

Salmonella DT104 in Denmark

**— a case study of the interplay
between risk management, uncertain
knowledge and risk communication.**

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Aim of the Case Study

- Early precautionary action by the industry against a threat perceived as serious evolved into
- A still unsolved conflict between industry and authorities about
 - very strict regulation vs. very high costs for the industry
- What can be learned of the case in order to avoid similar negative outcomes of precautionary action in the future?

Short Background 1

- Reports from UK in the early 1990s indicated that MR ST DT104 infections in humans resulted in higher degree of hospitalization and death than other *Salmonellas*.
- In late 1996, when DT104 was first confirmed in Denmark, DBMC decided on voluntary basis on a programme of stamping out infected herds in an attempt to keep DT104 out of Denmark

Short Background 2

- In late 1997, in a TV-documentary,
 - the authorities were heavily criticized for not doing anything, whereas
 - DBMC was acknowledged for its initiative
- This immediately led to strong pressure on the Government and the newly formed Ministry of Food in the press and in the Parliament

Short Background 3

- In spring 1998, the newly formed FV authorities decided on a very strict regulation (0-tolerance) and
- announced that consumers were now safe
 - Still in 1998, the authorities were criticized for not being in control
 - A major outbreak with a fluoroquinolone-resistant strain, resulting in two deaths, occurred in summer 1998.

Short Background 4

- Eradication was given up in 2000
- However, infected herds must still be slaughtered separately and the meat must be given heat treatment
- Referring to a new Danish study on the relative risk of DT104, DBMC now thinks there is no reason to give DT104 special focus.
- However, the authorities disagree with this evaluation of the study

Uncertainty

- Precautionary action is based on uncertain information
- It is necessary to adopt a flexible regulation that can be adjusted in the light of new information
- This again makes it necessary to communicate clearly about the uncertainty

Mutual respect

- Precautionary action requires cooperation between industry and authorities
- Cooperation requires reasonable consensus and mutual trust
- Main obstacles:
 - Conflicts over economic responsibility
 - Profiling yourself at the cost of others

To Act is to Communicate

- Precautionary action also requires approval from the general public
- This necessitates risk communication
- Why did the TV-documentary have such a strong but unanticipated impact?
 - Actions can signal more than words
- Communication needs to be integrated in the management decisions

Further Perspectives

- Cooperation also requires reasonable consensus about the choice of right regulative means
- Main obstacles:
 - Disagreements about the efficiency of regulatory means because of
 - Disagreements about the underlying goal behind regulation

Concluding Summary

- Necessary elements for successful precautionary action:
 - Communication about uncertainty
 - Mutual knowledge about and trust in values, motives and goals
 - Integration of the communicative aspect in the management decisions themselves
 - Reasonable consensus about the goals underlying regulation and the right means