



The views of key stakeholders on an evolving food risk governance framework: Results from a Delphi study

M.T.A. Wentholt^{a,*}, G. Rowe^b, A. König^c, H.J.P. Marvin^d, L.J. Frewer^a

^a Marketing and Consumer Behaviour Group, Department of Social Sciences, Wageningen University, Hollandseweg 1, 6706 KN Wageningen, The Netherlands

^b Institute of Food Research, Colney Lane, Norwich NR4 7UA, UK

^c Conseillère auprès du Recteur, Université du Luxembourg 162A, Avenue de la Faïencerie, L-1511 Luxembourg, Luxembourg

^d RIKILT-Institute of Food Safety, Bornsesteeg 45, 6708 PD Wageningen, The Netherlands

ARTICLE INFO

Article history:

Received 19 August 2008

Received in revised form 22 May 2009

Accepted 12 June 2009

Keywords:

Food
Risk management
Risk communication
Risk analysis
Delphi

ABSTRACT

Evidence of a decline in public trust associated with food risk governance over recent years has called into question the appropriateness of the current dominant risk analysis framework. Within the EU-funded SAFE FOODS project a novel risk analysis framework has been developed that attempts to address potential shortcomings by increasing stakeholder (including consumer) input, improving transparency, and formally incorporating benefit and non-health aspects into the analysis. To assess the viability of this novel framework, the views of food risk experts from the EU and beyond were sought using a distributed online questionnaire process called *Delphi*. In this paper the main results of this survey are described, revealing varying levels of support for the key innovations of the novel framework. Implications of our results for the new and old frameworks, for the future of risk analysis, and for the policy community more widely, are discussed.

© 2009 Elsevier Ltd. All rights reserved.

Introduction

Food risk analysis is currently the responsibility and preserve of expert risk assessors and professional risk managers. However, recent years have seen a decline in public trust in risk governance, particularly in the food domain, related to a number of high-profile food crises (e.g., Houghton et al., 2008). Recognition of this decline has led to moves by national and international responsible bodies (such as the European Food Safety Authority, EFSA) to attempt to increase public confidence in the risk analysis process by (for example), improving the transparency of risk analysis practices through increasing stakeholder (including consumer) input into the decision-making process. The institutionalisation of these practices has, largely been on an *ad hoc* basis. The impact of increased transparency and enhanced stakeholder engagement on consumer confidence has yet to be systematically evaluated (see Rowe, 2007). Additionally, there are a number of other factors not currently incorporated within the formal food risk analysis process (which focuses on risk to *human health*) that arguably should be taken into account. These include environmental, social, economic, and ethical impacts. By implication, the term “impact” incorporates assessment of both *risk* and *benefit*, as both are possible outcomes of many potentially hazardous events. However, the current

risk analysis framework tends to focus on risks, excluding consideration of benefits.¹

The Framework VI EU-funded SAFE FOODS project (2004–2008) has aimed to develop an improved risk governance framework for foods that explicitly incorporates stakeholder consultation, public participation, and risk–benefit assessment. In addition, the framework formally considers the question of whether to include assessments related to *non-human health* aspects, such as environmental, socio-economic and ethical impacts. Emphasis is placed on enhanced transparency throughout the process.

In this paper we describe how, in the course of developing the food risk analysis framework, expert opinion was sought through a specific iterative, distributed method. Following elaboration on the issue of risk analysis and the potential problems associated with the dominant contemporary framework, a more integrated risk analysis framework is presented. The problems of acquiring expert opinion on such an important issue are outlined. One particular approach for overcoming some of these difficulties, the Delphi

¹ Exceptions to this general approach can be identified. For example, the acceptability of sodium nitrate as a food preservative has been evaluated (Branen et al., 2002). Some risk assessors have concluded that the potential (but small) long-term risks of cancer from the formation of nitrosamines is outweighed by the antibacterial benefits of the use of the preservative. Similarly, the risks from some fungicides, such as the Ethylene bisdithiocarbamates, and their metabolite ethylene-thiourea, have been discounted because of the presumed benefits of reduced food losses due to spoilage (Schneider and Dickert, 1993).

* Corresponding author. Tel.: +31 7 48 22 55/33 85; fax: +31 7 48 43 61.
E-mail address: meike.wentholt@wur.nl (M.T.A. Wentholt).

technique, is described. The SAFE FOODS Delphi consultation process is then outlined, and selected results are presented. The views of interested actors and stakeholders regarding the advantages and disadvantages of the framework are provided, together with views on its further development, along with commentary on the usefulness and limitations of the *Delphi* research method.

Food risk analysis: processes and problems

The dominant framework of risk analysis applied in the agri-food sector (FAO/WHO, 1995) comprises of three components: food risk assessment, food risk management and food risk communication. *Risk assessment* focuses on the systematic and objective evaluation of all available information pertaining to foodborne hazards. *Food risk management* aims to optimise protection of public health by controlling risks effectively through the selection and implementation of appropriate measures. It is within the remit of risk managers to consider various legal, political, social and economic issues, such as risk acceptability and policies for risk mitigation activities, although these other issues are excluded from risk assessment (despite data being available that could potentially contribute to understanding the effects of a specific hazard on these factors). *Risk communication* is defined as the interactive exchange of information and opinions concerning risks and risk management activities between risk assessors, risk managers, consumers and other interested parties. Interaction occurs between all three components of the framework.

It is accepted that food control systems are highly unlikely to deliver a completely risk-free food supply (WHO, 2004). However, some observers have described the food chain in Western Europe as having been subject to a 'paradox of progress' (Fischer and Frewer, in press). Increasingly strict standards, quality controls and monitoring procedures have been applied within the agri-food sector. This has been perceived to correspond with an increasing number of food safety incidents, which have contributed to a reduction in consumer confidence in food safety (e.g., Berg, 2004; de Jonge et al., 2007; Eiser et al., 2002; Frewer et al., 1996; Houghton et al., 2008; Vos, 2004). Prominent examples include outbreaks of *Escherichia coli* in hamburgers (Tuttle et al., 1999), *Salmonella* in eggs and poultry (Guard-Petter, 2001; French et al., 2005), *Listeria* in pates and soft cheeses (Ramsaran et al., 1998), and accidental or deliberate contamination of the food chain or specific food products with toxic compounds, such as dioxin (Verbeke, 2001). The bovine spongiform encephalopathy (BSE) crisis can perhaps be singled out as the most important factor leading to revisions of food safety policy in recent years (Reilly, 1999; Smith et al., 1999). Concerns about emerging technologies applied to the agri-food sector (such as genetic modification of crops) have also resulted in problems with public confidence in food risk analysis (see, for example, Frewer et al., 2004).

Various efforts have consequently been made to bolster societal confidence in food risk analysis. It has been argued that public trust in food safety will be facilitated by the functional (and in some instances structural) separation of components in risk analysis, particularly risk management and risk assessment (Houghton et al., 2008). This approach has been adopted by various institutions with responsibility for food safety governance, including EFSA. The effect on consumer and stakeholder trust has, however, proven difficult to assess, other than in aggregate terms (for example, by comparing societal trust ratings in different food safety institutions).

Other approaches to increasing societal trust in risk analysis practices have stressed the need to develop effective risk communication strategies with consumers that explicitly address their information needs (Houghton et al., 2006; Millstone and Van Zwanenberg, 2000; Van Kleef et al., 2007), or propose *greater stake-*

holder involvement (including of consumers) in the overall process or specific stages of food risk analysis (Dreyer et al., 2006; De Marchi and Ravetz, 1999). Greater inclusivity may reflect institutional changes developed to increase the transparency and openness of regulatory practices (Byrne, 2002; Dreyer et al., 2006). The institutionalisation of these various strategies have been rather *ad hoc*, and their success (e.g. in terms of increasing public trust) has only been evaluated informally, if at all (e.g., Rowe, 2007). How best to operationalise these strategies in the case of food safety requires further analysis.

There are, other potential limitations to the dominant risk analysis approach currently applied. Quality of Life parameters in risk assessment, and other legitimate factors, including societal and economic factors, tend not to be considered explicitly (Cope et al., in press) and have not been translated into current practice in food safety regulation. There is a more general trend in policy making within the European Commission and beyond concerning the systematic assessment of economic, social, environmental, health and ethical factors associated with monitoring provisions (Dreyer et al., in press). For example, in the area of health impact assessment, consumption of specific foods may have both a positive and a negative health effect. A case in point is provided by fish and seafood. Biomagnification of persistent toxicants in freshwater and marine food chains provides an important pathway for human exposure. At the same time, fish may also constitute an important source of omega three fatty acids, which provide health benefits (e.g., Gochfeld and Burger, 2005; Levenson and Axelrad, 2006). Thus, assessment of health risks and health benefits are *both* relevant to the governance process. Similarly, quality of life assessment can also be quantified from a risk-benefit perspective, taking into account impact on different population segments (de Blok et al., 2007). Analysis of cost-benefit issues can be made in the context of environmental, health, and safety regulation (see for example, Arrow et al., 1997). Arguments can be provided to support analysis of both ethical costs and benefits associated with particular courses of (lack of) action (Wilson, 2002).

Given the uncertainties associated with *when* and *how* to involve stakeholders, and effectively communicate with the public, the lack of institutionalised and evaluated processes for promoting transparency, and the potential for assessment to also include systematic identification of the benefits (as well as risks) associated with potential food hazards, an improved food risk analysis framework is desirable. The development of a risk analysis framework that addresses these limitations has been an objective of one particular EU-funded project, entitled SAFE FOODS.

The SAFE FOODS framework

One aim of the SAFE FOODS project was to develop a risk governance framework that explicitly incorporates stakeholder consultation and public participation at appropriate stages in the process. The framework formally addresses the question of whether to include risk-benefit assessments, including those relating to environmental and socio-economic impacts, as well as ethical issues, and process transparency is emphasised throughout. The intermediate SAFE FOODS framework is summarised in Fig. 1.

The integrated framework describes an iterative decision process with four stages: *framing*, *risk-benefit assessment*, *evaluation*, and *risk management* (König et al., submitted for publication). At the *framing stage*, interested parties, experts and officials with interests in risk evaluation and management work together to gain an initial shared understanding of the issue, objectives, and broad courses of regulatory action. Areas of general agreement and dissent are documented in order to provide the basis for planning future decisions. The assessment and terms of reference, and

متن کامل مقاله

دریافت فوری ←

ISIArticles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات