SAFE FOODS
Improving decision-making on food safety

Food Quality and Safety Research:

First Results from FP6

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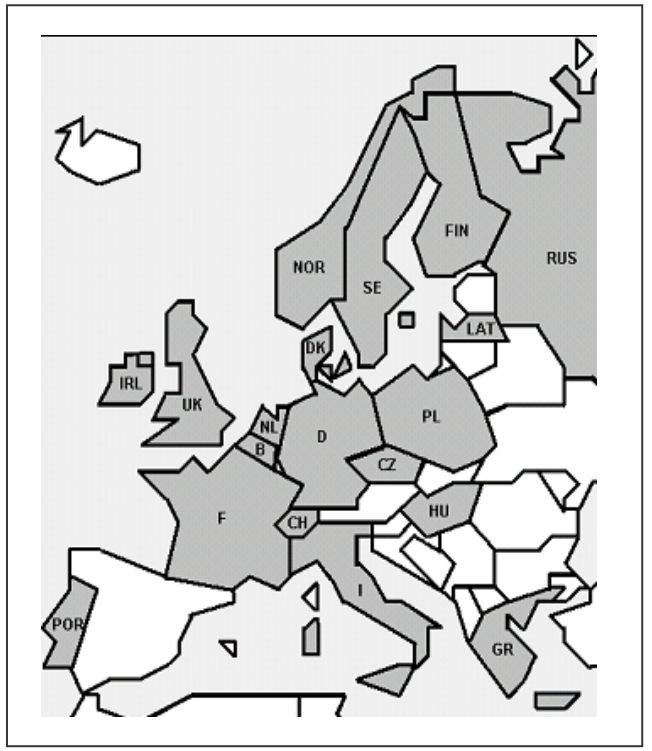
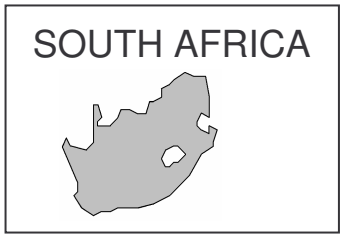
FP6 EU Project SAFE FOODS

- *Integrated Project*
- Coordinators:
  - *Dr. H. A. Kuiper*
  - *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*





Overview Presentation

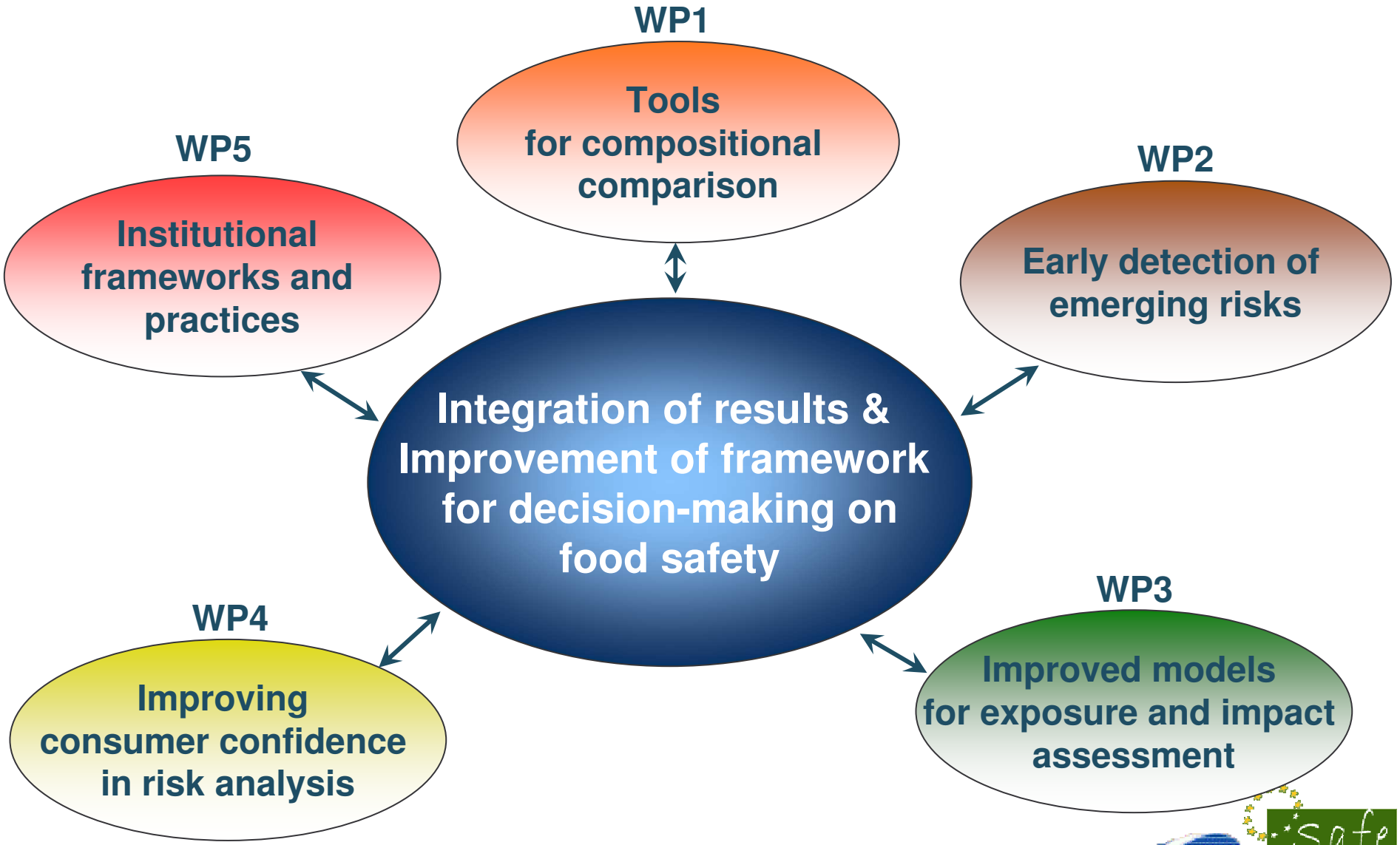
- Objectives
- Research under the SAFE FOODS project
- Improving decision-making on food safety
  - Steps in the development of an integrated risk analysis framework
  - Gaps between principles and practice
  - Addressing the gaps
- Main achievements of Work Packages 1 to 5
- Conclusions

SAFE FOODS objectives

The SAFE FOODS project develops:

- Improved tools for food safety assessment
- A risk analysis framework that integrates health, environmental, economic, social and ethical aspects
- Recommendations for a decision-making process with greater transparency and accountability

Research topics of the SAFE FOODS project



Developing a new Framework: Work in Progress

Timeline

- 19 October 2005
- September-December 2006
- January-February 2007
- March 2007
- 15 March 2007

International Framework for Risk Analysis

(after WHO, 1998)

Decision-making on food safety in the EU

Risk Assessment

Risk Management

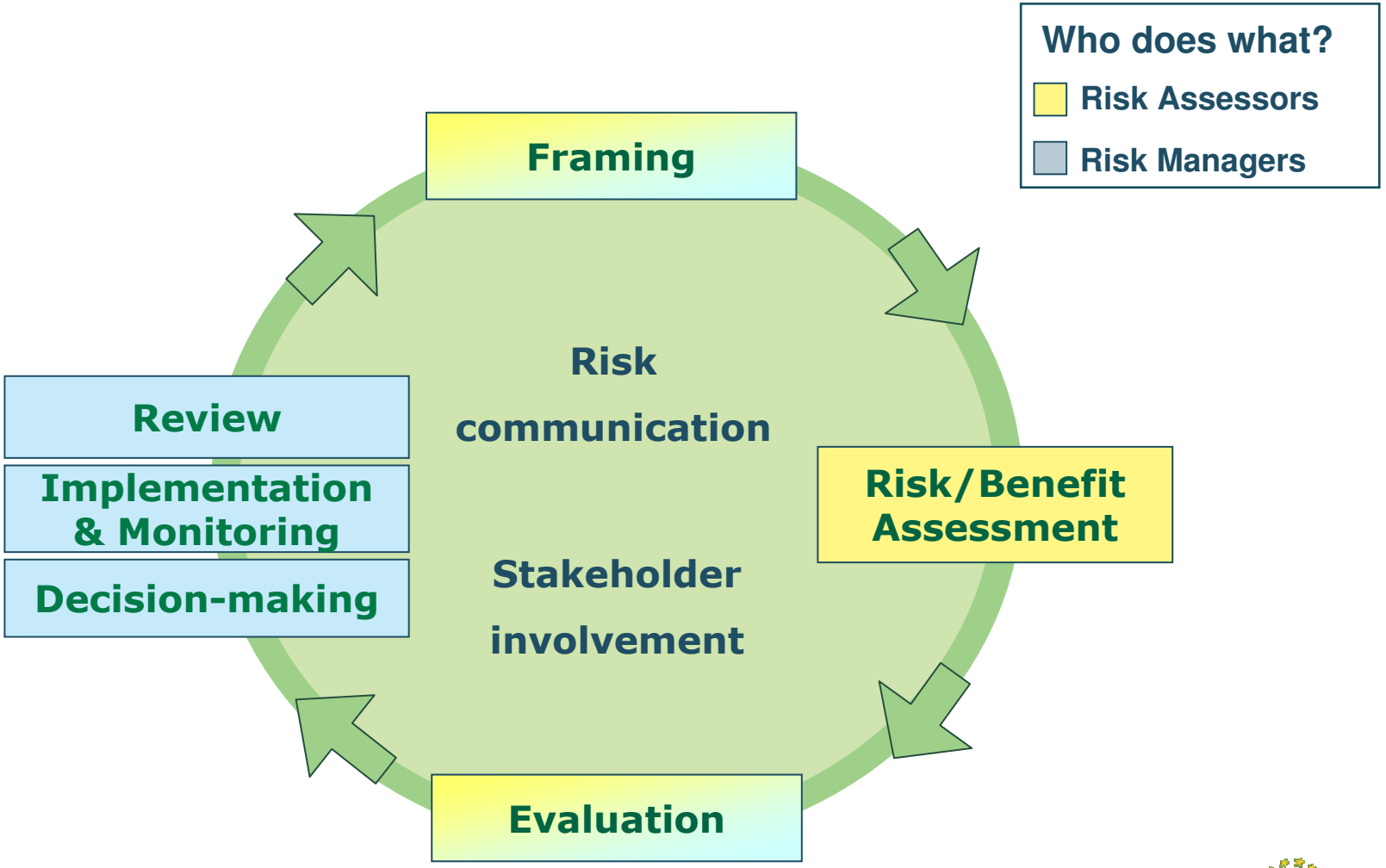
Risk Communication

Images: The best of Parma, BBC, EFSA, Govt. Victoria (AUS)

Gaps between principles and practice

Stage	Policy document	Principles of good governance	Current practice in food safety governance
Framing	Better Regulation Package EU SSC Report on Risk Assessment	Participatory framing for shared understanding of objectives	No formal framing step
Assessment	EU SSC Report on Risk Assessment Communication on Precautionary Principle	Impacts: ▪ Health (risk/benefits) ▪ Environmental ▪ Social ▪ Economic ▪ Ethical	Quasi-exclusive focus on health and environmental risks
Decision-making	Guidelines on Impact Assessment Communication on Precautionary Principle	Participatory process for ranking decision options	Informal consultation at discretion of officials

The SAFE FOODS Cycle - Improved Decision-making on Food Safety




Framing
Defining objective of regulatory action
• Identification of risks, costs, benefits & their distribution
• Risk profiling
• Identification of decision options
• Criteria for evaluation
Planning process & participation
• Terms of reference/selection of experts
• Monitoring indicators
• Early warning indicators
• Allocation of resources
Who does what?
Risk Assessors
Risk Managers
Risk/Benefit Assessment
Health & Environmental Assessment
Social & Economic Assessment
Ethical Assessment
• Hazard identification, characterisation and exposure assessment
• Risk/benefit characterisation
• Quality of life
• Economic impact
Evaluation
• Conclusions of the assessment
• Acceptability of distributions of risks, costs and benefits
Decision-making
• Assessment of management options
• Choice of action
Implementation & Monitoring
• Control of implementation
• Enforcement
• Monitoring of decision impact
• Monitoring of unintended effects
Review
• Decision
• Process
• Legislation & Policy
Risk communication
Stakeholder involvement

Main proposed changes to the status quo

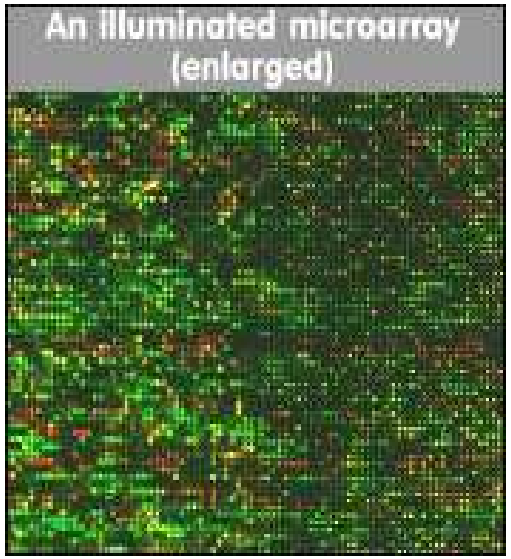
- Participatory and documented framing step
- Formal and documented assessment of impacts on
  - health (including benefits)
  - the environment
  - the social
  - the economy
  - ethics
- Use of new tools for hazard assessment and risk characterisation
- Explicit and participatory ranking of decision options
- Improved approaches to risk communication

To enhance transparency and accountability of the current process

Major achievements of Workpackages 1- 5

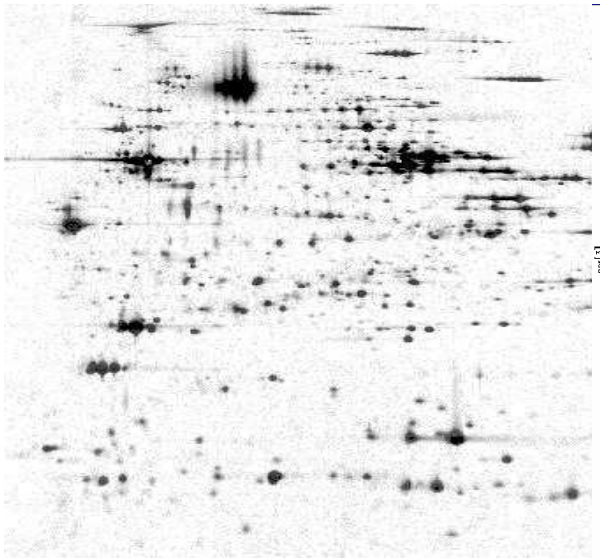
WP1: **Development of "omics" profiling methods and databases to compare compositions of crops from different agricultural production systems and breeding methods**

Transcriptomics



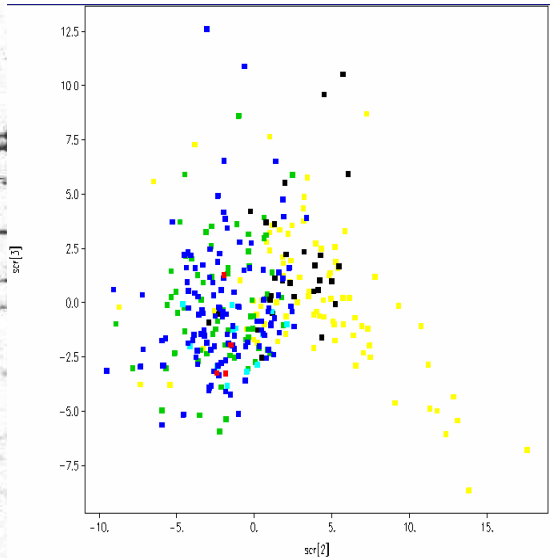
Illuminated micro-array

Proteomics



2-Dimensional protein gel

Metabolomics



A combination of chromatographic and other methods

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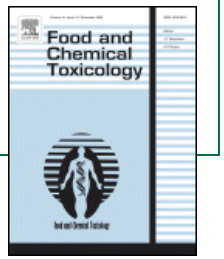
Main achievements of Workpackages - continued

WP2:

- Establishment of a widely accessible database of experts on diverse food safety issues
- Upcoming special issue in *Food and Chemical Toxicology* with reviews on emerging risks

(microbiological, chemical, mycotoxins)



WP3:

- Harmonised food consumption and residue databases allowing pan-European probabilistic exposure calculations
- Development of a new probabilistic risk model to quantify risks through the integration of exposure and effect modeling
- Development of a model to quantify risks from combined exposure to different chemicals

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Main achievements of Workpackages - continued

WP4: A better understanding of consumer perceptions regarding food risk management, based on:

- Focus group studies
- Large surveys across 5 countries
- Information experiments

- Practical recommendations for proactive communication of risks and uncertainties

WP5: Recommendations for defining stakeholder participation based on:

- Review of institutional structures and practices in five Member States and at EU-level
- Workshops with stakeholders, experts and regulators

Book publication:
"*Food Safety Regulation in Europe: A Comparative Institutional Analysis*"

Conclusions

- The SAFE FOODS project develops an improved framework for risk analysis that integrates the assessment of health, environmental, economic, and social impacts and ethics, and is more transparent and accountable.
- We are developing improved tools for compositional analysis of foods, probabilistic modeling of exposures and impacts, and risk communication.
- We have identified gaps between principles on good governance and practice in decision-making on food safety and developed first recommendations to address these.
- We are using case studies to assess potential challenges to practical implementation and to refine our recommendations.

For more detail and new results please consult our website at:

www.safefoods.nl