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## The Future of Risk Analysis

**Risk Management and the benefits side of the risk equation**

Dirk Hudig – Chairman of the European Risk Forum

### What is the socially agreed level of risk? How do we get the balance right?

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#### Overview

1. Innovation, scientific uncertainty and risk

2. Risk/risk, trade offs between alternatives

3. Ex-post risk / benefit assessment

4. Lisbon treaty, comitology change – the consequences

## Innovation and scientific uncertainty

Innovation is essential for growth, quality of life, progress

Cultural attitudes and incentives change (ageing society)

Risk of technologies or products? E.g. GMOs – food or health?

Are there choices? In food yes, in health no.

Better to control products (e.g. nano: products not processes)

Scientific evolution unpredictable – lasers for music? Petroleum as fuel?

Public risk perception / acceptance evolving

3

## Scientific uncertainty and precaution

Known unknowns and unknown unknowns

Scientists never say never – nothing is 100% sure

The Precautionary Principle or approach – what if potential risk is too great compared to the benefit?

Examples in medicine – side effects acceptable if the benefit is sufficient

Precaution is temporary, awaiting more scientific certainty – review and technical progress, proportionate measures

How much evidence do you need? Paralysis by analysis and risk of ideology

4

## Risk / Risk Trade off



5

## Risk / Risk Trade off (Graham/Wiener, 1995)

Managing one risk triggers other, potentially bigger risks

Risk and hazard – concept of exposure and probability

Risk and values – what is worse, global warming or nuclear waste?

Biofuels or food? 30% US corn into ethanol – world food prices and the poor;  
Effects of stunted growth – also hereditary.

Water safety – Cl2 or cholera? In Peru 3000 died

Animal health and new zoonoses/ Anti-biotics

Variety for fungicides, risk of resistance

6

## Ex-post evaluation and review

Behavioral economics and unintended consequences – tenant protection, MRI

“What is measured is managed” ; explicit assumptions

Compromise and clarity of objectives

Multiple objectives - risks of meeting none ( Biofuels?)

Revision is common, e.g. clinical trials directive, novel food directive

Ex-post closes policy cycle, but cycle often starts from a review

## Ex-post inhibitions

Internalization of constraints, new job dependence, stake in status quo

“Opening Pandora’s Box” – can get worse

Unintended consequences

Measuring cumulative effects / singling out specific factors

Stigmatization and irreversible effects – products/companies no longer exist

Distribution effects – impacts on the poor, e.g. fresh fruit safety, balanced diets

Benchmarks, cost per life saved (see OSHA)

Roles and responsibilities – those regulating also carrying out reviews?

## Policy Perspectives

EC commitment to evidence-based approach, agencies, Impact Assessment Board

Revision when needed: novel foods, clinical trials etc.

Innovation, personalized medicine

More mature authority of the EU agencies – EFSA and aspartame, no evidence provided

Risk communication and food scares

Greater transparency post Lisbon delegated acts, less risk of hijacking

New powers of the EP

Problems remain: Measuring what cannot be easily monetized, social equity

## Conclusions

Great progress is being made at EU level

The EU is getting better at risk assessment

Risk management is still potentially politicized – danger of excess caution

Risk communication improving through agencies

Next steps?

Better ex-post evaluation and getting greater benefits from regulation (regulators are not free)

Greater transparency should improve quality of debates on need

Commitment to scientific progress and innovation and growth is an overarching feature of the 2020 policy

The chief scientist is on the organigramme of BEPA. But where is he?

**Thank you for your attention!**

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