‘Risk-Based Science’ Explained

- Codex Alimentarius Commission - PRINCIPLES AND GUIDELINES FOR NATIONAL FOOD CONTROL SYSTEMS (CAC/GL 82-2013)

http://www.codexalimentarius.org/input/download/standards/13358/CXG_082e.pdf

“PRINCIPLE 6 RISK BASED, SCIENCE BASED AND EVIDENCE BASED DECISION MAKING

17. A competent authority should make decisions within a national food control system **based on scientific information, evidence and/or risk analysis principles4** as appropriate.

4 In accordance with members obligations under the World Trade Organisation Agreements, risk analysis frameworks adopted by national governments in the context of a national food control system should be consistent with the Codex *Working Principles for Risk Analysis for Food Safety for Application by Governments* (CAC/GL 62-2007) and relevant risk analysis policies developed by the World Organisation for Animal Health (OIE).”

- Ragnar Löfstedt, *Risk Management in Post-Trust Societies* (Palgrave Macmillan © 2005)

http://www.books.mec.biz/downloads/Risk_Management_in_Post-Trust_Society/NzEyOTM0MTYz

“Risk management encompasses a series of strategies or models. Max Weber, for example, defines four risk management ‘ideal types’:

(a) political regulatory process, including litigation;
(b) public deliberation;
(c) the **technocratic/scientific perspective**;
(d) risk management on strict economic grounds.

…Proponents of the technocratic perspective feel risk management should be left to the elites/experts advising government ministers and policy-makers with minimal or no public involvement. Only through strong science-led, expert advice and strict peer review will risk management ultimately work. Technocrats/experts want risk managers (civil servants) to create outcomes that citizens, after careful deliberation and training in relevant sciences, would want the government to produce. They see themselves as delegated agents of lay citizens who lack the time, expertise, resources and cognitive capacity to make complex risk-management decisions.

Notions of fairness as well as efficiency are important for technocrats. Technocrats are skeptical of stakeholder-based decision-making as well as decisions based on opinion polls and/or raw popular opinion. Involving the public and interest groups in a deliberative fashion can lead to inefficiencies both in time and funds, wrong prioritization of the hazards to be managed, and unforeseen difficulties, all of which breed distrust. By leaving risk management to experts, who

know the issue better than anyone else, society benefits. Nevertheless, technocrats argue that some form of public participation is needed to ensure accountability, and to force technocrats/experts to formulate decisions that are understood by the public. The technocrats are experts. They know the area that they are set to regulate better than any other. They serve as advisers to civil servants and ministers via expert advisory councils and agencies. They are not part of the politically appointed establishment, but are rather a politically insulated bureaucracy or expert unit that is assigned to deal with risks.

The technocratic risk management approach is well mapped out by John Graham, who argues that regulation of environmental and health problems should be based on the following criteria:

- **Scientific expertise indicating that exposure to identified pollutants can represent significant harm to the environment or human health**
- **Environmental problems identified should be prioritized by some type of 'comparative risk process' so as to ensure efficient use of resources**
- **To avoid risk-risk trade-offs, the proposed regulation should reduce the risks of the pollutants targeted to a greater extent than they increase other risks to the environment**
- **Economic costs of the proposed actions must be reasonably related to the degree of risk reduction**

In summary, regulatory reforms should be based on risk criteria drawn from economic and scientific spheres. By doing so, regulators are not drawn into populist regulatory arrangements which may satisfy the concerned public, but could have negative effects on the environment as a whole. Examples of such legislation are the US EPA's strict regulatory policies on toxic chemicals in the soil and asbestos in buildings, which are arguably low actual risks, while it ignores substantial environmental problems such as indoor air pollution. The technocratic approach, as advocated by Breyer, is to avoid inconsistencies caused by public and interest group opinion in the regulatory structures.

Policy-makers and regulators tend to favour the technocratic risk management perspective. It is more efficient (both in terms of time and money) than the deliberative approach and less controversial than the economic risk management alternative. The technocratic approach is arguably the exact opposite of the deliberative one. Ruckelshaus, a former US EPA Administrator, argued in the early 1980s that having scientists and experts characterizing the risks and carrying out the risk assessments would restore the credibility of the US EPA. In other words, cutting out interest groups and the public from the risk assessment part of the risk management process would not only lead to more efficient and competent decisions, but actually to greater public trust in the institution.

One important aspect of the technocratic approach is the risk-risk trade-off, to which policy-makers pay too little attention. Graham and Wiener postulate 'that **efforts to combat a target risk can unintentionally foster increases in countervailing risks'. 'Countervailing risks' can range from unintended consequences of public policy to medical side effects**. To reduce the chances of risk-risk trade-offs, decision-makers need to consider all aspects of any

regulatory policy. Proponents of risk-risk trade-offs note that public-driven regulatory agendas in many cases ignore the risk-risk trade-off. By adopting certain regulatory policies, risks in other areas may actually increase.

…**Much of the discussion about increasing the use of the technocratic approach occurs in the USA**: for example, in 1983 Ruckelshaus proposed risk management based on strict scientific criteria as a necessary tool for identifying environmental threats. In the early 1990s a series of bills were tabled in Congress advocating a risk-based approach for environmental decision-making. Although these bills have so far been unsuccessful, the indications are that risk-based criteria are increasingly utilized in government today."
(pp. 15, 22-25)