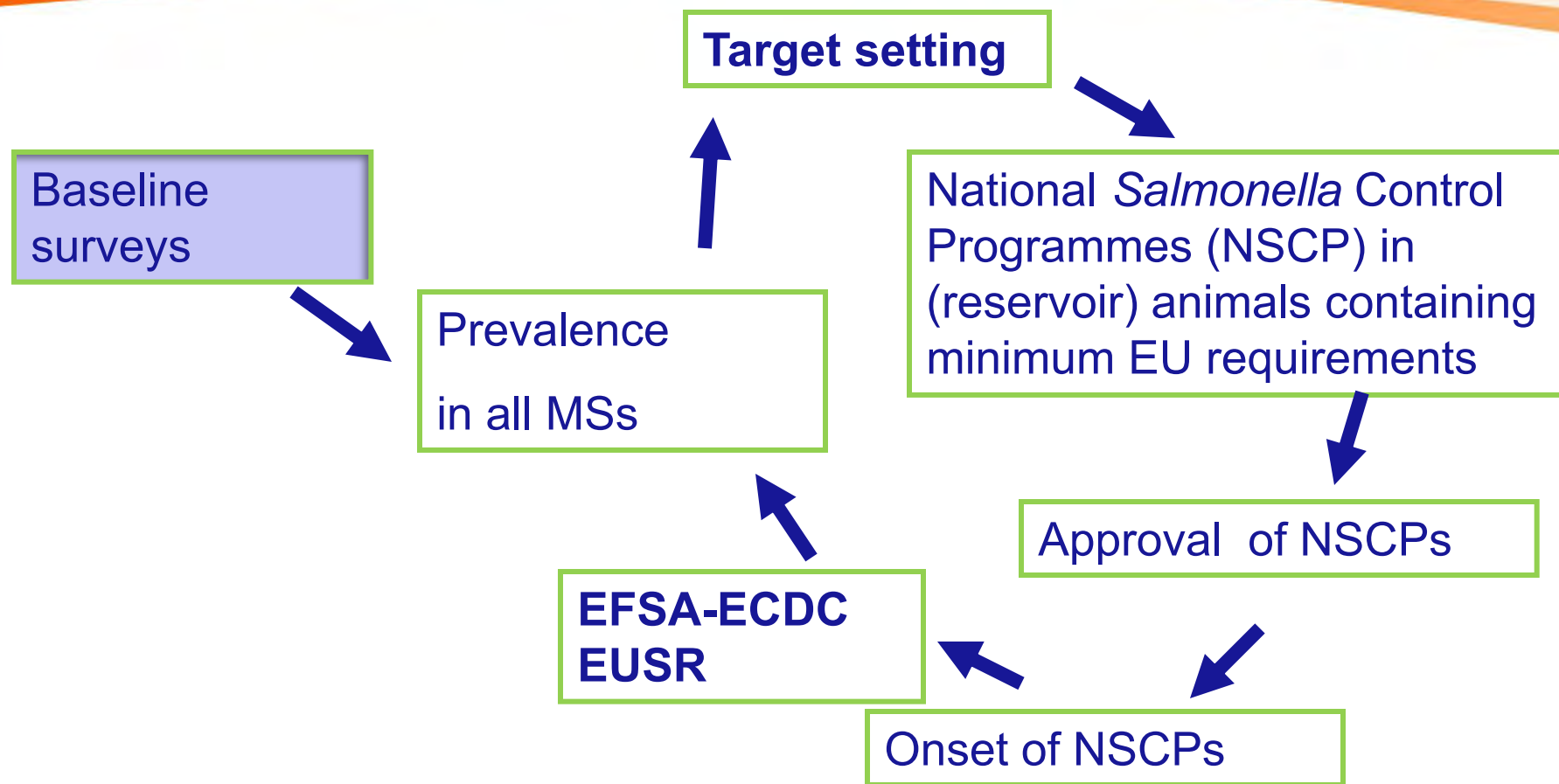
| 2011 | | | 2010 | | |
|---|---------------|------------|---|---------------|------------|
| Serovars | N | % | Serovars | N | % |
| S. Enteritidis | 34,385 | 44.4 | S. Enteritidis | 36,466 | 44.2 |
| S. Typhimurium | 19,250 | 24.9 | S. Typhimurium | 21,223 | 25.7 |
| S. Typhimurium, monophasic 1,4,[5],12:i:- | 3,666 | 4.7 | S. Infantis | 1,793 | 2.2 |
| S. Infantis | 1,676 | 2.2 | S. Typhimurium, monophasic 1,4,[5],12:i:- | 1,426 | 1.7 |
| S. Newport | 771 | 1.0 | S. Newport | 839 | 1.0 |
| S. Derby | 704 | 0.9 | S. Kentucky | 783 | 0.9 |
| S. Kentucky | 559 | 0.7 | S. Virchow | 689 | 0.8 |
| S. Poona | 548 | 0.7 | S. Derby | 665 | 0.8 |
| S. Virchow | 467 | 0.6 | S. Mbandaka | 471 | 0.6 |
| S. Agona | 459 | 0.6 | S. Agona | 445 | 0.5 |
| Other | 14,936 | 19.3 | Other | 17,657 | 21.4 |
| Total | 77,421 | 100 | Total | 82,457 | 100 |

Source: 25 MSs: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, and United Kingdom.

Human *Salmonella* cases in EU, 2008-2011

Significant decreasing trend in human cases



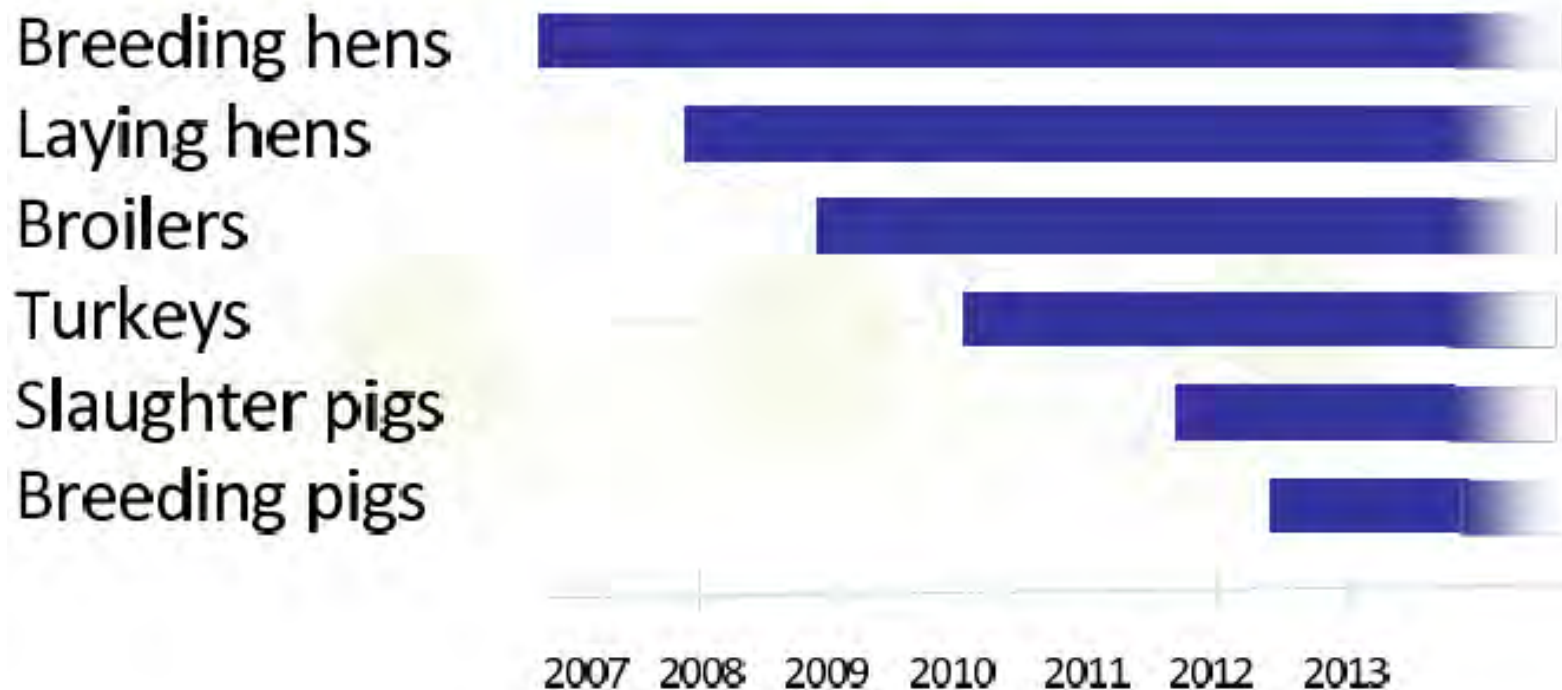


- following-up of trends
- verification of the achievements of the targets
- science-based, informed, prioritized risk managing decisions

EU *Salmonella* targets and harmonized monitoring

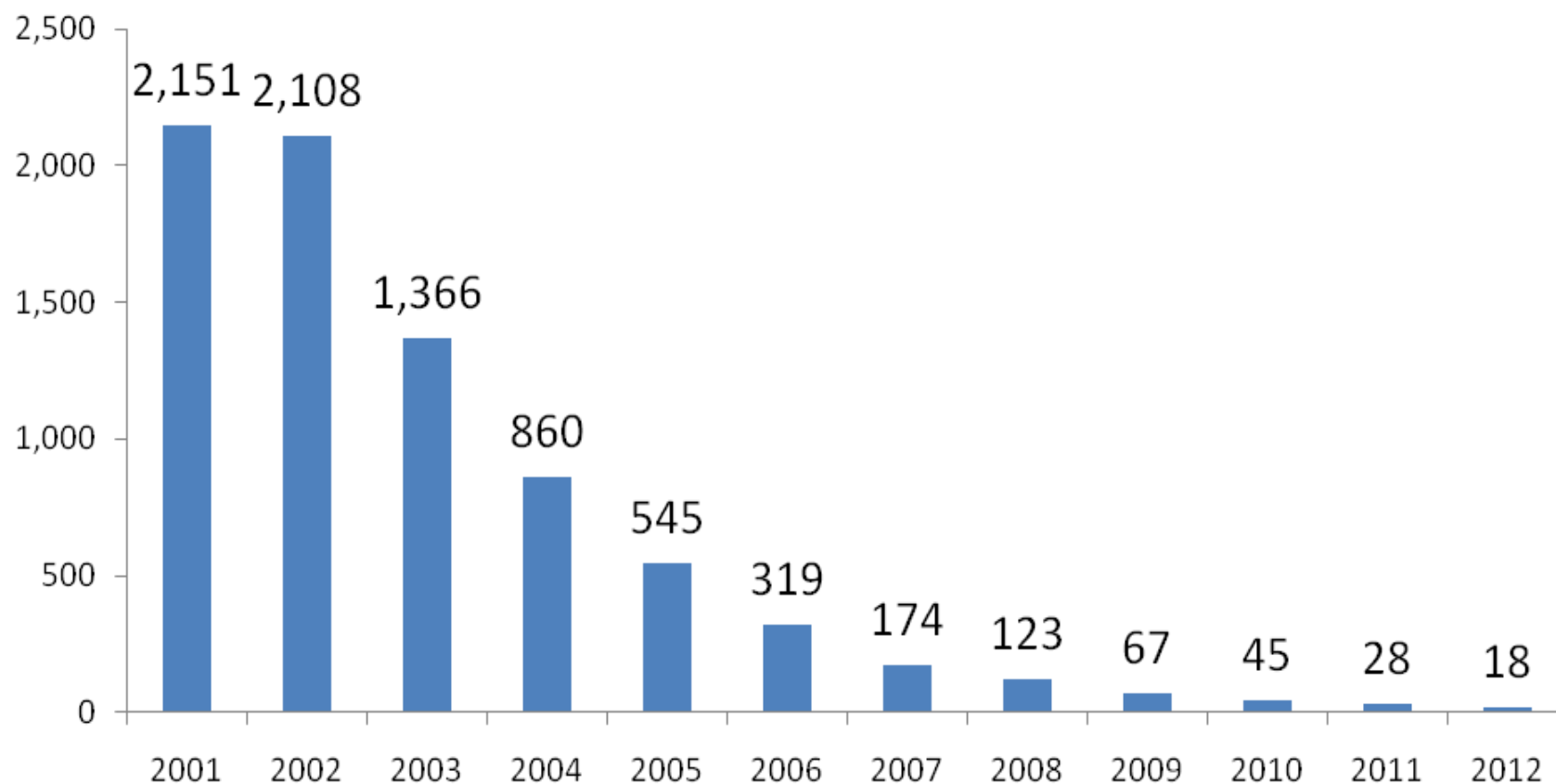


EU Salmonella control programmes



BSE cases: EU 2001 - 2012

BSE Cases per year in the EU

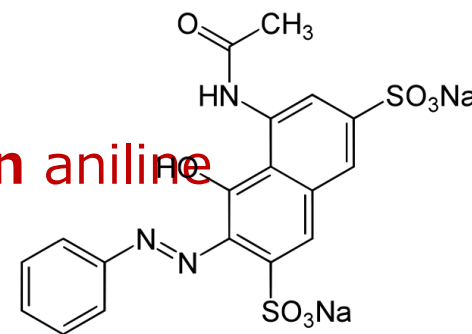


Re-evaluation of colours:

Example of Azo dyes

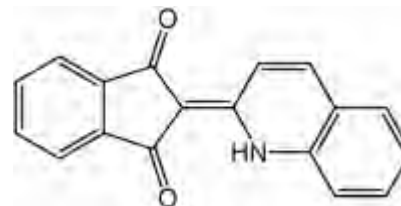
➤ ADI Withdrawal:

- Red 2G (E128)
- Extensively metabolised to the **carcinogen aniline**



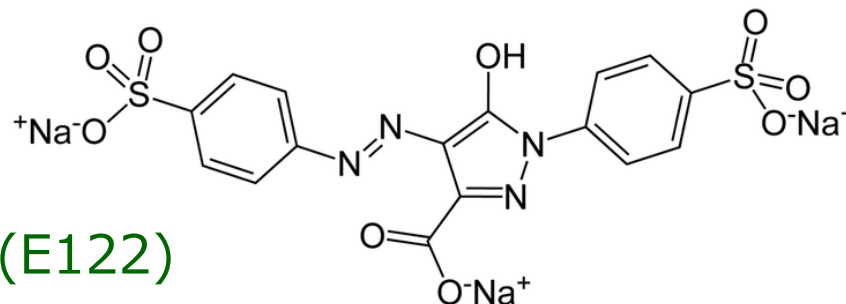
➤ ADI lowered:

- Quinoline Yellow (E104)
- Sunset Yellow FCF (E110)
- Ponceau 4R (E124)



➤ ADI unchanged:

- Tartrazine (E102)
- Azorubine/Carmoisine (E122)



- In 2012, EFSA has been mandated by the European Commission to evaluate the risks to bees linked to the use of neonicotinoids (clothianidin, imidacloprid, thiamethoxam) and of fipronil
- EFSA has identified some risks (dust released by granules and treated seeds, presence of residues in pollen, nectar and guttation droplets)
- For many uses, the available data were insufficient to finalise the risk assessment
- The European Commission has adopted restrictive measures for the neonicotinoids; for fipronil the decision making process is still ongoing



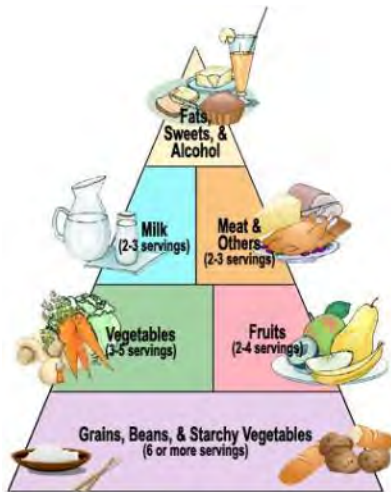


- EFSA established in May 2012 an internal task force to compile a state-of-the-art review of the work carried out at EFSA, as well as the current activities conducted outside EFSA, in the area of bees
- The task force has been established in line with EFSA's strategy to consider risk assessments in a wider, more integrated manner so as to provide risk managers with comprehensive advice
- One of the main objectives of the task force is to identify gaps in knowledge and research needs

Evolution of food consumption data at EFSA

CONCISE Food consumption database

Broad food categories, not covering children, not harmonised



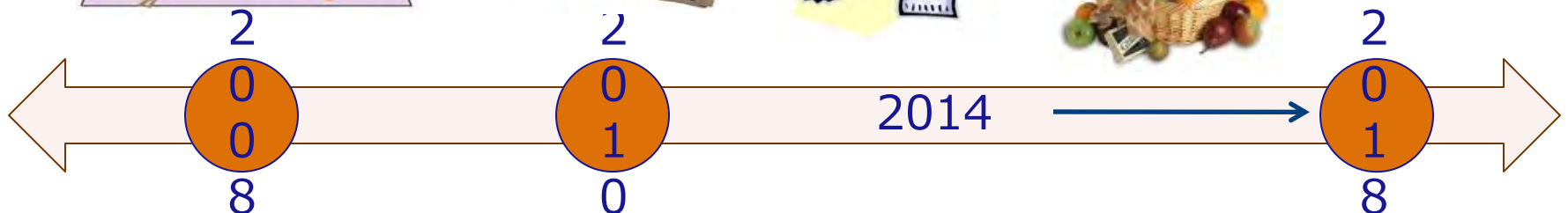
COMPREHENSIVE food consumption database

Detailed food categories, partly covering children, not harmonised (i.e. different methodologies)



EU Menu – towards HARMONISED food consumption data

Detailed food categories, covering children, harmonised

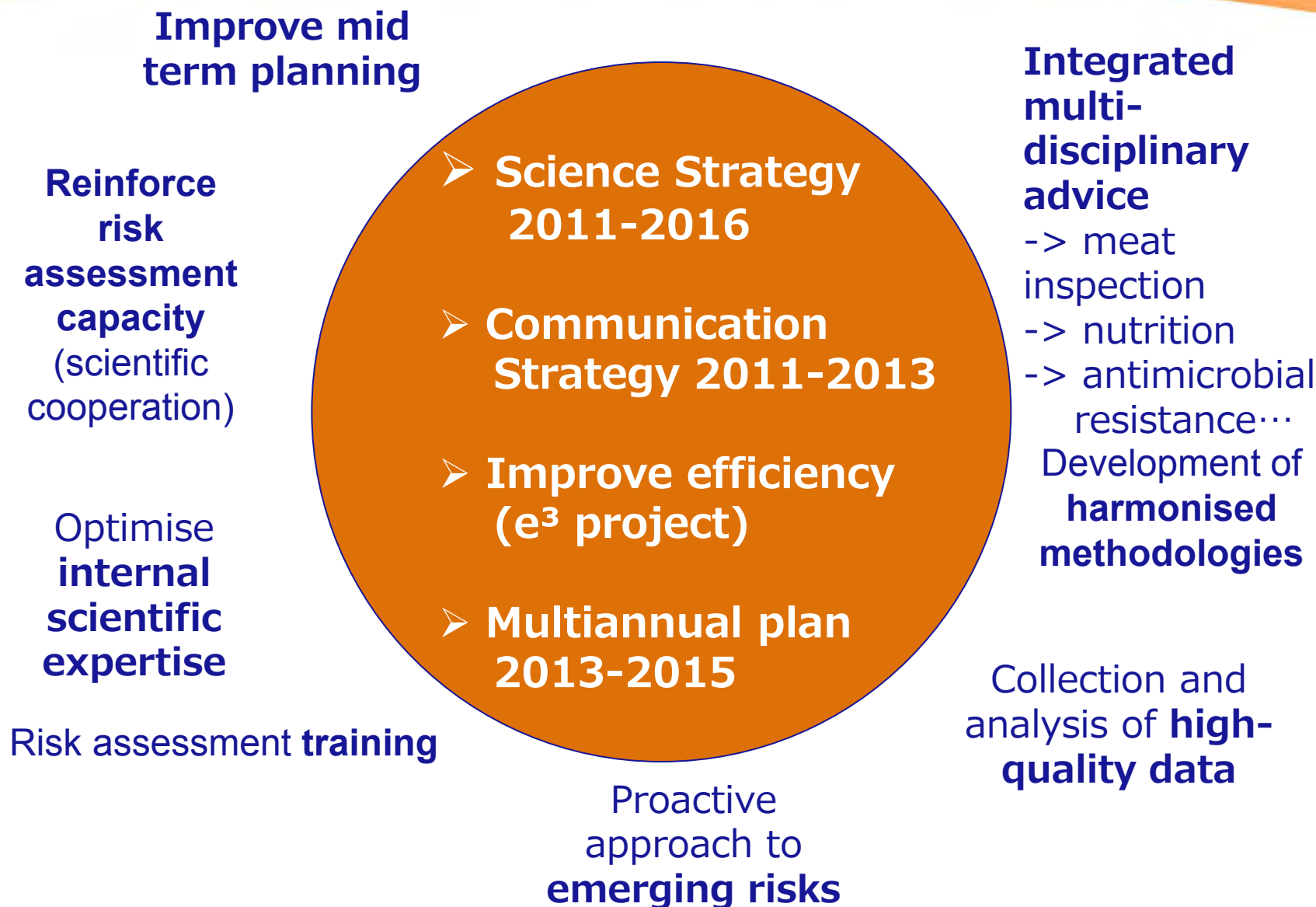


What's on the menu in Europe?

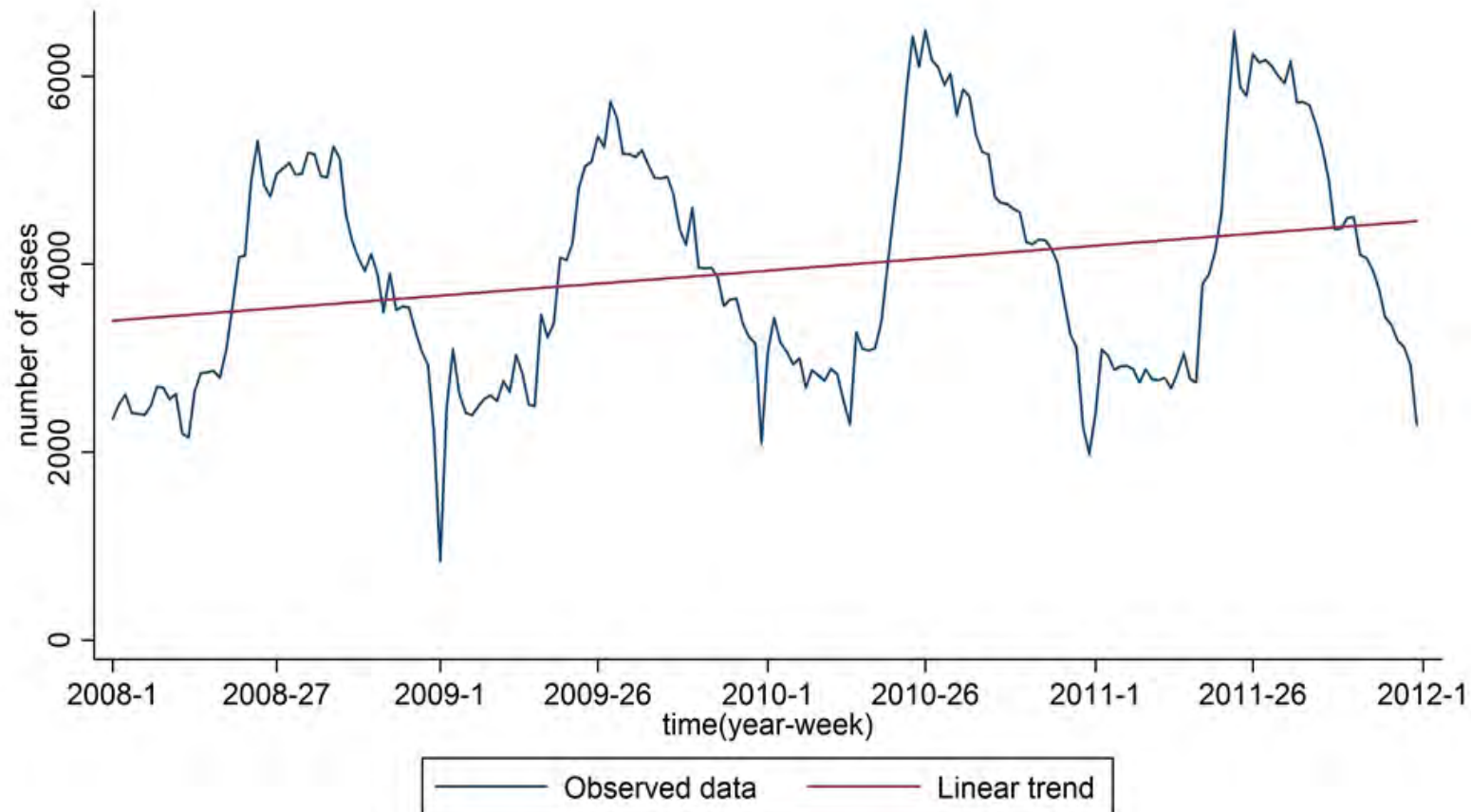


Aims to collect harmonised food consumption data at EU level:

- in different age classes (from infants to elderly)
- in 27 Member States (minimum 80,000 subjects in total)
- using methods allowing the comparison of the results from different Member States
- using the EPIC soft, or comparable software
- including anthropometric measurements

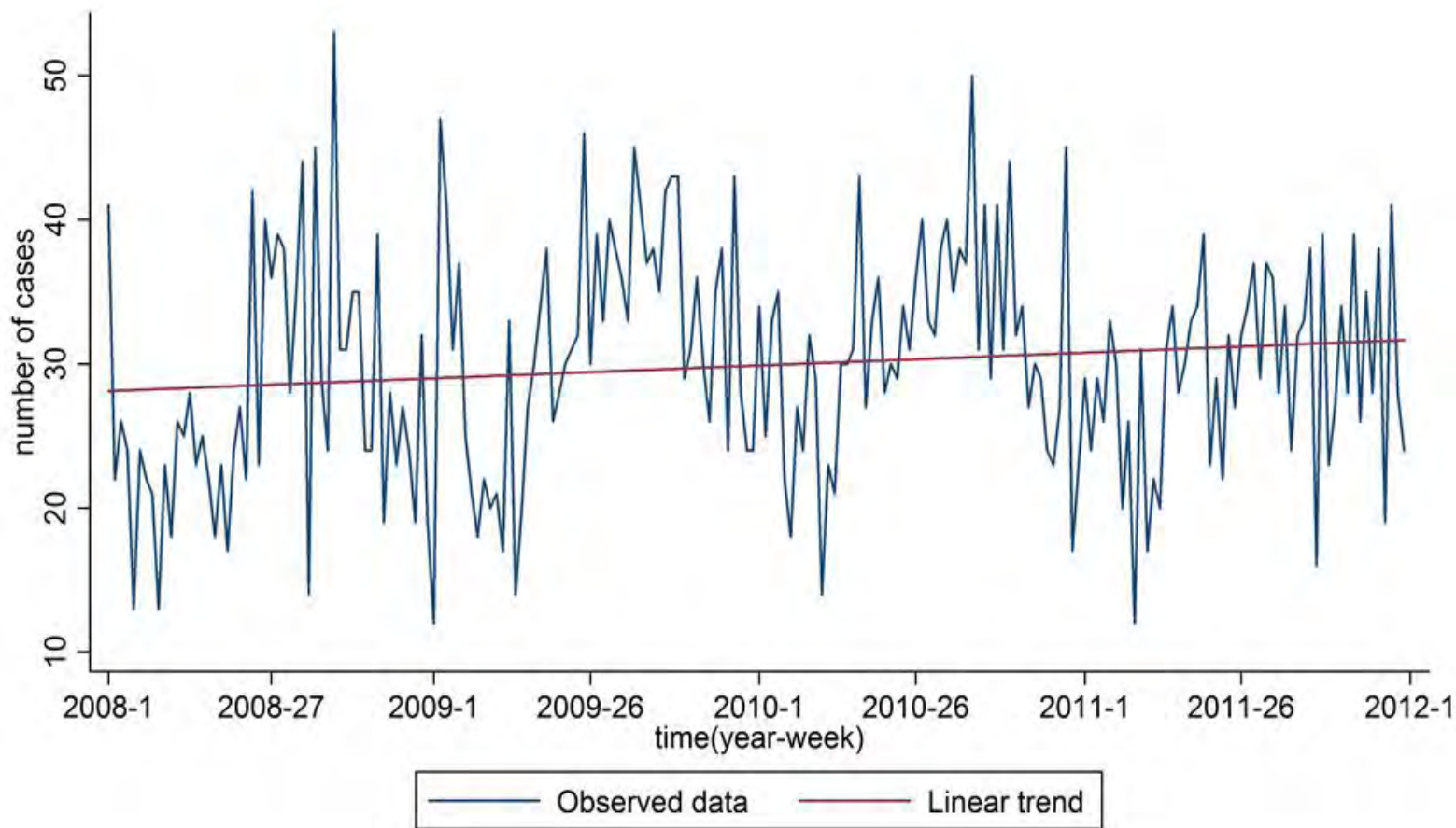


Human *Campylobacter* cases in EU: 2008-2011



- The EU notification rate of confirmed cases of campylobacteriosis has shown a **significant increasing trend** in the last four years (2008-2011)
- The proportion of *Campylobacter*-positive broiler meat samples was 31.3 %

Listeriosis in humans in EU: 2008-2011



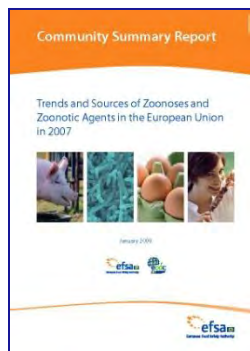
No statistically significant EU trend in listeriosis cases between 2008 and 2011 (analysis by week)

Who does EFSA communicate with?



Working together: within Europe

- National food safety agencies
- 400 research institutes
- 1500 experts annually
- **EU Agencies:**



✦ with national food safety organisations:

- U. S. : FDA, USDA APHIS, USDA FSIS, ARS, EPA
- Health Canada
- Food Safety Commission of Japan
- Food Standards Australia
- New Zealand Food Safety Authority

✦ with international organisations:



***Codex Alimentarius
Commission***