



# The Challenges of Emerging Food Safety Risks to the Food Industry

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- Qualifications

European perspective

Personal interpretation – not representative

Food safety > emerging risks



# Challenges for the European Food Industry



- H2 improve competitiveness of the industry
- H2 contribute to a healthier society
- H2 arrive at “Food–you-can-trust” and “sustainable solutions”
- H2 obtain the right personnel and sustain their careers

(CIAA – ETP Food For Life)





## Challenges of many types

- Food safety must always been seen within the overall context of a highly competitive business environment.
- Competition at company, sector and regional levels.
- Not always obvious how safety can bring competitive advantages.
- Food safety as major example of cooperation between direct competitors.





COMISSÃO DAS COMUNIDADES EUROPEIAS

Bruxelas, 12.1.2000  
COM (1999) 719 final

## LIVRO BRANCO SOBRE A SEGURANÇA DOS ALIMENTOS



# White Paper 2000



- **Summary of 80 measures which the EC intended to implement**
  - “farm to fork”
  - **EFSA**
  - **Risk Assessment**
  - **Traceability**
  - **Clarification of the responsibility of commercial operators**
  - **Systematic application of HACCP principles**



# Key needs for actual and emerging food safety risks



- Clear definition of responsibilities
  - All levels, legal compliance, generation and dissemination of knowledge.
- Availability of knowledge
  - Right questions asked – right answers given
- Engagement with all actors in the food chain properly addressed.
  
- These needs are never successfully met



# Industry's costs in maintaining safety



- Food safety management
  - Legal compliance, client demands (multiple)
- Analytical support.
  - Verification of HACCP, maintenance of GMP, specific demands.
- Training and information.
  
- Food safety issues are collectively addressed by the industry in a complex and broad based way – shared costs but real costs.
- How do emerging risks fit in.
  - high up-front costs independent of real risk – recalls, analysis, sales losses
  - Intense research needs – often very rapid.
  - Consumer trust affected







# Collective initiatives

- Many demands are too complex and expensive to be addressed at company level
- Food safety issues are classical platforms for collective solutions

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# Collective functions relevant to food risks



- Representation to lawmakers and appliers
  - Representations to the science community
  - Representations to the consumer and other stakeholders
- 
- Levels of organisation
    - Geographic:
    - Sectorial:



# Examples of collective organisations which address food safety in Europe



- National sectorial organisations (dairy, meats, eggs, grain, fats and oils, alcoholic beverages etc.)
- European sectorial organisations (Brewers of Europe, CEEV.....)
- National Food Federations (FDF, FEVIA, FIPA.....)
- European Confederation of Food Federations CIAA





## Scope of activities at European level

- Representation to science and financing community
  - CIAA directly, sectorial organisations, technology platforms, *ILSI Europe*.
- Representation to the wider community and the consumer.
  - Sectorial organisations, *EUFIC*.

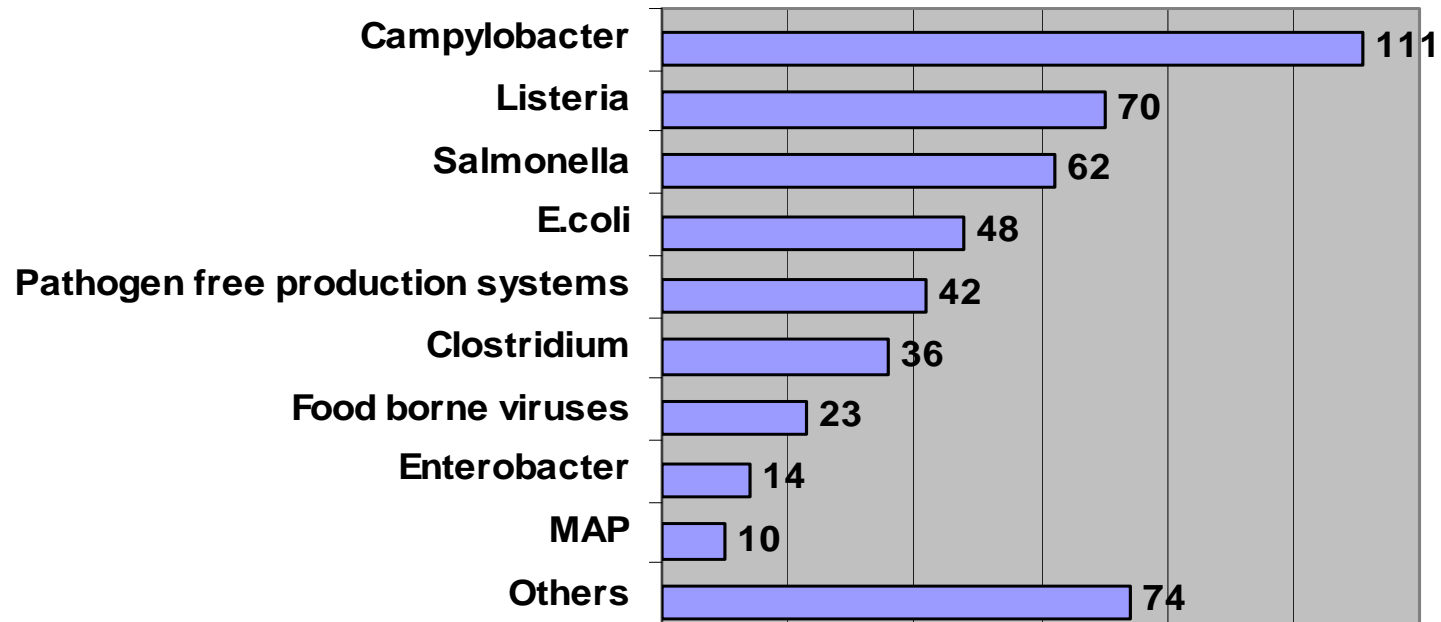




# Asking the right questions and getting the best answers



# Prioritising research for food safety

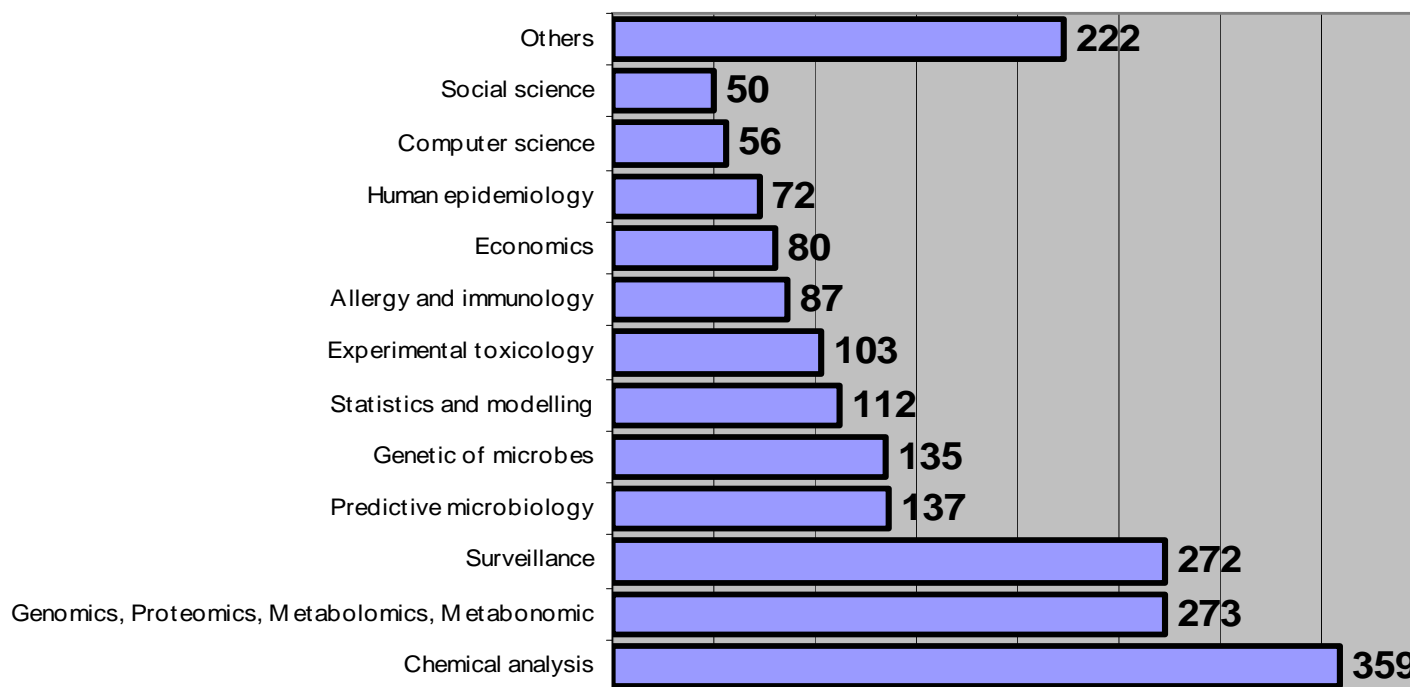


Nationally funded projects on specific pathogens (EU15 2005) source

SAFEFOODERANET

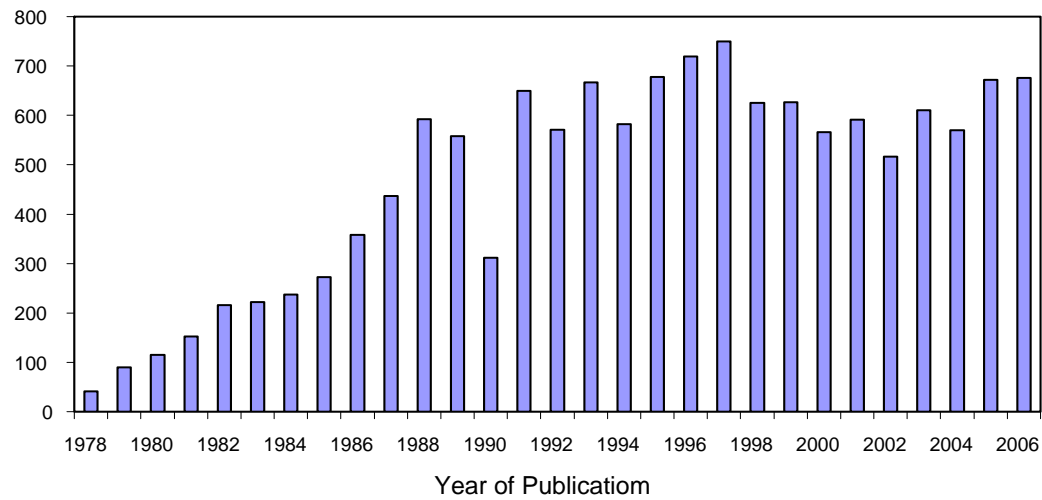
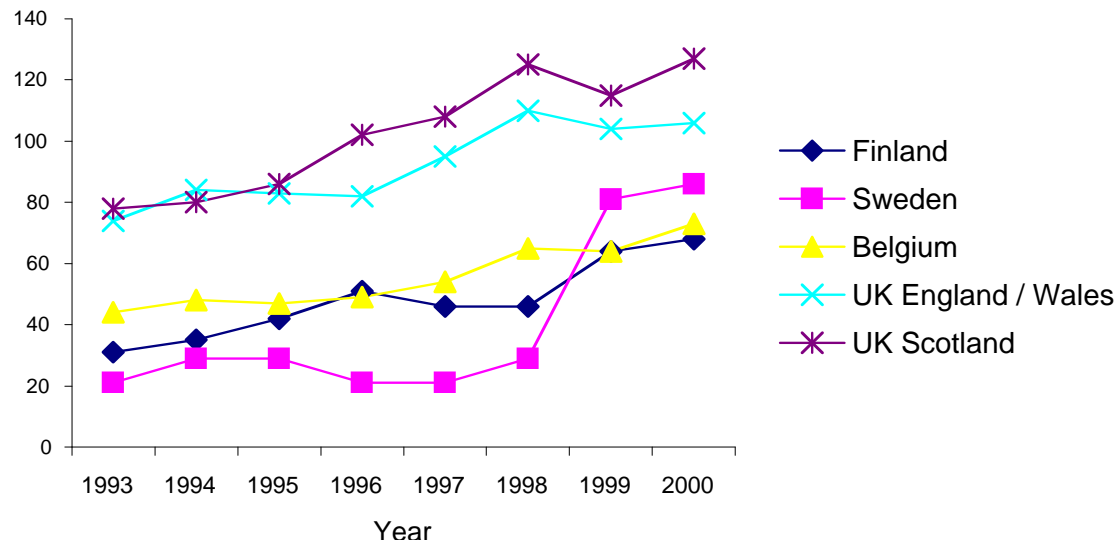


# Prioritising research for food safety



**Nationally funded projects addressing food safety – by discipline (EU15 2005) source SAFEFoodERANET**







Sharing expertise to build on excellence



- KBBE European Technology Platforms with relevance to Food Safety.

Plants for  
the future



Food For Life  
Animal Breeding  
Animal Health  
Sustainable Chemistry  
Plants for the future.





# European Technology Platform

## Central concept

- A new instrument to strengthen the European-wide innovation challenge (and address the so-called European Paradox),
- An (industry-led) framework to unite stakeholders around:
  - a common **VISION** for the technology concerned,
  - an agreed **STRATEGIC RESEARCH AGENDA**, and
  - a costed and managed **IMPLEMENTATION PLAN**.

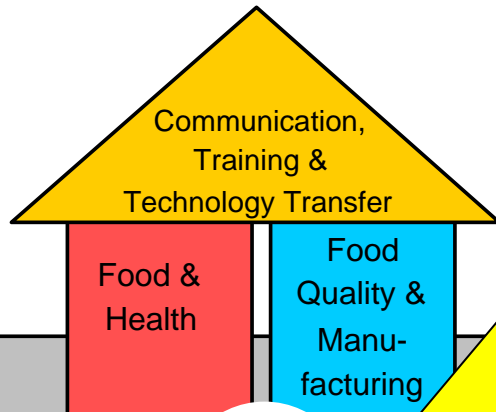


# From "House" to "Key Thrusts"



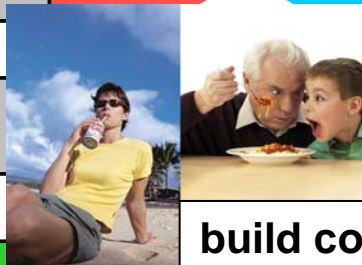
improve health, well-being and longevity

insuring that the healthy choice is the easy choice for consumers,



**New products, processes and tools that.....**

...er a healthier diet, ... quality food products,



build consumer trust in the food chain



derive from sustainable and ethical production



6. Mana

Optim training ... cation, gy transfer.





## Key Thrust 2: Consumers' trust in the food chain



# ETP - Key Thrust 2: Consumers' trust in the food chain



## Problems to be solved:

- The emergence of new and under-recognised biological hazards.
- Uncertainties concerning importance of low-level chemical contaminants in the food chain.
- Immature tools for risk and risk-benefit studies.
- Consumer engagement and trust levels are low thus impeding introduction of novel quality, health and safety driven solutions.
- Many SMEs: usually not too strong in research and innovation



# Key Thrust 2: Consumers' trust in the food chain



## Three Priority areas:

### Evaluation of Risks versus Benefits

- To understand and describe **(micro-) biological and chemical risks** and develop and validate appropriate science based quantitative risk assessment, risk management and risk communication tools and the **evaluation of benefits versus risks** of novel foods, ingredients and technologies.

### System innovation methodologies in the food production chain

- To deliver new methods to support chemical and microbiological food safety; technologies for tracking and tracing and their integration into management systems; predictive and probabilistic models for food microbial stability and safety; novel/natural preservation and mild processing methodologies, including the role of food refrigeration and cold chain.

### Consumer studies

- To identify and quantify determinants of **consumer trust and confidence in the complete food provision system** (including trust in actors and institutions) for an understanding of consumer confidence and its changes over time, and to understand the consumers' perception of risk issues, particularly in the context of risk-benefit trade-offs and the amplification of risk perceptions beyond the available scientific evidence.



## 2 of 5 research goals address emerging risks directly




































- **Goal 1. Predicting and monitoring the behaviour and fate of relevant known and emerging biological hazards.**
- **Goal 2. Predicting and monitoring the behaviour and fate of relevant known and emerging chemical hazards including toxins of biological origin.**



# National Platforms



- Build national Vision, SRA and Implementation Action Plans
- exchange experiences and best practices, link individual stakeholder groups across national boundaries & cooperate
- Articulate national funding with funding at EU level

 Albania	 Hungary	 Serbia
 Austria	 Iceland	 Slovakia
 Belgium (Flanders' Food platform)	 Ireland	 Slovenia
 Belgium (Wagralim platform)	 Israel	 Spain
 Bulgaria	 Italy	 Sweden
 Czech Republic	 Latvia	 Switzerland (Swiss Food Research)
 Denmark	 Lithuania	 The Netherlands
 Estonia	 Norway	 Turkey
 Finland	 Poland	 Ukraine
 France	 Portugal	 United Kingdom
 Germany	 Romania	
 Greece	 Russia	







# The CIAAs acrylamide toolbox

- Highly detailed good practice guide, fully supported by science.
- Freely available for download and updated periodically.



# In conclusion



- Challenges to the european industry
  - To ensure that the least sophisticated parts of the chain participate in the vigilance which is necessary to protect against risks.
  - To maintain the pressure, which is necessarily antagonistic at some level, on official bodies to ensure that what is controlled is that which is needed to be controlled.
  - To make sure that the right answers are asked and addressed – especially in that science which is performed in the name of the industry (cf RANA).
  - To work towards a state of affairs in which the industry and individual companies are partners with the risk assessors to ensure that exposure data is as complete as possible. This relationship will need to be cultivated to be robust as possible to survive ..





- <http://www.ciaa.be/asp/index.asp>  
ETP Food for Life, Acrylamide Toolbox.
- <http://www.eufic.org/>
- <http://europe.ilsil.org/about/general/>

