Management of Health Risks from Environment and Food

Policy and Politics of Health Risk Management in Five Countries – Asbestos and BSE
ALLIANCE FOR GLOBAL SUSTAINABILITY BOOKSERIES
SCIENCE AND TECHNOLOGY: TOOLS FOR SUSTAINABLE DEVELOPMENT

VOLUME 16

Series Editor  Dr. Joanne M. Kauffman
6–8, rue du Général Camou
75007 Paris
France
kauffman@alum.mit.edu

Series Advisory Board

Professor Dr. Peter Edwards
Swiss Federal Institute of Technology – Zurich, Switzerland

Dr. John H. Gibbons
President, Resource Strategies, The Plains, VA, USA

Professor David H. Marks
Massachusetts Institute of Technology, USA

Professor Mario Molina
University of California, San Diego, USA

Professor Greg Morrison
Chalmers University of Technology, Sweden

Dr. Rajendra Pachauri
Director, The Energy Resources Institute (TERI), India

Professor Akimasa Sumi
University of Tokyo, Japan

Professor Kazuhiko Takeuchi
University of Tokyo, Japan

Aims and Scope of the Series

The aim of this series is to provide timely accounts by authoritative scholars of the results of cutting edge research into emerging barriers to sustainable development, and methodologies and tools to help governments, industry, and civil society overcome them. The work presented in the series will draw mainly on results of the research being carried out in the Alliance for Global Sustainability (AGS). The level of presentation is for graduate students in natural, social and engineering sciences as well as policy and decision-makers around the world in government, industry and civil society.

For other titles published in this series, go to
www.springer.com/series/5589
Management of Health Risks from Environment and Food

Policy and Politics of Health Risk Management in Five Countries — Asbestos and BSE

Edited by

Hajime Sato
The University of Tokyo, Japan

Springer
**THE AGS**

The Alliance for Global Sustainability

**Chairman:**

Mr. Lars G. Josefsson, President and Chief Executive Officer, Vattenfall AB

**AGS University Presidents:**

Prof. Hiroshi Komiyama, President, University of Tokyo  
Dr. Susan Hockfield, President, Massachusetts Institute of Technology  
Prof. Karin Markides, President, Chalmers University of Technology  
Prof. Ralph Eichler, President, Swiss Federal Institute of Technology, Zürich

**Members:**

Mr. Eiichi Abe, Managing Director, Nissan Science Foundation  
Dr. Thomas Connelly, Chief Science and Technology Officer, DuPont  
Dr. Hans-Peter Fricker, CEO, WWF Switzerland  
Mr. Lars G. Josefsson, President and Chief Executive Officer, Vattenfall AB  
Mr. Heinz Karrer, CEO of Axpo Holding  
Mr. Kazuo Ogura, President, The Japan Foundation  
Mr. Dan Sten Olsson, CEO, Stena AB  
Mr. Motoyuki Ono, Director General, The Japan society for the Promotion of Science  
Mr. Mutsutake Otsuka, Chairman, East Japan Railway Company  
Ms. Margot Wallström, Member of the European Commission  
Prof. Hiroyuki Yoshikawa, President, National Institute of Advanced Industrial Science and Technology  
Dr. Hans-Rudolf Zulliger, President Stiftung Drittes Millenium, Board of Directors, Amazys Ltd.
Aphorisms

Ad primum ergo dicendum quod omnia corporalia obediunt pecuniae, quantum ad multitudinem stultorum, qui sola corporalia bona cognoscunt, quae pecunia acquiri possunt. Judicium autem de bonis humanis non debet sumi a stultis, sed a sapientibus, sicut et iudicium de saporibus ab his qui habent gustum bene dispositum.

Sancti Thomae de Aquino. (1265–1272). Corpus Thomisicum. Summa Theologiae, prima pars secundae partis a quaestione I ad quaestionem V.

Die menschliche Vernunft hat das besondere Schicksal in einer Gattung ihrer Erkenntnisse: daß sie durch Fragen belästigt wird, die sie nicht abweisen kann; denn sie sind ihr durch die Natur der Vernunft selbst aufgegeben, die sie aber auch nicht beantworten kann; denn sie übersteigen alles Vermögen der menschlichen Vernunft.

Immanuel Kant. (1787). Kritik der reinen Vernunft, Vorrede.

The central concern of administrative theory is with the boundary between the rational and the nonrational aspects of human social behavior. Administrative theory is peculiarly the theory of intended and bounded rationality – of the behavior of human beings who *satisfice* because they have not the wits to *maximize*.

Harbart A. Simon. (1945). Administrative Behavior, Commentary on Chapter V.

Economists tell you what you get for what you give up. Political scientists tell you who gets what and why. Far from being contradictory or incompatible, politics and markets are twin forms of competitive redundancy that complement one another by learning from social interaction.


As all politics, however consequential, is local, so however ambitious, is all understanding. No one knows everything, because there is no everything to know.

Preface

The Alliance for Global Sustainability

The Alliance for Global Sustainability (AGS) is a unique, international partnership between four of the world’s leading science and technology universities: Swiss Federal Institute of Technology, Zurich, Massachusetts Institute of Technology, The University of Tokyo, and Chalmers University of Technology.

Formally created in 1997, the AGS today brings together hundreds of university scientists, engineers, and social scientists to address the complex issues that lie at the intersection of environmental, economic, and social goals. Together, we seek to meet these challenges through: Improving scientific understanding of global environmental challenges; Developing technology and policy tools to help societies reconcile ecological and economic concerns; and Educating of a new generation of leaders committed to meeting the challenges of sustainable development.

Since its inception, the AGS has pioneered a new research paradigm that brings together multi-disciplinary research teams from the partner institutions. Strong, local programs engage faculty, students and senior research staff from across their respective institutes. These research teams have developed a significant body of new knowledge on critical issues in sustainability in the areas of energy and climate, mobility, urban systems, water and agriculture, cleaner technologies, and policy and communications.

Since the first set of AGS-sponsored research projects was launched in 1997 with support by the Avina Foundation, the AGS has worked with farsighted leaders from global businesses and industries, governments, and NGOs worldwide to provide innovative and practical solutions to real and urgent environmental problems around the world.

(Adapted from AGS website: http://www.theags.org/about/)
Acknowledgements

This book is based on the research project entitled “Strategic management of health risks” (2005–2009; Principal investigator [PI]: Hajime Sato, project researches: Andrew Webster, Bernard Reber, Pierre-Benoit Joly, Rose Campbell, and Domyung Paek), funded by the Alliance for Global Sustainability (AGS), the University of Tokyo. The research project entitled “Management and Communications of Health Risks from an International Comparative Perspective” (2006–2008; PI: Hajime Sato) was supported by a grant from the Japan Society for the Promotion of Science. The project entitled “A comparative study on health risk management” (2007: PI: Hajime Sato and Andrew Webster), was supported by a Daiwa Small Grant from the Daiwa Anglo-Japanese Foundation. Finally, a research on comparative journalism was funded from Japan Study and Butler University Holcomb Awards Committee (2006–2007; PI: Rose Campbell).

AGS board members at the University of Tokyo (UT) provided continuous supports for the project. Special thanks should go to Hiroshi Komiyama (President of the UT, April 2005 – March 2009, the AGS Governing Board), Akimasa Sumi (AGS Office, Integrated Research System for Sustainability Science, and Center for Climate System Research, UT), and Yuji Togami (AGS Office, UT). In various phases of the research project, many people offered generous supports, advice and insights. They include Drs./Profs. Philip J. Landrigan (Mount Sinai School of Medicine, New York), Julian Peto (London School of Hygiene and Tropical Medicine), Catherine Labrusse-Riou (Paris University I), Jean-Paul Gaudilliere (INSERM, Villejuif- Île-de-France), Takashi Onodera (Graduate School of Agriculture and Life Sciences, UT), John D. Montgomery (John F. Kennedy School of Government, Harvard University), and several members of the Society for Policy Sciences, to name a few.

Partial results from these projects were presented by Domyung Paek and Hajime Sato on July 9–10, 2007, in Seoul, Korea, at the US-Korea Workshop, entitled “Understanding Bioenvironmental Complexity” sponsored by the School of Public Health at Seoul National University, Rutgers – The State University of New Jersey, the US National Science Foundation, and the Korea Science and Engineering Foundation; and by Rose Campbell and Hajime Sato on November 15–18, 2007, in Chicago, USA, at the 93rd Annual Convention, National Communication Association.
Contents

Part I  Introduction

1  The Policies and Politics of Health Risk Management......................... 1
Hajime Sato

Part II  Management of environmental risk: Cases of asbestos

2  Development of Asbestos Regulation in Japan: Incremental Policy Making and Crisis Politics........................................................... 29
Hajime Sato

3  Emergence of Asbestos-related Health Issues and Development of Regulatory Policy in the UK........................................... 63
Andrew Webster, Conor M.W. Douglas, and Hajime Sato

4  Development of Asbestos Regulation in France: Policy Making Under Uncertainty and Precautionary Principle........ 101
Bernard Reber and Hajime Sato

5  Asbestos in the United States ............................................................ 127
Rose Campbell, James S. Webber, and Hajime Sato

6  Risk Perception and Management of the Asbestos Industry in Korea: Rise and Fall of the Industry and Health Issues ..................................................... 167
Domyung Paek and Hajime Sato

Part III  Management of food risk: Cases of BSE-related human risk management

7  Policy and Politics of BSE-related Human Disease Prevention in Japan: In Pursuit of Food Safety and Public Reassurance .......... 183
Hajime Sato
<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>BSE in the United Kingdom</td>
<td>221</td>
</tr>
<tr>
<td></td>
<td>Andrew Webster, Conor M.W. Douglas, and Hajime Sato</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Governing Uncertain Threats: Lessons from the Mad Cow Saga in France</td>
<td>267</td>
</tr>
<tr>
<td></td>
<td>Pierre-Benoit Joly and Hajime Sato</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Policy and Politics of BSE in the United States</td>
<td>317</td>
</tr>
<tr>
<td></td>
<td>Rose Campbell and Hajime Sato</td>
<td></td>
</tr>
<tr>
<td>Part IV</td>
<td>Conclusions</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Conclusions: Policies, Politics, and Communications of Health Risks: In Search of Safety and Public Reassurance</td>
<td>341</td>
</tr>
<tr>
<td></td>
<td>Hajime Sato</td>
<td></td>
</tr>
<tr>
<td></td>
<td>List of the Project Members</td>
<td>377</td>
</tr>
<tr>
<td></td>
<td>Index</td>
<td>381</td>
</tr>
</tbody>
</table>
Part I

Introduction
Health Risks and Their Management

Risk is a part of life; it is the potential for harm and the probability of encountering negatively-valued events. The language of risk has become an intrinsic part of the political rhetoric in many industrialized countries. Safety, on the other hand, is the degree to which, in a group of people, one or more of the following three conditions are controlled, avoided, prevented, or made less frequent or probable: (1) temporary ill health or injury, (2) chronic or permanent ill health or injury, and (3) death (Adams 1995; Siddall 1981). As people become wealthier, it becomes easier for them to avoid what previously would have been seen as involuntary hazards. Wealthier societies are thus characterized by a reduction in the fear of numerous health hazards, as our ability to control them correspondingly improves. However, this desire for safety is unsatiable. Whereas scientists and an attentive public are searching for real and potential health issues, politicians might be happy with those emerging issues, as they give them opportunities to take actions that provide them with political rewards.

Risk management has become a dominant concern in public policy. Since the 1970s, environmental hazards have continued to be conspicuous as a social issue (Chaffe 1985; Mintzberg 1988; Pauchant & Mitroff 1992; Porter 1980). Starting in the 1990s, perceived risks associated with genetically modified foods, Bovine Spongiform Encephalopathy (BSE) and variant Creutzfeldt Jakob Disease (vCJD), and emerging pathogens such as \textit{E coli} O157, as well as increasingly complex information about appropriate nutrition, continue to be foci of public fear and cynicism about how food risks are managed (Frewer et al. 1996, 1997, 2001). Study of these issues continues to shed light on the management of technological advances and
industrial development, and they call for the efficient application of scientific knowledge, efforts to address the changing health concerns of the public, and more effective policies. Also, failure in risk management can erode a government’s legitimacy. As is expected of a government, the first function of management is “prevoyance”, a word that means on the one hand to forecast and foresee, and on the other hand to secure and make reliable (Foyol 1916).

The quest for safety is a balancing act: how can we use risk to get more of the good and less of the bad (Wildavsky 1988)? The controversy over risks and their management inevitably involves a confusing mixture of science and politics, including debates about which substances and technologies present risks, which margins of safety are achievable and prudent, and what costs are necessary and affordable for prevention (Graham et al. 1988). The controversy about known and potential risks arises in part from differences in people’s values and interests. In some cases, government actions are based on the law of sacrifice: the safety or macrostability of the whole is dependent on the riskiness (risk taking) or instability of the parts. For example, the mere possibility of an increase in the risk of cancer, no matter how small or speculative, is sufficient to justify severe regulatory restrictions on the use of a suspect substance.

Research Project: Strategic Management and Communication of Health Risks

This research project was intended to examine a set of health-related risk management cases from a comparative perspective. Concrete case histories were constructed with the help of an analytic framework drawn from political science, regulatory science, and sociology.

The regulation of asbestos use and the policy toward BSE (better known as the mad cow disease) were selected for examination. The hazard of asbestos use was scientifically debated as early as the 1960s, but its usage has not been denied or regulated promptly and universally in all countries. It is still an important social issue in many countries, both industrialized and economically developing ones. BSE policy is related to the issues of health, agriculture, and trade. Although scientific information is shared among countries, information about the perception and management of risk is not. Policies are not always concerted, and remain to be internationally disputed, as is exemplified by the import ban on US beef.

To examine the process of policy making on these issues, a comprehensive and exhaustive search was conducted for relevant historical documents. The search included archives of public records, both printed and on-line, as well as newspaper articles and reports of opinion polls. Databases of medical articles were also searched for publications on asbestos and BSE, and other types of documents and books, such as theses, essays and recollections, were assembled. Finally, supplementary interviews were conducted with (ex-)bureaucrats, politicians, researchers, and non-governmental organizations (NGOs).
The Policies and Politics of Health Risk Management

Concepts and Models as Perceptive Lenses

Studying politics, as Edelman argues, is not simply an effort to learn what is happening. It is also a process of making observations that conform to sets of assumptions called models (Edelman 1971). Models state the relationships that have been observed among the conditions and patterns of political life, and they accumulate credibility insofar as evidence is gathered to support them (Almond & Powell 1966, p. 15). These models differ in terms of the perceived decision makers (actors), as well as their perceived efficacy; these serve as the independent variables of the model. In this study, such concepts and models have been employed to examine the socio-political process of risk management concerning asbestos and BSE.

Policy Process Analysis

In the framework of Policy Process Analysis, policy is considered to be a combination of several processes, which, although interrelated, still can be conceived as distinct elements determining government action (Snare 1995). Although the details of these conceptions vary, they all have several attributes in common. The first stage of the traditional policy process, problem definition, involves the recognition of an emerging problem or crisis. Second, a policy to address the problem is formulated by various governmental and non-governmental actors, such as legislators, executive branch officials, the courts, citizens, and special-interest groups. Specific policy proposals are then adopted in the third stage. The fourth stage is policy implementation, wherein the adopted policies are executed by administrative units. Finally, in the policy evaluation stage, policy makers determine whether the policy has achieved its goals (Altman & Petkus 1994).

This study adopts the conceptualization of these processes proposed by Jones and Kingdon (Jones 1978; Kingdon 1973; Lindblom & Woodhouse 1993). Each process is divided into several stages: Problem Finding and Issue Definition (identification and description of issues and problems), Agenda Setting (deciding what issues are to be officially addressed), Development of Alternatives (formulation of policy proposals), Decision and Legitimization (selection of policy proposals and legitimizing their adoption), and Implementation and Appraisal (initial implementation and continued application of the decision, and evaluation of the government’s actions). Each of these component processes has been extensively studied (Anderson 1978; Axelrod 1973; Bauer et al. 1963; Cobb & Elder 1972; Cobb et al. 1976; Connolly 1984; Crenson 1971; Elder & Cobb 1983; Farrar et al. 1980; Freedman 1978; Hall 1973; Jones 1975, 1978; Lasswell 1954; Levine 1982; Light 1982; Lindblom 1959; Lipset 1981; Rochefort & Cobb 1994; Rogers & Bullock 1972; Thompson 1981, 1984; Van Meter & Van Horn 1975; Walker 1981; Weiss 1970; Weiss 1989).

As noted above, the Policy Process Analysis breaks down policy making into functionally distinct processes and provides a useful conceptual analysis of this complexity. The efforts of various coalitions to translate their beliefs into government