SAFE FOODS

Promoting Food Safety through a New Integrated Risk Analysis Approach for Foods

Introduction to SAFE FOODS and Seminar

Hans Marvin

FP6 EU Project SAFE FOODS

- Integrated Project
- Coordinators:
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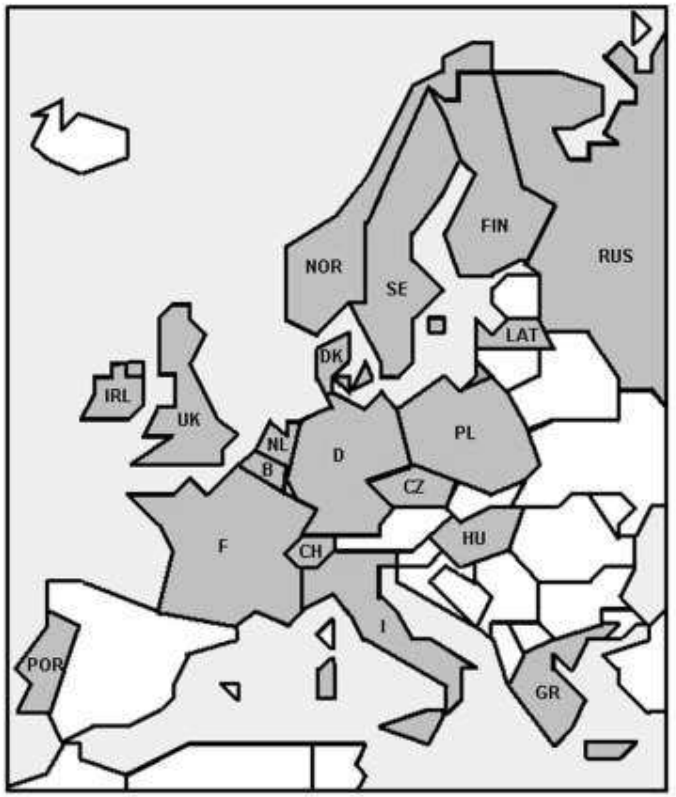
  - *Dr. H.J.P. Marvin*

  } *RIKILT*
- April 2004-March 2008
- Project Participation:
  - *37 partners*
  - *21 countries*
- Budget:
  - *14,628,000 € total*
  - *11,576,000 € EU contribution*



Overall objectives of SAFE FOODS

SAFE FOODS aims to strengthen consumer trust in the safety of the European food chain

SAFE FOODS aims to improve the interaction and integration between the components of the food safety risk analysis framework

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Strategic Objectives

- An effective European working-procedure for early identification of emerging risks in food production chains in an expanding European market
- To develop comparative safety assessment approaches for foods produced by different breeding and production practices
- Quantitative risk assessment of complex food contamination patterns
- To investigate consumers concerns/preferences in risk analysis practices for foods

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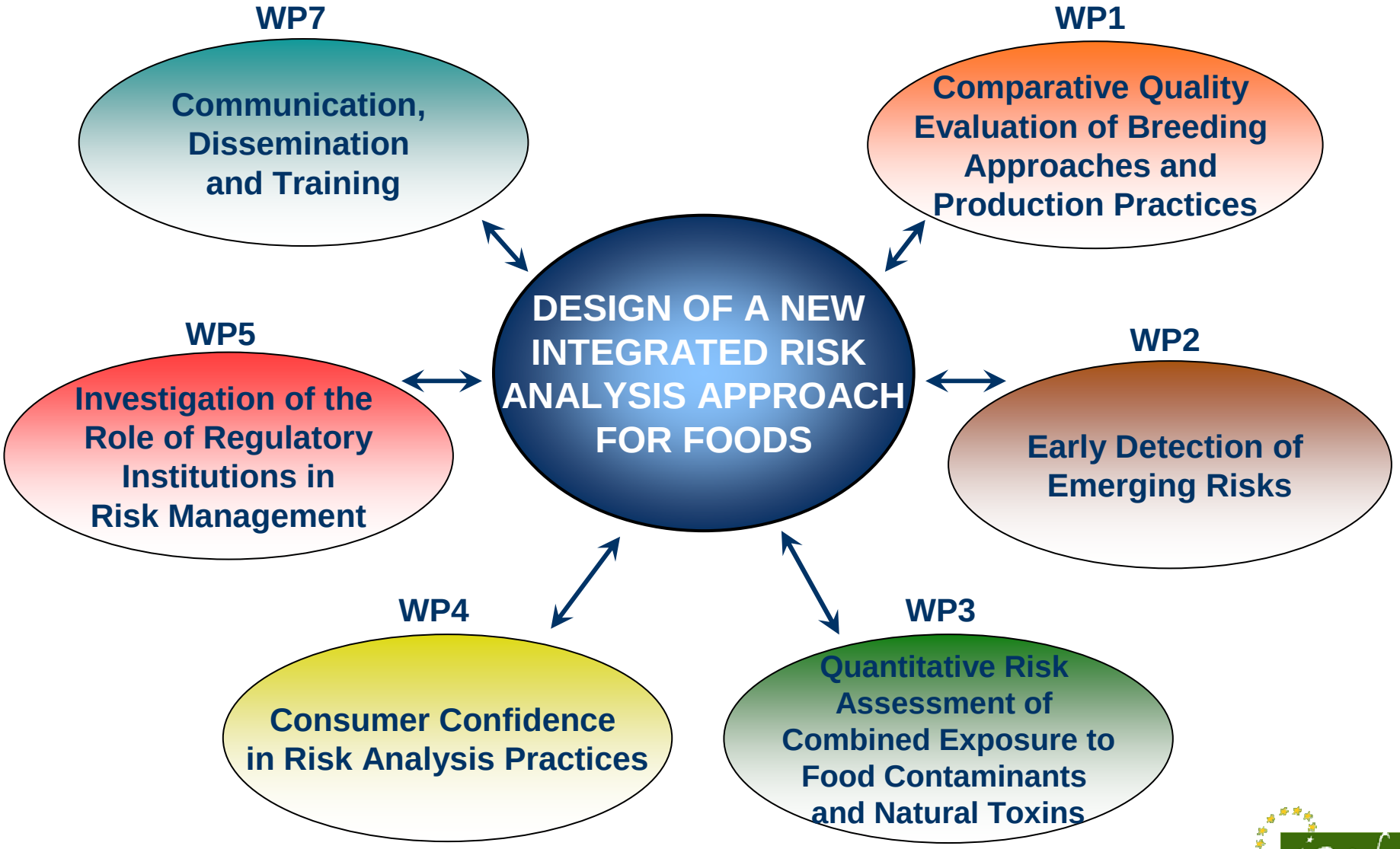
Strategic Objectives

- To investigate the new role of institutions across Europe involved in risk assessment and management taking a broader impact of food production on environment, animal welfare, sustainability, and socio-economic consequences into account
- To design a new risk analysis approach for foods, integrating scientific principles, societal aspects and effective public participation

SAFE FOODS STRUCTURE



Workpackage 1: Comparative Safety Evaluation of Breeding Approaches and Production Practices Deploying High-and Low-Input Systems

Does diversification in agricultural production systems lead to diversification in risk?

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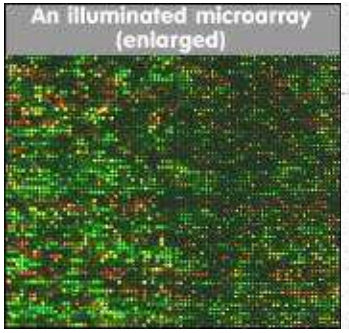
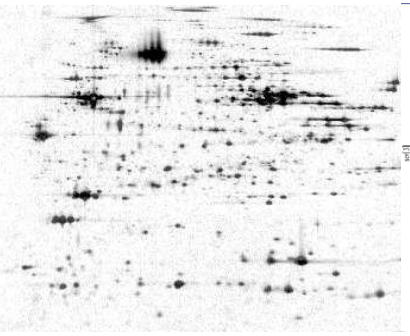
WP1 – The ‘OMICS’ approach

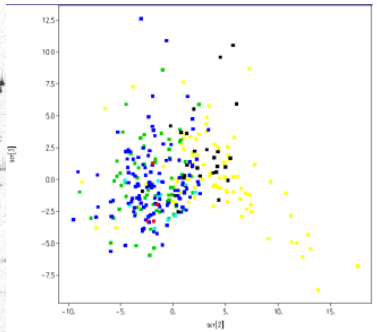
“Unbiased” approaches
Data rich: reducing uncertainty
Multivariate analysis, PCA

Profiling techniques

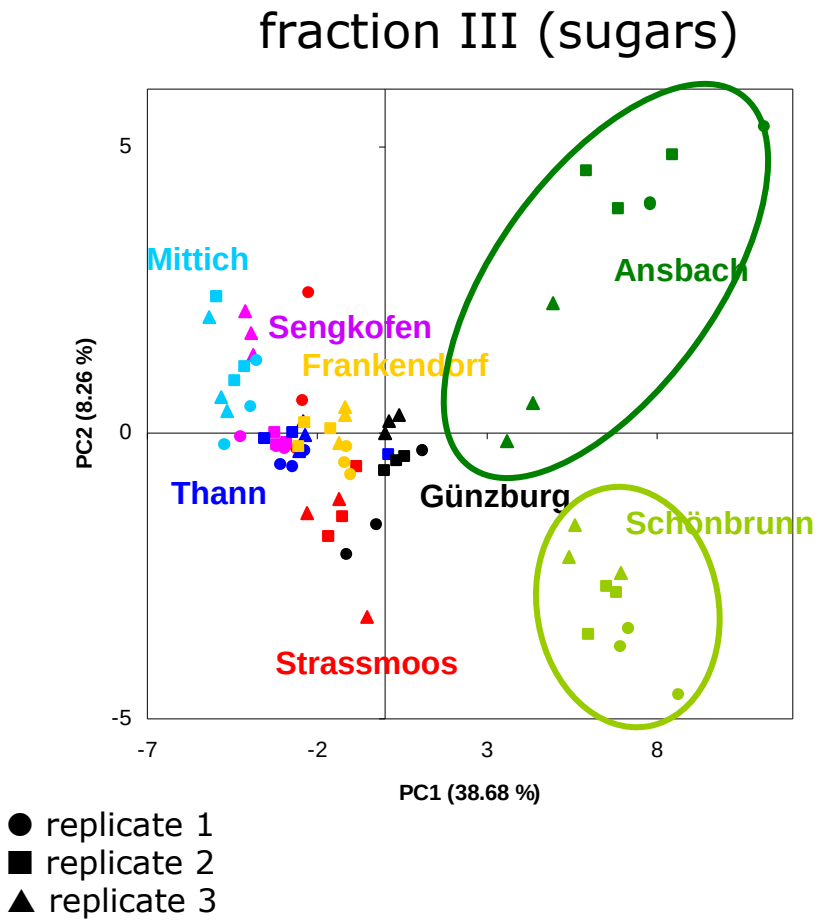
Transcriptomics **Proteomics** **Metabolomics**







Influence of location



1 Variety Lukas grown at different locations in Bavaria

Agricultural practice or location?

Workpackage 2: Early Detection of Emerging Risks Associated with Food and Feed Production

Does the expanding European market lead to new food safety risks and can we identify them early?

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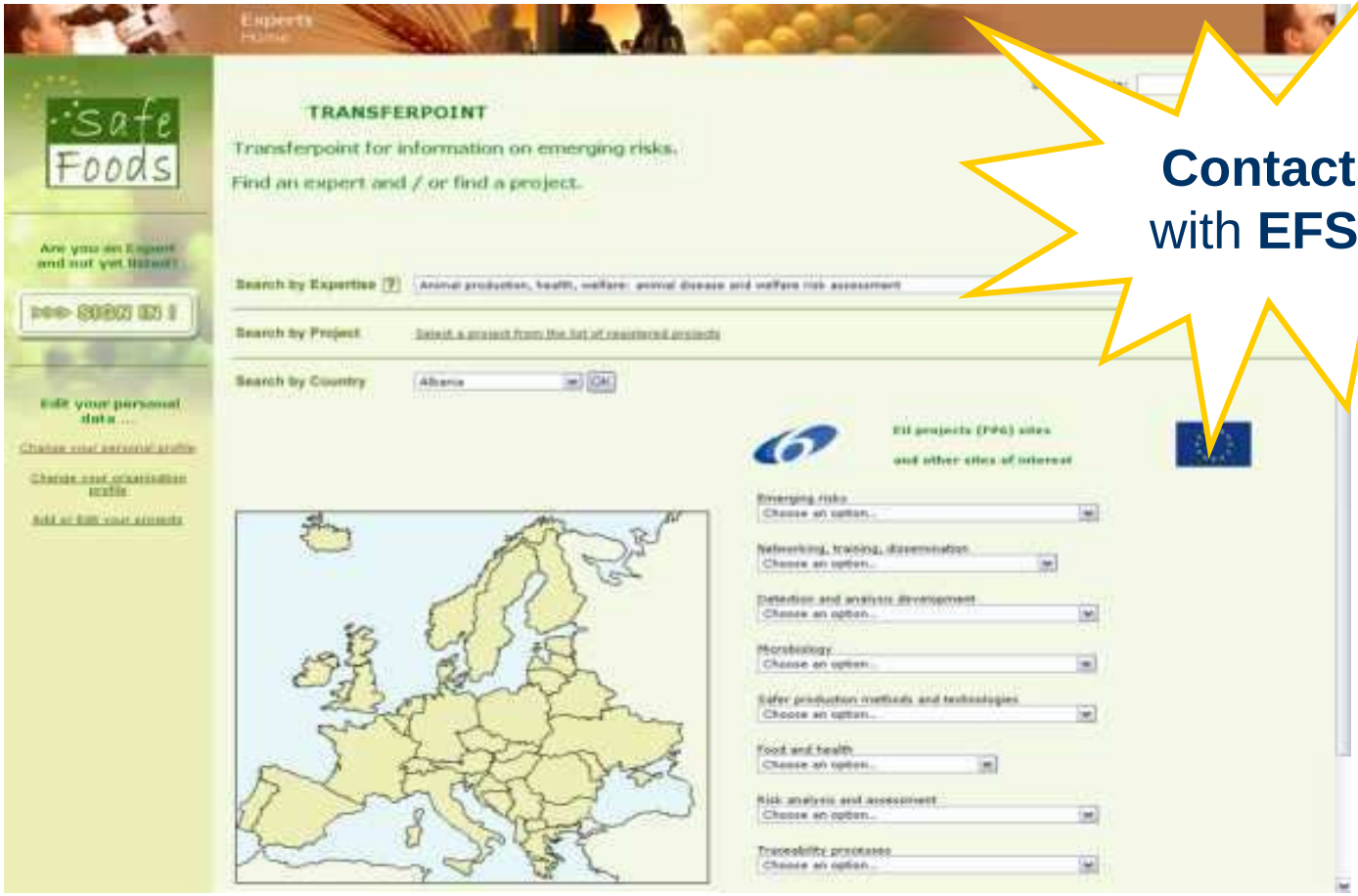
WP2 – Objectives

- To establish a working procedure for the early detection and assessment of emerging microbial and chemical hazards in food and feed chains
- To propose mechanisms, both at national and international level, to feed information from the database on early detection of risks and from workshops into regulatory systems
- To provide data on emerging pathogens, the development of multi-resistant bacterial strains in high- and low-input agricultural systems
- To provide data on chemical residues in food and feed produced in high- and low-input agricultural systems
- Role in the framing phase

WP2 – Early detection and assessment of emerging

Transfer Point for Information on Emerging Risk

Building an electronic library containing experts and expertise in the field of food safety research and food safety assessment over the world



Workpackage 3: Quantitative Risk Assessment of Combined Exposure to Food Contaminants and Natural Toxins

What is the health impact of human exposure to combinations of food contaminants, and natural toxins?

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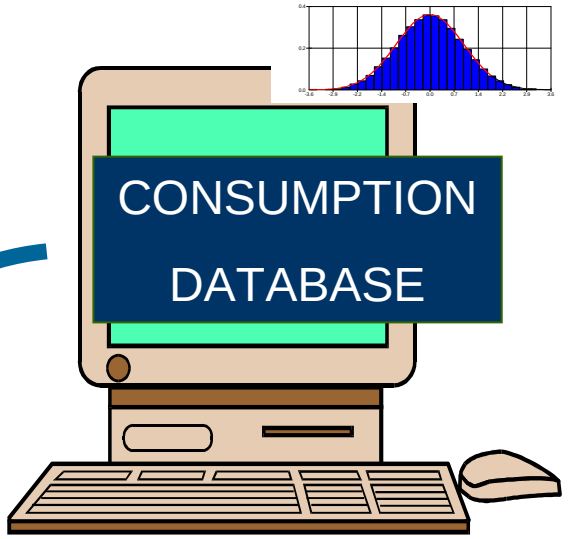
WP3 – Objectives

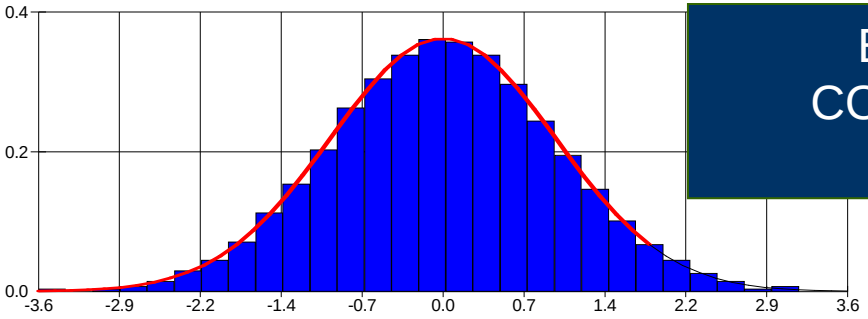
- To develop probabilistic risk modelling (exposure, toxicity of food contaminants and natural toxins)
- To evaluate uncertainties in risk assessment (exposure, adverse effects, susceptibility)
- To perform uncertainty analyses (uncertainty in data, different risk models, assumptions made on assessment variables)
- To develop combined exposure assessment (mycotoxins, pesticides, natural toxins)

WP3 - Probabilistic modelling of exposure

RESIDUE DATABASE

CONSUMPTION DATABASE





EXPOSURE = CONSUMPTION × RESIDUE

WP3 - Pan-European exposure modelling

- Harmonisation food and compound coding from:
  - The Netherlands 
  - Italy 
  - Sweden 
  - Denmark 
  - Czech Republic 
  - France (future) 
- Pan-European modelling of pesticides, mycotoxins and natural toxins

Workpackage 4: Consumer Confidence in Risk Analysis Practices

How do risk analysis and communication practices affect consumer confidence?

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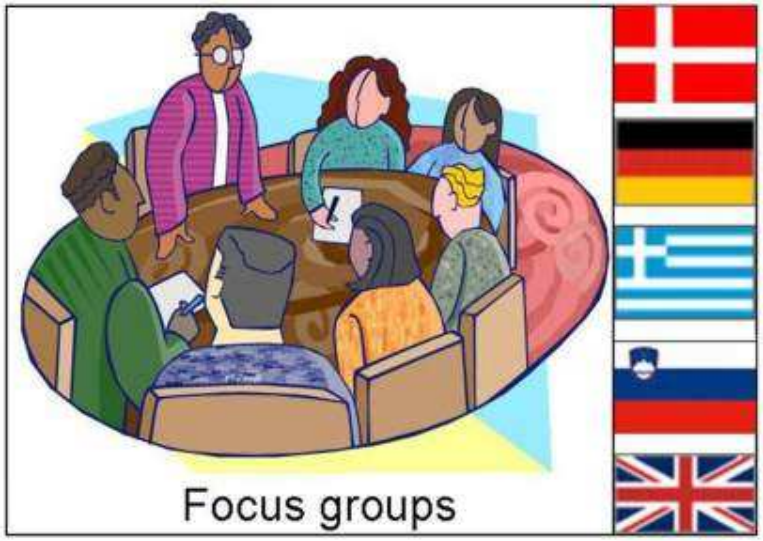
WP4 – Objectives

- Understanding consumer perceptions, attitudes and beliefs regarding food risk management
- Understanding differences between consumers, experts and decision-makers regarding their perceptions of food risk management
- Identification of strategies to communicate uncertainty and variability in risk assessment
- Resulting recommendations for better Food Risk Analysis

WP4 – Qualitative Phase

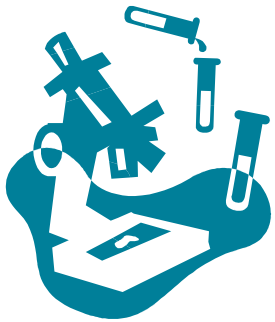
Perception of the effectiveness of current food risk management practices

- Focus groups:
  - Consumers
  - Experts (food safety scientists, risk assessors, risk managers)
- Follow-up interviews:
  - Focus group participants
  - Confronted with each other's views on food risk management



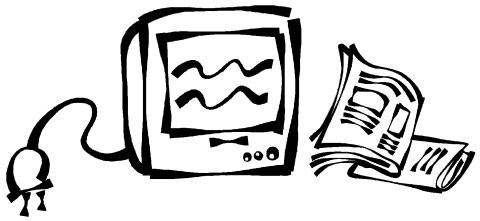
WP4 – Qualitative Phase - Results II

- Priorities: consumers were not sure if consumer health protection was a priority in the risk management process



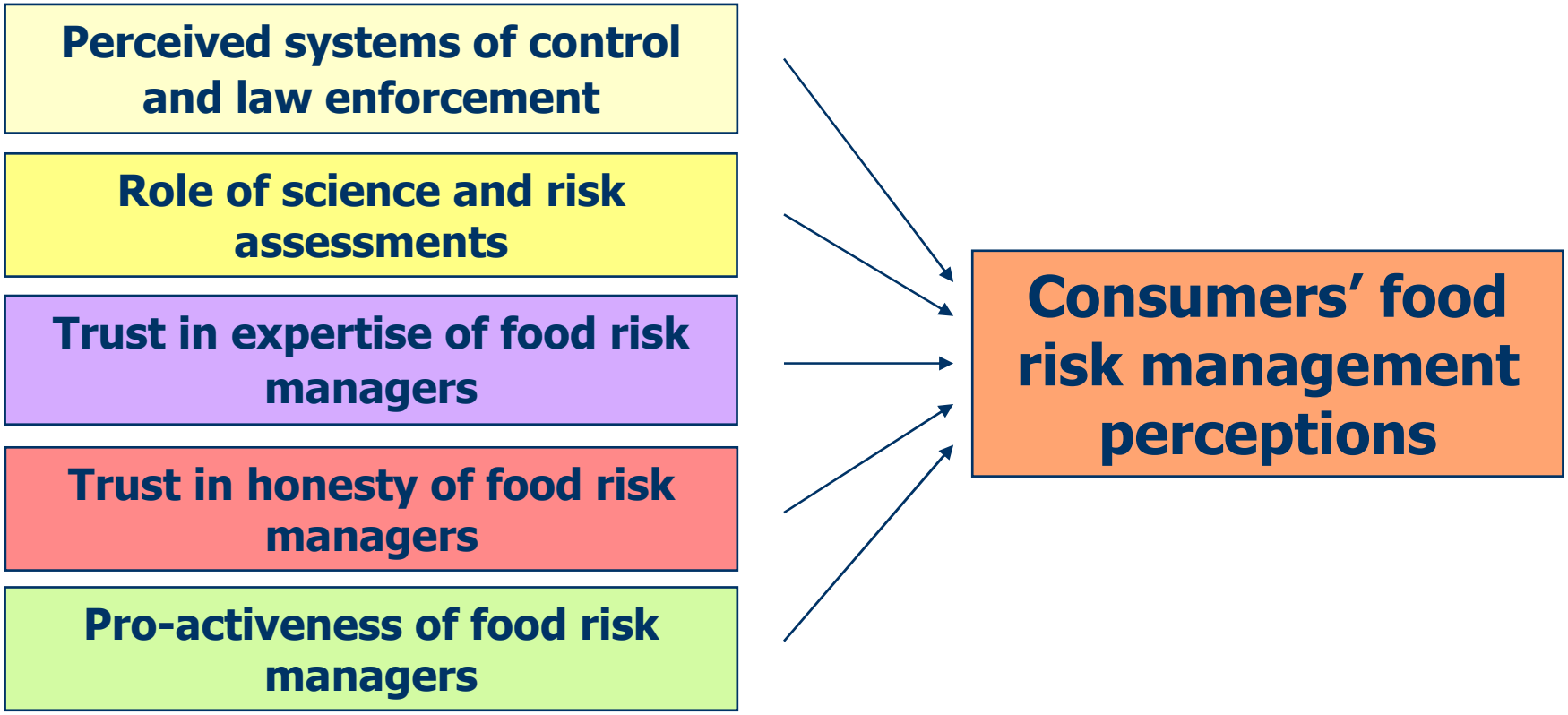
- Science: experts were concerned about complexity and “emerging” or “hidden” risks

- Media: experts believe that media attention is causing *unnecessary worry* among consumers



WP4 – Cross-national Consumer surveys - key results

Key factors influencing consumer perceptions of food risk management



Workpackage 5: Investigation of the Institutional Challenges and Solutions to Systemic Risk Management

What should be the role of institutions in risk management practices?

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WP5 – Objectives

- To review the existing institutional structures and procedures of risk management
- To analyse their compatibility with the new requirements of systemic risk management
- To provide suggestions for a more active pub involvement in risk management
- To compare (EU-level) philosophy, structure and institutional arrangements with respect to the management of food risks

WP5 – Institutional review – Results II

-  ,  and  have followed different approaches in restructuring the existing regulatory system.
- Reforms include:
  - Separation of risk assessment and risk management responsibilities
  - Approval of the “Precautionary Principle”
  - Improved transparency, by means of public documentation
  - Increased stakeholder consultation
  - Increased risk information addressing target consumer concerns

WP5 – Institutional review – Results III

- Little changes to the regulatory system since its establishment in 1972
- The ordinary citizen does not seem to be concerned about food safety

- New Member State which needs to adapt to the new EU regulations
- Strong paternalism tradition
- Trust issues are becoming more important

- Reforms concentrate on the risk assessment phase
- Clear guidelines for risk assessment but not so for risk management and risk evaluation

Workpackage 6: Integrated Risk Analysis Model

Towards a new risk analysis approach for foods, integrating

- **Scientific principles**
- **Societal aspects**
- **Effective public participation**

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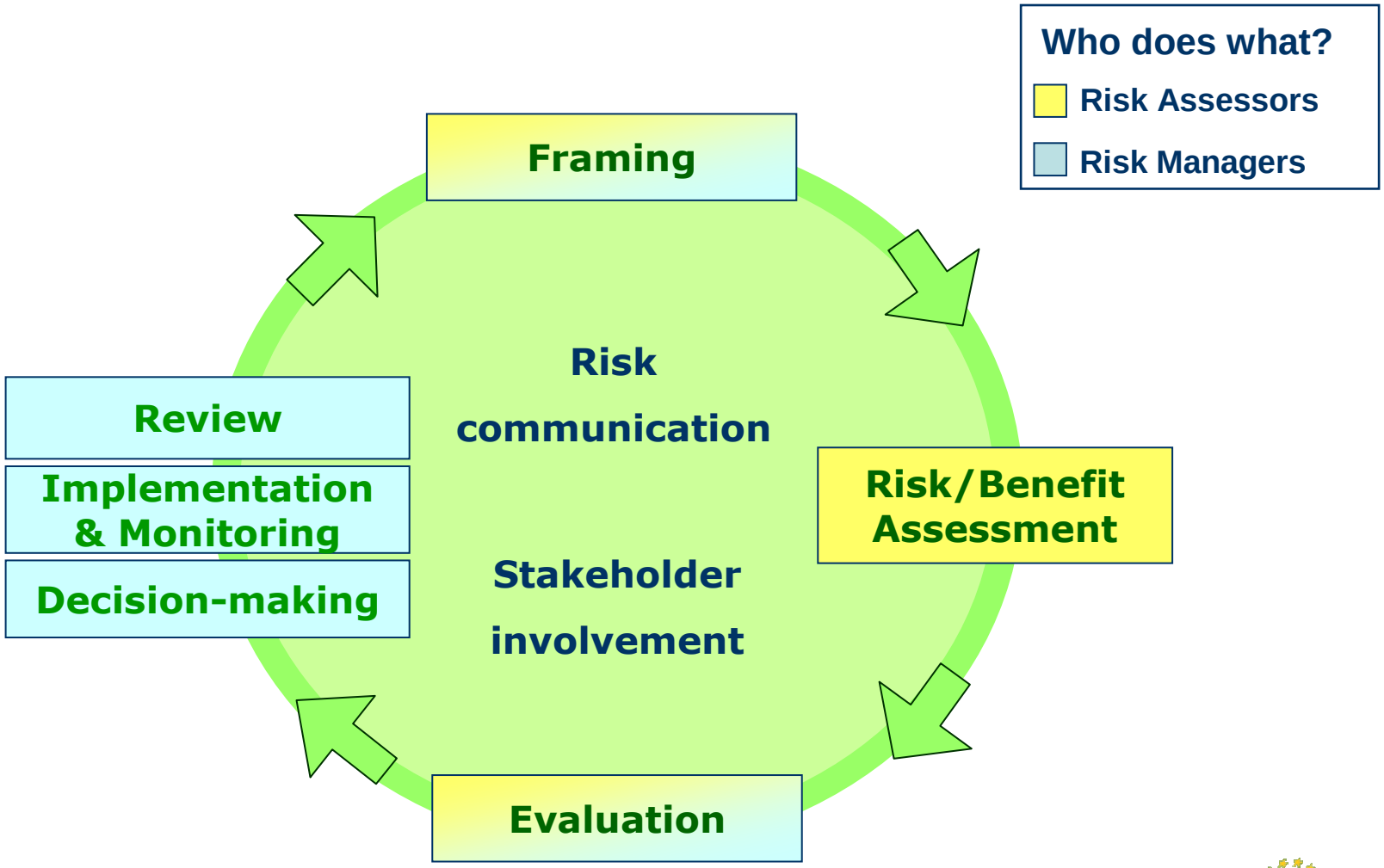
WP6 – SAFE FOODS Integrated Risk Analysis Model



Risk Analysis Process Further Developed

- Update the Risk Assessment Process, taking new developments into account
- Improve interplay between risk assessors and risk managers: consequences of conclusions, options, responsibilities
- Role and involvement of stakeholders in the various steps of the risk analysis process
- Risk communication throughout the process: what, when and by whom?
- Role of monitoring and surveillance: driven by science, public concerns or ethical considerations?

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The SAFE FOODS Project team

Promoting Food Safety

through a New Integrated Risk Analysis Approach for Foods

Recent food safety incidents and the introduction of genetically modified foods in Europe have resulted in an intense public debate regarding the safety of the European food supply. Consumers have little confidence in the safety of their food supply and remain sceptical and distrustful of the management procedures currently in place.

The overall objective of the SAFE FOODS model is to change the scope of decision-making on food safety from single risks to considering foods as sources of risks, benefits and costs that are associated with their production and consumption, and taking into account the social context in which decisions are made.

Two new partners have joined SAFE FOODS

spi Sociedade Portuguesa de Inovação

The Sociedade Portuguesa de Inovação (SPI) is a new SAFE FOODS partner that will assist Workpackage 2 in the organisation of training.

In SAFE FOODS, SPI will be involved in the development of a training module and the organisation of three

The A.N. Bakh Institute of Biochemistry (INBI) is another new SAFE FOODS partner. This Russian partner joined via the INCO Top Up Call that was launched in February 2006.

Contract number:
Food-CT-2004-506446

Enter the SAFE FOODS Project Site
(members only)

SAFE FOODS former meetings

Sixth SAFE FOODS consortium meeting Riga, Latvia. Click here for more information.

Latest news!

SAFE FOODS in SICURA Conference
11/1/2006

SAFE FOODS workshop with risk managers in Brussels
11/1/2006

SAFE FOODS in BCPC International Conference
11/1/2006

Done Internet

Agenda for the Workshop

DAY 1

- Principles of risk assessment and management
- SAFE FOODS risk analysis model
  - Discussion: Helpful? Improvable? Own approach? Viewpoints from risk assessment and risk management
- Framework for emerging risk identification
  - Discussion: How to include this into the risk analysis model?
- Participants' examples of emerging risks
  - Which risks and the way it was dealt with
  - One presentation per country

Agenda for the Workshop

DAY 2

- Identification of emerging hazards
- Selected case studies
  - Mycotoxins
  - Microbiological
- Group assignment on emerging risks
  - Sample case studies or chosen by participants
    - Early identification?
    - Which measures?
    - Improvements needed?
    - Examples from the past?
  - Reporting back (one-page summaries)
- Conclusions

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