



Datageneration related to The Risk Analysis

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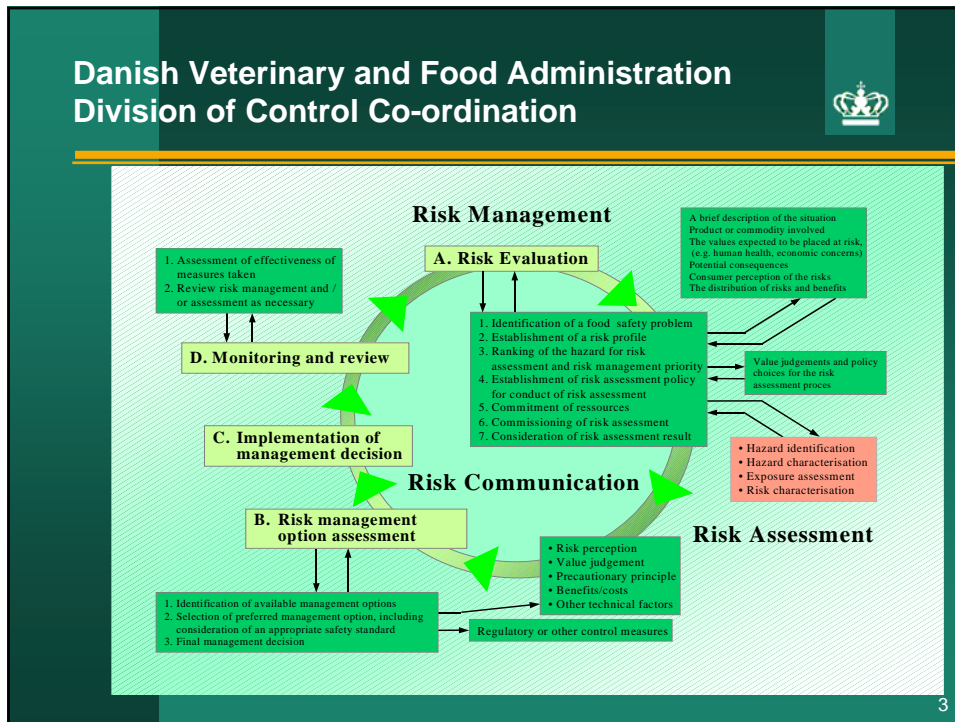
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Issues of today :

- The concept of Risk Analysis and related data
- The Danish concept for datageneration

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**The background for
implementation of Risk Analysis**

(European Commission)

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”WHITE PAPER ON FOOD SAFETY”

COMMISSION OF THE EUROPEAN
COMMUNITIES

Brussels, 12.1.2000

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Risk analysis

The **Risk analysis** must form the foundation on which food safety policy is based.

The EU must base its food policy on the application of the three components of risk analysis:

1. **Risk assessment** (scientific advice)
2. **Risk management** (regulation and control)
3. **Risk communication.**

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The pillars of food safety contained in this White Paper :

- scientific advice
- data collection and analysis,
- regulatory and control aspects
- consumer information

must form a seamless whole to achieve this integrated approach.

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ESSENTIAL ELEMENTS OF FOOD SAFETY POLICY:

Information gathering and analysis – scientific advise


- Informations from member states

Monitoring and surveillance

- Networks for public health monitoring and surveillance
- Surveillance plans of zoonoses and residues
- Rapid alert systems

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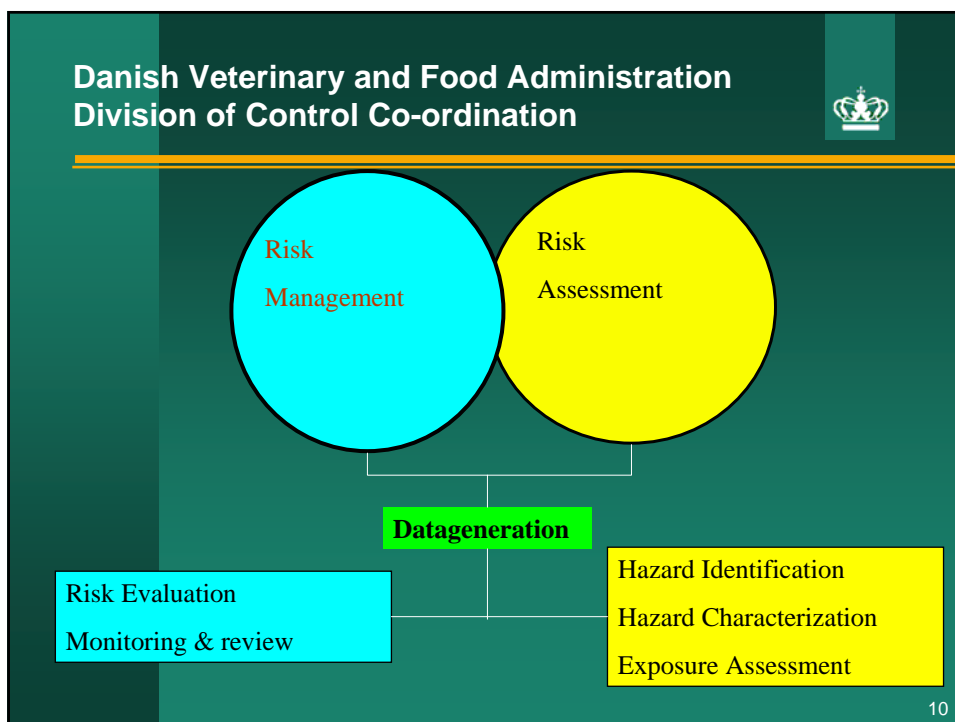
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**REGULATION (EC) No 178/2002
OF THE EUROPEAN PARLIAMENT
AND OF THE COUNCIL
of 28 January 2002**

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

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Laboratory data related to the Risk Analysis

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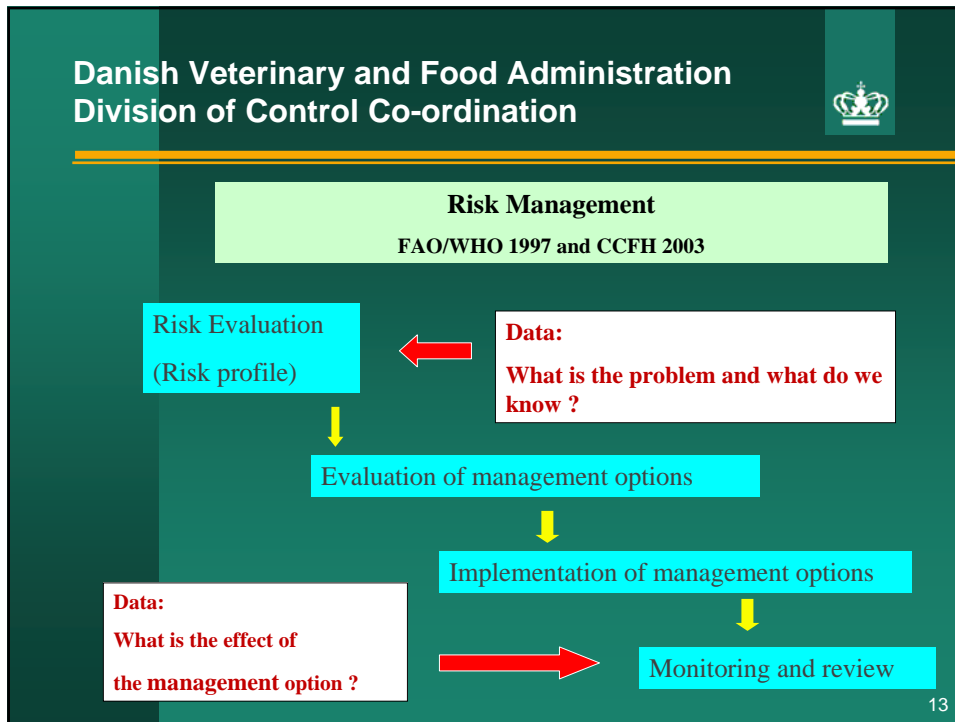


What is the purpose ?

Data for:

- Risk profiles
- Risk Assessment
- Control campaigns (monitoring)

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Risk evaluation:


PRINCIPLES AND GUIDELINES FOR THE CONDUCT OF MICROBIOLOGICAL RISK MANAGEMENT, Draft CCCFH 2003

Risk Profile:

A Risk Profile is a description of a food safety problem and its context developed for the purpose of identifying those elements of a hazard or risk that are relevant to risk management decisions.

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MONITORING AND REVIEW:


PRINCIPLES AND GUIDELINES FOR THE CONDUCT OF MICROBIOLOGICAL RISK MANAGEMENT, Draft CCCFH 2003

Monitoring:

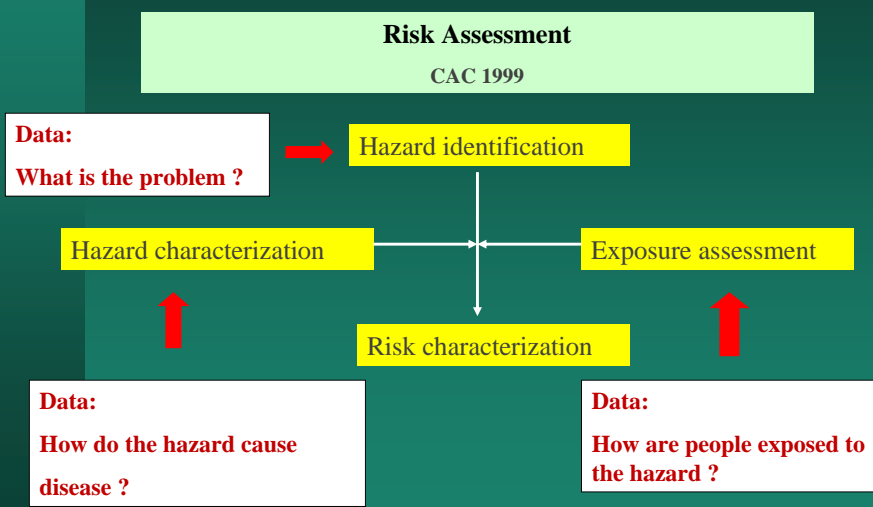
Monitoring is used to provide information on risks to human health from specific hazards and/or foods. In this respect, surveillance of human populations includes investigation of food-borne disease outbreaks and product tracing/traceability to the source of the likely causal hazard/pathogen

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Risk Assessment
CAC 1999



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    graph TD
      A[Data: What is the problem?] --> B[Hazard identification]
      B --> C[Hazard characterization]
      B --> D[Exposure assessment]
      C --> E[Risk characterization]
      D --> E
      F[Data: How do the hazard cause disease?] --> C
      G[Data: How are people exposed to the hazard?] --> D
  
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The diagram illustrates the Risk Assessment process according to CAC 1999. It starts with a box labeled "Data: What is the problem?" which points to "Hazard identification". From "Hazard identification", the process branches into "Hazard characterization" and "Exposure assessment". Both of these lead to "Risk characterization". Below "Hazard characterization" and "Exposure assessment" are two data boxes: "Data: How do the hazard cause disease?" and "Data: How are people exposed to the hazard?", with red arrows pointing up to their respective process boxes.

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Hazard

A biological, chemical or physical agent in, or condition of, food or feed with the potential to cause an adverse health effect.

(No 178/2002)

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Hazard Identification:

PRINCIPLES AND GUIDELINES FOR THE CONDUCT OF
MICROBIOLOGICAL RISK ASSESSMENT CAC/GL-30 (1999)

The identification of biological, chemical, and physical agents capable of causing adverse health effects and which may be present in a particular food or group of foods.

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Hazard Characterization:

PRINCIPLES AND GUIDELINES FOR THE CONDUCT OF
MICROBIOLOGICAL RISK ASSESSMENT CAC/GL-30 (1999)

The qualitative and/or quantitative evaluation of the nature of the adverse health effects associated with the hazard. For the purpose of microbiological risk assessment the concerns relate to microorganisms and/or their toxins.

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Exposure Assessment:

PRINCIPLES AND GUIDELINES FOR THE CONDUCT OF
MICROBIOLOGICAL RISK ASSESSMENT CAC/GL-30 (1999)

The qualitative and/or quantitative evaluation of the likely intake of biological, chemical, and physical agents via food as well as exposures from other sources if relevant.

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Examples of data for the EU-commission:

- Council Directive 96/23/EC of 29 April 1996 on measures to monitor certain substances and residues thereof in live animals and animal products
- Directive 2003/99/EC of the European Parliament and of the Council of 17 November 2003 on the monitoring of zoonoses and zoonotic agents, amending Council Decision 90/424/EEC
- Regulation (EC) No 2160/2003 of the European Parliament and of the Council of 17 November 2003 on the control of salmonella and other specified food-borne zoonotic agents

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Examples of data for the EU-commission:

- 1999/313/EC: Council Decision of 29 April 1999 on reference laboratories for monitoring bacteriological and viral contamination of bivalve molluscs
- Council Directive 92/46/EEC of 16 June 1992 laying down the health rules for the production and placing on the market of raw milk, heat-treated milk and milk-based products
- Council Directive 97/78/EC of 18 December 1997 laying down the principles governing the organisation of veterinary checks on products entering the Community from third countries
- Council Directive 89/397/EEC of 14 June 1989 on the official control of foodstuffs
- Council Directive 93/99/EEC of 29 October 1993 on the subject of additional measures concerning the official control of foodstuffs

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The Danish strategy related to sampling for microbiological testing

In general:

Focus on food safety – pathogenic microorganisms

Focus on source related control

- Fewer samples for "control" purposes at retail level
- Samples at retail level should be focused on regional control campaigns

More samples for Risk Management and Risk Assessment

- Risk Profiles
- Monitoring
- Exposure assessment

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Strategy related to sampling for microbiological testing

Companies that handles food:

18.000 at retail level

1.400 authorized (production)

Estimated number of samples needed : 57.000 /year

Distribution of samples between the regional control centres is based on the number of companies within the region.

- Regional control at retail level : 40%
- Regional control at authorized companies : 30%
- Centrally coordinated projects : 30%

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Public sampling for microbiological testing in DK
 (primary production not included)

	1998	2001	2002	2003	2004
Total number of samples	90.000	77.000	53.000	57.000	50.000
Retail level (for inspection)	79.000	60.000	23.000	23.000	23.000
Autorized companies, (for inspection)	8.000	7.000	17.000	17.000	17.000
Centrally coordinated projects	3.000	10.000	13.000	17.000	10.000

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Types of Centrally Coordinated Microbiological Projects (CCMP)
Examples given from the program in 2003

Risk profiling:

- Presence of VTEC O26, O103, O111 and O143 in beef Cattle (1500 samples)
- Presence of Campylobacter in precut ready-to-eat salad (500 samples)

Risk Assessment:

- Effect of different reduction strategies on the number of Campylobacter on broilers at slaughter level (2000 sampl.)
- Presence and number of Campylobacter on Turkeys during slaughter combined with antibiotic resistance testing (1500 samples)

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Types of Centrally Coordinated Microbiological Projects (CCMP) Examples given from the program in 2003

Monitoring and Review:

- Surveillance program on antibiotic resistance in bacteria from foods - DANMAP (1000 samples)
- Listeria monocytogenes in ready-to-eat foods (1200 sampl.)
- Campaigns from the EU - e.g. Vibrio in seafoods (1000 samples)

A total of 14 CCMP projects comprising 16.000 samples was scheduled for the year 2003 . Sampling and testing takes place at the eleven regional control centres and six regional laboratories.

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Types of Centrally Coordinated Microbiological Projects (CCMP) Examples given from the program in 2004

Risk profiling:

- Presence of VTEC O26, O103, O111, O143 and O157 in game deer and sheep/lamb at slaughter (600 samples)
- F-RNA phages, E. coli, virus and Vibrio spp. in shellfish (600 samples)
- Enterobacter Sakazakii in dried milk (200 samples)
- Salmonella in pasteurized egg products (300 samples)

Risk Assessment:

- Effect of different reduction strategies on the number of Campylobacter on broilers at slaughter level (1800 sampl.)

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Types of Centrally Coordinated Microbiological Projects (CCMP) Examples given from the program in 2004

Monitoring :

- Surveillance program on antibiotic resistance in bacteria from foods - DANMAP (1000 samples)
- Campylobacter in poultry products at retail (1050 samples)
- Listeria monocytogenes in fish products (1500 samples)
- Campaigns from the EU
 - e.g. Pathogenic bacteria in termised milk (200 s)
 - Bacillus a.o. in spices (500 samples)

A total of 13 CCMP projects comprising approx. 11.000 samples is scheduled for 2004. Sampling and testing takes place at the eleven regional control centres and six regional laboratories.