

winning the risk game

a three-point action plan for managing risks that affect consumers

by Sue Dibb



About the National Consumer Council

The National Consumer Council is an independent consumer expert, championing the consumer interest to bring about change for the benefit of all consumers. We do this by working with people and organisations that can make change happen – governments, regulators, businesses and people and organisations who speak on behalf of consumers.

We are independent of government and all other interests.

We conduct rigorous research and policy analysis and draw on the experiences of consumers and other consumer organisations. We publish. We campaign. We help people to come together to advance the consumer cause.

Issues of disadvantage are at the heart of our work, as often the most vulnerable people find it hardest to be heard.

We have linked organisations in England, Scotland and Wales, and a close relationship with colleagues in Northern Ireland. And we work with consumer organisations in Europe and worldwide to influence European and global governments and institutions.

We are a non-departmental body, limited by guarantee, and funded mostly by the Department of Trade and Industry.

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Our Risk project

The objective of our Risk project is to achieve the right balance between innovation and consumer protection by improving the understanding, communication and management of risk and uncertainty and to develop and promote models of risk governance that reflect consumer perspectives. We aim to promote greater understanding of consumers' experiences, particularly disadvantaged consumers, in relation to handling issues of risk and uncertainty.

Our work has covered three case study areas: food policy, new technologies and financial services.

We have also published:

Handling risks to the public: response to the Strategy Unit consultation on principles of handling risks to the public (2003)

Running Risks: summary of NCC research into consumers' views on risk (2002)

Retirement Roulette: a case study of consumer perspectives on the risks to retirement income (2002)

Risk and Regulation: themes paper for a seminar (2002)

Science, risk and trust: a briefing (2002)

Learning the lessons of BSE: NCC response to the government's interim response to the Report of the BSE Inquiry (2001)

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Summary and recommendations

One year ago the deadly SARS (severe acute respiratory syndrome) virus first appeared in China and within weeks the world faced an unprecedented global alert. The UK escaped the most devastating consequences of the virus, but this doesn't mean we can breathe more easily because SARS appears to have gone away. Consumers are facing new and uncertain risks yet poor government handling of such risks as BSE, foot-and-mouth, controversy over GM crops and the MMR (measles, mumps and rubella) vaccine has severely dented consumers' trust in those who should protect our interests. The rapid pace of developments in science and technology – such as artificial intelligence, cloning and nanotechnology – will herald major advances, but also pose new challenges for society.

With government facing falling levels of consumer trust and confidence, now is the crucial time to learn the lessons essential to ensure we are ready to deal with the next *urgent* crisis – and also to deal better with *emergent* risks that have an impact on the public. At stake is not just consumer trust but also significant cost to the economy.

A failure to anticipate or act swiftly to control risks can have disastrous consequences for those affected directly and in costs to the economy and taxpayers. SARS was estimated to have caused US \$30 billion of damage to Far East economies alone. The cost of BSE was spread across the European Union (EU), even though Britain accounted for 95 per cent of cases. The outbreak will cost European governments and farmers £64 billion (1). Even closer to home the cost to taxpayers and businesses of the 2001 foot-and-mouth outbreak was over £8 billion (2). Obesity and other diet-related diseases cost the NHS and taxpayers £15 billion every year (3) while pensions misselling has cost the financial services industry £12 billion in compensation (4). While governments and business will always require contingency funds for genuine emergencies, better risk management should reduce this need.

Dealing with this new risk agenda requires a new approach. This report by the National Consumer Council (NCC) calls for a dramatic change in how seriously government departments and other risk managers deal with the anticipation, management and communication of risks to the public. It draws lessons that can be learned from the SARS experience and the handling of other high-profile risk issues – including GM food, mobile phones and the MMR vaccine – and highlights developing good practice.

In this report we set out three key messages for the UK.

1. Better understanding of consumers (new emotional literacy)

Government and regulators need to be **more emotionally literate** in tuning in to how consumers deal with risk. Too often consumers' fears are dismissed as irrational or ignorant when compared to the way that experts measure risk. It is a waste of time to try to 'educate' the public to perceive risks in the same way as experts. The NCC's extensive research shows that bridging this gap requires new ways of listening to consumers; their perceptions of risk need to be understood, acknowledged and taken into account in decision-making. We need to see regulators and government departments using psychologists and social scientists to understand consumer responses and for greater expertise in risk communication.

2. Governance

Drawing on our research we set out a framework for good risk governance to ensure the mistakes of the past are not repeated.

To support consumers' needs and to help build trust in risk decision-making processes and bodies, the NCC has developed a model for risk governance.

The key is a process that:

- is open and transparent;
- is inclusive of stakeholders (including consumers) from an early stage;
- is clear and accountable;
- values scientific expertise but recognising the need to take account of other factors;
- adopts the judicious use of the precautionary principle.

3. Better communication of risk

The government and other risk managers need to be more open and honest when it comes to dealing with risks to the public including openness about uncertainties. The report identifies *emergent risks* where openness and involvement are needed to inform and carry a consensus and build trust, particularly where there are uncertainties and/or controversy; and *urgent risks* – such as SARS – where a model of openness that marries leadership with open and honest communication is needed.

The government must take the lead in assessing and controlling risks but consumers want, where possible, to be able to make their own choices. For this they need appropriate and trustworthy information – not propaganda or ‘government spin’ – so they can weigh up the risks and benefits for themselves.

We call for greater expertise in risk communication as a specialist activity and for risk to be a fourth ‘R’ of education to help both future professionals and citizens to better understand risk issues.

Recommendations

The government has recognised the need to improve its ability to handle matters of risk and uncertainty (5) and has published a set of *Principles of Managing Risks to the Public* – see Appendix (6). We welcome this commitment, yet there is much that needs to be done to ensure their full and consistent implementation.

Our recommendations are aimed at government and regulators, but we recognise that the principles we advocate can be applied by those managing risks to the public in other organisations or businesses.

To all those who assess, manage and communicate risks that affect consumers in government departments, agencies, regulatory bodies, scientific institutions and business:

- To adopt the NCC’s model of good risk governance to ensure that consumers’ concerns and values are understood and acknowledged, and that their interests and needs are fully taken into account in risk decision-making processes and communication strategies.

To UK government departments, agencies and regulators:

- To implement the government’s *Principles of Managing Risks to the Public* in practice and facilitate the organisational culture change required. The training of policy-makers and scientific advisers needs to be an essential element of the implementation strategy. Sufficient resources – for example, for programmes of change management and staff training – must be available.
- To monitor and evaluate the implementation and impact of the principles. At the end of the two-year programme of change, progress should be evaluated and the results published by the government’s Risk Support Team. This should form the basis of review and consideration of where further action is needed.

- To implement better co-ordination, collaboration and clear responsibilities of risk management strategies, particularly where risks cross a number of departmental and agency responsibilities.
- To use social scientists to ensure better understanding of consumer responses to risk, and for greater expertise in risk communication to be available.
- To develop communication strategies with consumers (and other stakeholders) that focus on two-way discussion and facilitate openness and transparency.
- To ensure appropriate and trusted information is available on risk matters to enable consumers, where possible, to make their own choices.
- The UK government should encourage EU and international institutions to develop and implement similar good risk management processes and practices.

To the Department for Education and Skills, the Qualifications and Curriculum Authority, universities and other tertiary education bodies

- To help the understanding of risk issues – both among future professionals (for example, scientists, doctors, civil servants) as well as citizens – the study of risk and its effects on society should be introduced into secondary school and university curriculums.

Scope of this report

The word 'risk' is widely used in relation to a range of possible threats or opportunities. In this report, our focus is on the management of risks to the public including health and safety matters and risks associated with scientific or technological developments. Though many of the principles we outline are applicable to the management of other types of risks, we do not specifically focus in this report on financial or reputational risks or threats to the public from crime or accidents.

Chapter 1 of this report sets out the context for the new risk agenda, while Chapter 2 highlights the need for risk managers to be more emotionally literate in tuning in to how consumers deal with risk. The NCC's model for risk governance is set out in Chapter 3, backed up with reference to case studies. We focus on consumers' specific needs in relation to risk communication in Chapter 4.

1. The new risk agenda

Whether it is the findings of the latest medical research, scientific controversy over new technological developments, new food safety fears or threats from killer diseases or terrorism – our 21st century world can look a risky place.

The first anniversary of the SARS (severe acute respiratory syndrome) outbreak provides an opportunity to look at the important lessons for disease control and for the way risks are handled by governments and public authorities worldwide. From its emergence in the southern Chinese province of Guangdong on 16 November 2002, SARS became one of the fastest-moving diseases in history. It showed the vulnerability of a globalised society linked by air travel to the emergence of lethal new pathogens.

No amount of crystal-ball gazing will reveal where and when the ‘next SARS’ will strike. The certainty is that there will be one – whether in the shape of a pandemic or a bio-terrorist attack. Is Britain prepared to deal efficiently and effectively with the next global threat? Are the mechanisms ready to deal with such risks, and to assess, control and communicate them in a way that consumers can understand?

The SARS experience showed how we can develop a capacity for communicating global alerts and improve vigilance and awareness at all levels – from health professionals and national authorities, to politicians and the travelling public. It has also shown the importance of international collaboration – for example, inspiring the world’s leading scientists to collaborate to combat a shared threat. Dealing with transnational risks to health and the environment is also emerging as a positive force for international governance and democracy.

Perhaps the most important lesson, with implications far beyond SARS, is the challenge of maintaining openness and transparency while dealing speedily and effectively with such crises. China was criticised for initially covering up SARS. In a globalised world, attempts to conceal or minimise high levels of public risk inevitably carry a very high price.

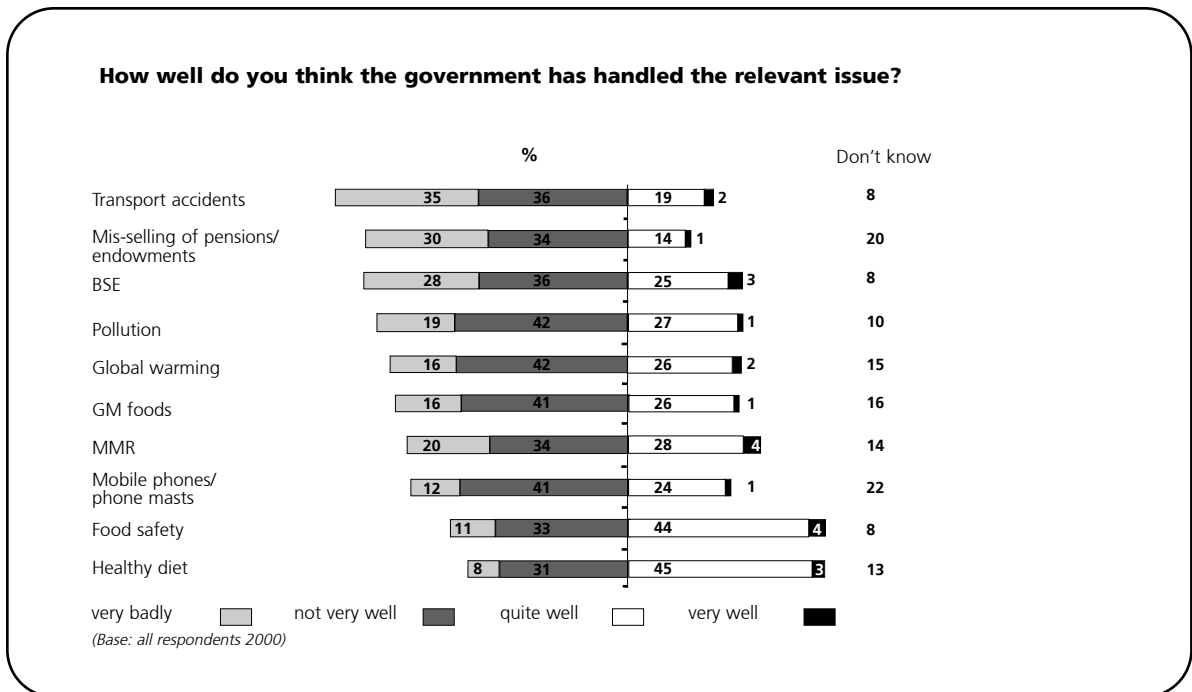
There is no room for western authorities to be complacent about openness, particularly in their approach to dealing with public anxieties about risks. Too often experts and politicians are quick to dismiss people’s fears as hysterical and irrational, while seeking to reassure. There is a fear that being open and honest with the public will create panic. Paradoxically, efforts to quell anxiety can actually induce alarm. In the UK in the 1990s, the public’s response to government attempts to reassure over

to ‘reassure’ over BSE – and, more recently, over MMR vaccines – provide powerful illustrations of how such communication strategies can backfire.

Loss of consumer confidence

In recent years, a series of risk issues, such as BSE, MMR, rail safety, and genetically modified foods have severely dented consumer confidence and trust in those authorities expected to inform and protect.

Between March and June 2002, the NCC carried out focus group workshops with an emphasis on social class C2DE backgrounds, and a quantitative survey of 2,000 adults across Britain looking at consumer attitudes to risk (7). The research reveals strong dissatisfaction among most consumers with the way that government and ‘officialdom’ have handled risk and uncertainty issues. Consumers give government very poor ratings on this. The main concerns are weak and inconclusive handling, as well as a failure to present information in a clear manner.



Trust in information and the information provider is an essential element in ensuring effective risk communication. Yet our research shows an overriding lack of trust in government, reflecting several factors, including:

- a belief that those in government are driven by motivations of personal or political gain, with politicians constantly ‘spinning’ information and making decisions reactively rather than proactively;
- a sense that there is a web of conspiracies between politics, business and the media resulting in policy decisions that are more about money than consumers;
- a view that government and politicians have a record of broken promises and bad decisions;
- a perception that officials and specialists are fearful of doing the wrong thing and getting blamed or sued.

Other research shows how relatively poorly government ministers, and politicians in general, score in the public’s trust (see table below).

Who would you generally trust to tell the truth?

Doctors	91%
Teachers	85%
Clergyman/priest	80%
Professors	77%
Television news readers	71%
Scientists	64%
The ordinary/man woman in the street	54%
Civil servants	45%
Business leaders	25%
Government ministers	20%
Politicians generally	19%
Journalists	13%

Source: *Trust in People*, MORI, 2002.

A new approach

Lack of trust is one of several factors that are driving the need for new ways of handling matters of risk and uncertainty. Today's public is better informed and less accepting of the so-called 'expert' view of the world. Many have ready access to alternative, unofficial sources of information, making it impossible for government to filter information in the hope of controlling public anxiety.

Though we may seem to live in a safer world than previous generations, this depends largely on which part of the world or economic stratum a person inhabits. We also face new risks. As SARS shows, our globalised world and economy are extending the scope for existing or new risks, such as the spread of disease, computer viruses or other forms of sabotage.

Developments in science and technology will continue apace, bringing opportunities but also posing new risks. For example, risks from nuclear technology, asbestos, thalidomide or pesticides such as DDT, were not fully anticipated. Now global warming, the development of genetic technologies and the rapid and widespread introduction of mobile phones all bring potential new and uncertain risks. The brave new world of nanotechnology, cloning and artificial intelligence will further challenge our abilities to weigh benefits against risks.

Bridging the gap between what is perceived to be scientific and measurable, and how the public gauge risks and make decisions remains a challenge (see the Risk, Science and culture box below).

Scientific endeavour to assess risks is typically characterised by uncertainty – or ignorance – where both the nature of the risk and its probability are not fully known. Such uncertainties leave room for interpretation and disagreement among the experts, and make it even more difficult to establish what is an acceptable level of safety to society.

Risk, science and culture

Traditional approaches to risk, such as in the field of health and safety, focus on objective measurement of possible effects through quantitative, scientific, risk assessment. The roots of this approach lie in the Enlightenment, the philosophical movement that flowered in the eighteenth century and believed in the superiority of reason over superstition.

But in recent decades, the limitations of this approach have been exposed. In trying to understand and control risks that affect people, leaving human nature out of the equation doesn't work. However much the experts wish we better understood their risk calculations and responded rationally – the reality is that we also bring our own experiences and perspectives to risk situations – we are all our own risk experts. The challenge is to develop systems of risk management that can integrate these two differing perspectives.

In 1983 the Royal Society, the UK's pre-eminent scientific institution, distinguished between *objective* (that is, measurable risk) and *subjective* or *perceived* risk (the lay person's often very different interpretation) (8). The former is largely the study of 'hard' science, while the latter has become an important area of 'soft', social science research. A substantial body of social scientists has been seeking to bring a social and cultural perspective to the explanation of risk, among them Ulrich Beck, John Adams, Chris Hood, Paul Slovic, Roger Kasperson, and Frank Furedi.

John Adams shows powerfully the relevance of culture in his book, *Risk* (9)

Slipping and falling on the ice is a game for young children, but a potentially fatal accident for an old person. And the probability of such an event is influenced both by a person's perception of the probability, and by whether they see it as fun or dangerous. For example, because old people see the risk of slipping on an icy road to be high, they take avoiding action, thereby reducing the probability. Young people slipping and sliding on ice, and old people, striving to avoid doing the same, belong to separate and distinct cultures. They construct reality out of their experience of it. They see the world differently and behave differently; they tend to associate with kindred spirits, who reinforce their distinctive perspectives on reality in general and risk in particular.

But it remains a challenge to bridge the gap (some might say gulf) between what is perceived to be scientific and capable of being measured, and how public opinion gauges risks and makes decisions. Despite the limitations of the traditional approach, this is still the dominant perspective in fields such as regulation and consumer protection.

The risk business

Risks can be reduced or mitigated – though decreasing one risk often increases another – but rarely can they be eliminated. Consumers recognise this, and many risks are seen as part of life. Yet many consumers also buy products and services that help to offset some of the risks they face.

Insurance is the traditional means of offsetting risks by allowing risks to individuals to be pooled. In 2001, UK consumers spent £18 billion on life assurance and £3.5 billion on home insurance. And market analysts predict a 50 per cent growth in life assurance, a 47 per cent growth in accident and health insurance and a 37 per cent growth in personal pensions over the next five years (10).

Insurance doesn't directly seek to reduce the incidence of risk – that is, of dying prematurely, being burgled or being involved in a car accident. Instead, insurance offers compensation if the risk materialises.

However, not all consumers can afford personal insurance. For example, half of the poorest households are uninsured compared with a quarter of households on average incomes (11). Not only do low-income consumers find it harder to afford insurance premiums, they will often have to pay more. Furthermore, the premiums for hard-to-estimate risk – such as the likelihood of particular medical conditions – are always overloaded.

We also spend money on a range of other products that we perceive may protect us against life's risks. For example, the UK organic food market is currently worth over £920 million (12) and sales of vitamins and mineral supplements reached £172 million in 2001 (13).

2. Reacting to risk

If you only read newspaper headlines you could be forgiven for thinking we are a nation obsessed by risk. The view that risk dominates our lives finds support in the opinion of commentators such as Frank Furedi who sees widespread public panic over issues such as GM crops and mobile phones, from global warming to foot-and-mouth – what he has termed an ‘epidemic of fear’ (14).

So what is going on? Is the nation gripped by fear? Is anxiety paralysing our lives? At the NCC, we have been taking a close look at how people deal with risks (15); frankly, we don’t recognise the picture that has been painted. Our major piece of research into consumer attitudes to risk shows that, on the whole, consumers are very adept at weighing up risks and benefits for themselves, assessing information sources and coming to their own conclusions.

There is now a growing recognition that government, regulators and policy-makers ignore public attitudes at their peril, and that responsiveness to consumer interests can enhance the quality of decision-making and help build trust in policy-making bodies.

So it is essential for government, regulators, other authorities and experts who handle matters of risk to develop a new emotional literacy, to understand how consumers view risk. Indeed, understanding how people view a risk may often be as important as understanding the risk itself, yet traditional approaches emphasise the latter while often ignoring or even denigrating the former.

A new emotional literacy

As our research confirms, everyone brings a range of factors when considering risk issues. These include our own personal attitudes and experience as well as how much control or knowledge we feel we have. And we weigh up potential risks against the benefits as we perceive them. For example, we continue to use our mobile phones, as for the vast majority the benefits outweigh uncertainties over health risks but we are far more cautious over uncertain risks on, say, GM foods because we don’t see them giving us any direct benefits.

Of course particular risks can trigger strong emotional responses. A common question is: How would you feel if it were your own child or family that were affected? Our research pinpoints the factors that shape people’s perceptions of risky issues (see ‘How consumers perceive and react to risk’). And the Department of Health has identified a number of what it has termed ‘fright factors’ that are likely to make particular risks more worrying for people (see box below). All these factors can be influenced by

what we feel about those in authority. For example, do we trust them to protect our interests? Do we trust the source of information?

Emotional responses by consumers to issues of risk can often frustrate experts and policy-makers. While it is true that our emotional responses can lead us to overplay, or conversely, downplay the likelihood or impact of risks, the reasoning behind such responses needs to be understood rather than dismissed as irrational. A positive affirmation of an emotional approach to risk comes from the work of Antonio Damasio, the neuroscientist who points out that emotional responses are beneficial in deciding a course of action (16). Emotion, he suggests, is an evolutionary tool to inculcate the learning of generations to survival in the face of risk - to the everyday decisions of the individual.

The result is that, while consumers will always need to harness and balance their emotions while remaining open to expert advice, there also needs to be a new emotional literacy within government, regulators and other authorities. Those who manage and communicate risks to the public need to start with an understanding of consumers' emotional responses towards risk.

What would help to achieve this? Firstly, more expertise in risk communication is needed. This is a specialist activity, perhaps even a distinct new profession. Despite the success of its strategy overall, the World Health Organisation, for example, has acknowledged that a major weakness in the handling of SARS was the patchy and even non-existent communication expertise in places which became critical.

In the UK government handling of BSE, MMR and GM crops have largely been public relations disasters. There is now a real opportunity to learn the lessons from the past and put in place new approaches to handling risks to the public that treat emotions as legitimate and that understand how ordinary people respond to risk. The NCC calls for regulators and government departments such as the Food Standards Agency, Department of Health and the Financial Services Authority to appoint social scientists to understand consumer responses. We also call for the introduction of a new profession of risk communicators.

This new approach must receive commitment at the highest level, as well as practical implementation at all levels that will make a real difference to how matters of risk are handled in the future.

Fright factors

Risk is likely to become worrying (and less acceptable) for the public when it is seen as:

- involuntary – for example, exposure to pollution – rather than voluntary (dangerous sports or smoking);
- inequitably distributed – some benefit while others suffer the consequence;
- inescapable by taking personal precautions (there is no control);
- arising from an unfamiliar or novel source, such as genetically modified organisms;
- resulting from man-made rather than natural sources – for example, from pesticides, nuclear power stations;
- likely to cause hidden or irreversible damage through onset of illness many years after exposure;
- posing some particular danger to small children, pregnant women or more generally to future generations;
- to threaten a form of death, or illness/injury (for example, cancer) arousing particular dread.

Source: The Department of Health, *Communicating About Risks to Public Health*, 1998

How consumers perceive and react to risk

Our research into consumer attitudes to risk set out to pinpoint the factors that shape people's perceptions of risky issues. We found that consumers react to risk in a complex and diverse way. Their attitudes and behaviour are influenced by a number of different and inter-linking factors. These include: the nature of the consumer; the nature of the risk – for example, the degree of control; the risk's outcome; and external influences.

The NCC's research was carried out in March and June 2002 and took the shape of a qualitative stage and a subsequent quantitative stage. The qualitative phase of the research comprised nine workshops with participants spanning a range of ages and life stages with an emphasis on participants from social class C2DE backgrounds. The subsequent quantitative survey of 2,000 adults was undertaken among a random, but representative, selection of adults across Britain.

The nature of the consumer

As well as individual appetites for risk, life stage and social grouping are also important. For example, parents are more anxious about certain risks, and older people have mixed attitudes. Many believe the world is a riskier place now than it was, while others take a risk-weary view, believing 'you shouldn't worry too much'.

Important differences in attitudes and behaviour also emerged between higher and lower income consumers. Those in higher income groups engage more with a wider

range of issues than lower earners. This is likely to reflect their education and the empowerment that results from greater purchasing power. Lower income groups tend to most readily engage with issues that could fundamentally affect their livelihood and income.

The nature of the risk

The nature of the risk has a direct bearing on how consumers think and respond. These factors include whether consumers find themselves in the risky situation voluntarily; feel they are in control of the situation; feel they have to make the decision (take the risk) only once; have always seen the issue as a risk and can measure it or have had personal experience of the risk.

Many consumers weigh up risk by considering how much power or control they have. Overall, consumers' sense of risk is heightened when they feel they have little choice or control over the situation. This explains why we feel safer driving a car (despite the greater risk of accident) – than train or air travel – where we are not in control and must take competency and safety checks on trust.

Decisions that appear regularly – such as food choices – are thought to carry less risk than one-offs – such as the decision over childhood vaccination. Uncertainty also heightens a sense of risk, particularly if fuelled by lack of proof or trust in information. Consumers say they feel calmer when presented with all the facts, though, of course, people do not always believe everything they hear.

Weighing up the outcome

Contrary to popular belief consumers do not expect to live in a risk-free world; they are adept at weighing up a number of factors that may affect the outcome of a course of action, such as its benefits and drawbacks. Assessing the outcome of a risk is complex and can involve thinking about the expected benefits and downsides, the extent to which any outcome is reversible, whether the outcome is expected in the short term or the longer term, the effect of the outcome on others such as children; the degree of predictability in the outcome; and whether they could cope.

External influences

Several external influences affect perceptions of risk. Influences that are understood, trusted and most relevant to the consumer have the greatest effect on the ways consumers think about and assess risk. For example, these include: personal influences such as parents, family, friends; media; official/government spokespeople; consumer groups and non-government organisations.

3. A model for managing risk

This section sets out the NCC’s proposals for a model of good risk governance – the overall process by which risks are identified, assessed, managed and communicated. It examines the essential principles that support our approach, using case studies to illustrate each aspect.

Decision-making involving risks is rarely straightforward. What every risk manager (and politician) would like to know is: ‘What is the “right” decision or course of action to take?’ Where the evidence is conclusive and there is broad agreement for action, the right decision can sometimes be obvious. But vital evidence may be non-existent or uncertain. There are likely to be various risk management options and differing views among those with an interest in the outcomes. Doing nothing may in itself carry considerable risks, so a way forward must be found.

The NCC’s model aims to help ensure the best outcomes in the circumstances and greater acceptance and understanding of decisions reached – important if there are strong disagreements and controversy. And, importantly for consumers, it should ensure their interests are identified and taken into account. Ultimately, the process should instil greater trust in those charged with managing risks and protecting public safety.

The NCC’s model of good risk governance

The key to government and regulators handling matters of risk and uncertainty successfully is for them to apply a model of risk governance that:

1. is open and transparent
2. is inclusive of stakeholders – including consumers – from an early stage
3. is clear and accountable
4. values scientific expertise but takes account of other factors
5. adopts the judicious use of the precautionary principle.

1. Open and transparent

Our research shows that consumers want to see greater openness and transparency in decision-making on risk issues. More than nine out of ten consumers agree that ‘the government should be more open about how it makes decisions’.

More honesty – particularly where there are uncertainties – is important. Yet there is still an obvious reluctance by government and agencies to admit that ‘we don’t have all the answers’. Greater openness must apply to ‘what we don’t know’ as well as ‘what we do know’.

The government’s *Principles of Managing Risks to the Public* shows they are committed to being open and transparent about the understanding of the nature of risks to the public and about the process of handling them:

Government will make available its assessments of risks that affect the public, how it has reached its decisions and how it will handle the risk. It will also do so when the development of new policies poses a potential risk to the public. When information has to be kept private or where the approach departs from existing practice, it will explain why. Where facts are uncertain or unknown, government will seek to make clear what the gaps in its knowledge are, and where relevant, what is being done to address them. It will be open about where it has made mistakes, and what it is doing to rectify them (17).

We recognise that greater commitment to openness and transparency in decision-making presents new challenges. The Freedom of Information Act, 2000 – which comes into effect in 2005 – should add to the drive towards openness in risk matters, although existing best practice exceeds what is required under the legislation. We recommend that all departments and agencies strive towards best practice. For consumers and consumer organisations it is important that this includes consideration of the quality of information available – not just the quantity. Ensuring that information is accessible, useful and appropriate for its audience is vital.

A further challenge for risk managers is in deciding how far to go in sharing knowledge with the public. Politicians and other risk managers often fear that being too open will alarm and cause panic. But as our case study: ‘The challenge of communicating openly and honestly’ shows, this anxiety is misplaced (see box below).

Case study: the challenge of communicating openly and honestly

The World Health Organisation (WHO) won plaudits for its handling of SARS and saw its international standing enhanced, but important challenges remain. Perhaps the most important lesson – with implications far beyond SARS – is the challenge of operating and communicating openly and transparently in dealing speedily and effectively with such crises. China was universally condemned for initially covering up SARS and putting the world at risk. But on the whole, according to the WHO, the transparency of national reporting was exemplary – even when the economic consequences of doing so were known to be significant.

But there is no room for western authorities to be complacent about openness, particularly in their approach to dealing with public anxieties. Peter Sandman and Jody Lanard, US risk communications advisers, identify the temptation among western governments when dealing with public anxieties towards risks such as SARS to resort to what he calls a ‘soft cover-up of over-reassurance and minimisation’ (18). Dismissing people’s fears as hysterical and irrational, while seeking to reassure is typically how this approach to risk communication is manifest. Behind this approach is the fear that being open and honest with the public will create panic. The paradox is that efforts to quell anxiety – ‘allay the public’s fear’ is the usual phrase – can actually induce the panic it aims to prevent.

The public’s response in the UK to government attempts in the 1990s to reassure over BSE and, more recently over the MMR vaccine, provide graphic illustrations of just how such efforts can backfire.

In the case of MMR, there undoubtedly existed a fear among officials that openness about uncertainties over safety (which offering the single-dose option could signal) would fuel anxieties and further discourage vaccine take-up. Our research shows that uncertainty does increase perceptions of risk – yet the consequences of not acknowledging this are likely to have an even greater effect. If people feel they are not being told the whole truth and believe there is a ‘government cover-up’, they lose trust in the message and the messenger.

One of the difficulties facing risk managers is that avoiding over-reassurance and being open about uncertainty are often counter-intuitive and so are hard to put into practice. But risk managers who have learned the lessons of being open about what is and isn’t known – for example, during the Food Standards Agency’s communications over the possibility of BSE in sheep – have been positive about the way in which such messages have been received.

2. Inclusive of stakeholders, including consumers

As with openness and transparency, involving those affected by risk decision-making is a way of gaining greater consumer trust in processes. The NCC's wider work on involving consumers shows that this approach is also likely to produce better and more publicly accepted decision-making. This is particularly the case where issues are controversial or involve uncertainty. Making sure policies that affect consumers reflect their needs and concerns is an essential element in ensuring effective policy implementation. For example, many parents felt that their concerns over the MMR vaccine had been ignored by public health scientists and politicians. This undoubtedly contributed to the failure of public policy to ensure sufficient levels of vaccination among children (see 'Case study: the MMR vaccine' below).

Ensuring a consumer-focused risk governance process means consulting and involving consumers and organisations that represent their interests. In our experience, policy-makers often lack knowledge of, and confidence in, ways to involve the public. Where such barriers exist, strategies must be developed to overcome them.

The NCC's research reveals that consumers often feel left out of decision-making and strongly believe that much public consultation is of a token nature. Lower income earners feel this most keenly. So, it is not surprising that levels of apathy among these consumers are high, reflected in the quote from one participant: 'Why bother? They don't care what I have to say.'

High levels of disempowerment, disillusionment and low confidence mean that many consumers do not necessarily see the value of greater involvement in policy and decision-making regarding risk issues. When prompted, however, there is a positive response from consumers. More than eight out of ten agree that 'the government should give ordinary people more of a say in debate about risky issues'.

Consumers in our research were keen that there should be consumer representation in debates from the outset. They identified a need for more genuine, practical and long-term approaches of facilitating greater openness and build trust.

While increasingly accepted in theory, examples of real public engagement remain harder to find in practice. Hearing the views of ordinary people towards the controversial issue of genetically modified (GM) crops was the motive behind the government's GM Nation public debate held in 2003 (see 'Case study: GM public debate' below). The attempt to reach members of the public was unprecedented in its scale but was not without its problems and controversies. Evaluation of the process and outcomes will provide important lessons for government and other risk managers.

GM is one of several emerging and developing technologies that raise questions about the potential effects on consumers, the environment and society more broadly. And it is vital that we learn from the mistakes made in this case for future technologies. For example nanotechnologies could deliver novel medical technology, faster computers, new energy sources and improved materials. While the potential of these technologies is immense, so are their social, economic and political implications. The challenge here for government and regulators is how to enable exploitation of a technology while ensuring that society has confidence in its regulation. With such emerging technologies, it is vital that there is early and open discussion and debate to shape future developments, including any consumer protection measures that are needed.

There are benefits in ensuring that public concerns and interests are considered at an early stage in science and technology development. For example, the Foresight Food Chain and Crops for Industry panel was set up to explore how the future use of technology in the food chain might better be debated with the public. It was hoped that decisions on investment and public policy might take place in a more informed and less contentious environment. Alastair Robertson, the panel's chair, noted:

It highlights the real benefits that can come from including the public in science and technology development in food and enabling product researchers, developers and policy makers to become more in tune with their food concerns and interests.

Timing when to engage

An understanding of the timing of dialogue and communication is also important. For example, horizon-scanning exercises can identify risks or issues of likely concern to the public, or particular groups, at an early stage. Such work might include focus groups, surveys or ongoing consultation with stakeholders. Input during the assessment stage can ensure that the questions are relevant to consumers interests, whereas stakeholder dialogue and consultation can feed into weighing up risk management options.

With *urgent* risks – such as SARS – we recognise that the need for speed prevents the kind of deliberative consultation we describe for *emerging* risks. Nonetheless, the existence of stakeholder and consumer networks that facilitate dialogue can be invaluable in facilitating the speedy communication necessary to deal with urgent risks.

Engagement and consultation is resource-intensive, so it is equally important to recognise when not to consult. For example, consulting when the outcome cannot be changed wastes time and money and can be tokenistic.

Reaching consumers

Consumers are keen to be represented in the debate from the outset, and there is a need for more genuine, practical and long-term approaches. Those taking part in NCC research agreed that the government needed to find new ways to listen to and to reach consumers. Suggestions included:

- better use of the internet, for its speed, immediacy and increasing accessibility;
- adopting a surgery model approach – going out to consumers where they live;
- open days where the public can find out about a particular issue;
- polling and referendums;
- deliberative consultation methods such as citizens’ juries or public forums;
- local newspapers and pamphlets presenting unbiased information on particular issues of concern, distributed to every household;
- telephone helplines as tools to provide factual answers to common questions;
- using existing networks like residents’ associations, schools and workplaces to help people think about issues of risk and uncertainty.

Case study: GM public debate

The government held a public debate during the summer of 2003 on GM issues and the possible commercial growing of GM crops in the UK. The intention was to facilitate a full and wide-ranging debate as proposed by the Agriculture and Environment Biotechnology Commission. There were opportunities for consultation at regional and local level across the UK, involving a wide range of people. Such a public debate is unprecedented in the UK but its planning and delivery highlighted a number of challenges.

First, any such debate requires considerable resources – both in terms of time and money. Yet the resources needed to conduct a credible public debate were underestimated. Second, government failed to make clear how the views of the public would affect the decision-making process. The impression created was of consultation without inclusion, raising questions about whether the government genuinely had an open mind.

Evaluation of the process and its effect on policy will provide important lessons.

Case study: the MMR vaccine

The unproven and controversial theory of a link between the MMR vaccine and autism received considerable media attention in 2002. But government failure to acknowledge and address parental concerns and perceptions of risk in its management and communication strategies contributed to a sense of crisis about the use of MMR. The choice between having the vaccine (with its perceived unknown but potentially devastating risk of autism) and not having the vaccine (with the risk of contracting measles, mumps and rubella) presented a difficult decision to any parent. But a failure to acknowledge the dilemma that many parents felt, compounded by experts' criticism of parents, was not helpful.

One of the important aspects was whether parents should be able to choose single dose vaccines. Our research shows that people feel a lot calmer about risks the more they have control or choice over the matter. Hence the appeal to many parents of single dose vaccines. Yet Department of Health intransigence against this policy option failed to understand and acknowledge the different perspectives that the public bring to their decision-making. Ultimately, this contributed to the failure of public policy to ensure that adequate numbers of children were vaccinated.

3. Clear and accountable

The management of risk typically involves government departments, advisory bodies, agencies, regulators and various stakeholders. It is essential that their relationships, responsibilities, lines of communication and accountability are clear in the governance process. The NCC believes there is a need for a more co-ordinated approach.

Problems that can occur through lack of clarity are illustrated by the government's handling of the BSE crisis. Major criticisms that emerged from the BSE inquiry were lack of a clear remit and defined responsibilities of risk assessment bodies (scientific advisers) and risk managers (essentially government ministers). The effect was a displacement of responsibility for policy decision-making. In practice, ministers hid behind their official advisers.

Who should manage risks?

Who should have responsibility for handling risk can only be judged on a case-by-case basis. But the government's Strategy Unit report provides useful criteria for establishing responsibilities (19):

- competence – who has the skills and experience and/or can best recruit and retain the right people?
- capacity – does the capacity exist? Can it be developed?

- public interest – is there sufficient assurance that the public interest will be protected?
- value for money – who will offer the best trade-off between costs and benefits?
- management – can the arrangements be adequately managed?
- subsidiarity – operational decisions will often be best made by those closest to service delivery.

New approaches to risk governance have led to the establishment of new bodies. The Food Standards Agency, for example, was set up as an arms-length body to provide advice direct to the public without recourse to ministers. The National Institute for Clinical Excellence (NICE) advises government and offers guidance direct to patients, health professionals and the public. The Human Genetics Commission and the Agriculture and Environment Biotechnology Commission were set up to advise government in response to the need to consider the broader social and ethical aspects of human genetics and biotechnology. The Strategy Unit recommends consideration of increased use of such arms-length bodies – in part because they have the potential to be more trusted than government.

The generally accepted view is that responsibility for managing risk should be allocated to those who are in the best position to control the risk. In some instances this may be the individual themselves. The NCC’s research shows that consumers strongly desire to decide for themselves whether they want to bear some types of possible risk though we also recognise that a person’s right to choose must not unfairly burden the individual or expose others to unacceptable risks.

4. Valuing scientific expertise but taking account of others

To a great extent, risk management decision-making has been expert driven – whether that expertise is scientific, medical, technical or economic. The NCC’s approach to risk governance is based on the premise that while scientific assessment should inform decision-making, it is an insufficient basis for policy judgements. The process of risk management must involve a whole range of judgements about whether risks are acceptable and how they can be managed.

Social, ethical and economic factors must be acknowledged in this process. For example, the costs of different options, their practicality and their acceptability must be considered. Relevant factors will also include the public’s perceptions of risks faced and their concerns and values. We welcome the establishment of bodies such as the Human Genetics Commission (see ‘Case study: the Human Genetics Commission’ below) and the Agriculture and Environment Biotechnology Commission whose

remit is to advise government on broader social and ethical issues. In determining the acceptability of technologies, the desire to take into account social and ethical issues – that go beyond the narrow question of safety – can challenge existing regulatory frameworks and lead to conflicts.

We welcome the government’s commitment to base risk decision-making on all relevant evidence. Its *Principles of Managing Risks to the Public* state:

Government will aim to ensure that all relevant evidence has been considered and, where possible, quantified before it takes decisions on risk. It will seek impartial and informed advice that can be independently verified wherever possible, and seek to build a shared understanding of the risks and options for action. It will consider evidence from a range of perspectives, including the public as well as experts. It will not use the absence of evidence alone to provide the absence or presence of threat, and will acknowledge alternative interpretations of the available evidence. It will make clear how evidence has informed its decisions and will keep them under review as new evidence comes to light.

We also welcome the work of the government’s Chief Scientific Advisor to improve scientific advice to government (20). The guidelines seek to ensure greater openness and transparency – including openness about framing assumptions and uncertainties, both key failings in the handling of BSE. These guidelines also recommend that all scientific advisory committees include at least one lay member. Our preference is for two such members. We recommend that this should also apply to other types of risk-advisory or decision-making bodies where issues are known to be uncertain or raise ethical or social questions.

Case study: the Human Genetics Commission

The Human Genetics Commission (HGC) is the government’s independent advisory body on social and ethical issues in human genetics. In 2002, health and science ministers asked the HGC to review the controls on genetic tests that are sold directly to the public. To gauge opinion on the issue, the HGC issued a consultation document and began a public debate. To find out what potential consumers felt, a series of focus groups, discussion meetings and an internet opinion survey were conducted. Evidence was also taken from a broad range of interests, including regulators, consumer groups, professional bodies and commercial organisations. The review found that genetic tests supplied direct to the public raise some serious issues. The HGC made recommendations – including to regulators – about how these may be dealt with. The recommendations are aimed at making sure that companies only market high quality tests, with good customer support, and that they do not seek to misuse (or inaccurately describe) the power of modern genetics as a marketing tool. As its recommendations are potentially far-reaching in an areas where the science, industry and regulatory bodies are still developing, the HGC says it wishes to monitor progress.

5. The precautionary principle

The precautionary principle was developed to help decision-making under conditions of uncertainty, where there is a threat of serious or irreversible harm. It is based on the 1992 Rio Declaration which states: ‘Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation’ (21).

The precautionary principle argues that ‘it is better to be safe than sorry’. Yet there has been considerable debate about what the use of the principle should mean in practice. The UK government is committed to using it and commissioned the Inter-departmental Liaison Group on Risk Assessment to develop guidance on a more consistent approach to application of the principle across Whitehall (22). Its *Principles of Managing Risk to the Public* state that:

It will apply the precautionary principle where there is good reason to believe that irreversible harm may occur and where it is impossible to assess the risk with confidence, and will plan to revisit decisions as knowledge changes.

The EU has taken a similar approach. In December 2000 at the Nice Summit, heads of government endorsed a resolution on the precautionary principle. The approach embraces many of the principles of good risk governance. These include openness and transparency and the involvement of, and consultation with, interested parties and the public from an early stage.

The Independent Expert Group on Mobile Phones set up to advise government on possible adverse health effects from mobile phone technology defined its approach in this way:

The precautionary approach is not all or none in nature. Rather, it is a matter of degree. In essence, it requires that before accepting a new development we should have positive evidence that any risks from it are acceptably low, and not simply an absence of convincing evidence that risks are unacceptably high. (23)

The management of potential health risks from mobile phones provides an example of precaution in practice (see ‘Case study: precaution in practice – mobile phones’ below).

Case study: precaution in practice – mobile phones

While evidence of potential harm from mobile phones and masts is uncertain, the government's strategy has been to provide information and guidance – for example, recommending limits on the use of mobile phones by children – until more is known. This precautionary approach allows consumers to make up their own minds. The Independent Expert Group on Mobile Phones was set up to advise government on possible adverse health effects from non-ionising radiation from mobile phone technology. This 12-strong commission included experts on epidemiology, experimental biology, social sciences, risk perception and legal issues as well as two members with lay interests. Observers from relevant government departments/agencies were also included. The group conducted closed expert hearings and open meetings to gather comprehensive evidence. Over 170 organisations and individuals gave written evidence.

Its report recommends that 'a precautionary approach to the use of mobile phone technologies be adopted until much more detailed and scientifically robust information on any health effects becomes available'. Its recommendations also included specific precautionary action that should be taken, including limiting the use of mobile phones by children under 16, adherence to more stringent international (rather than national) guidelines for public exposure to radio frequency, and commissioning further independent research.

4. Better communication of risk

For too long risk communication has been seen solely as an add-on – providing information at the end of the risk assessment and management process. Ongoing controversies such as mobile phone masts, concern about MMR vaccines and the debate about the future of GM crops, all illustrate how providing information alone – particularly at a late stage and within a climate of low trust in government institutions – falls short of consumer expectations. New ways of dealing with risk makes two-way communication with consumers and other stakeholders essential to the whole process (see chapter 3). However, there remains an important role for information provision and in this section we look at where improvements are needed in this area.

Our research found that consumers believe there is considerable room for improvement in how the government and officials communicate risk. Consumers expect government to take a lead in providing information and advice to help them make their choices. For example, this has happened in communicating the possible health risks of using mobile phones. While research continues about possible risks, the government's emphasis has been on telling the public what is known, and what is unknown, so they can decide for themselves what precautions to take.

Consumers welcome information – as long as they feel they can trust both the *information* and the *source* to help decision-making. Information that is perceived as propaganda or 'government spin' is counter-productive. Consumers also want communication to enhance the process of debate and, where possible, positively allow them to make up their own minds about things. Nine out of ten agree that 'the government should give me enough information to help me to make my own decision about what to do in a risky situation' (24).

Strategies that rely on providing information make several assumptions about consumers' abilities to access, understand and use such information. Some consumers may find this more difficult, and their needs must also be considered.

Consumers and information

Consumers in our research stated several ways of improving information provision to empower and educate them. These include:

- providing simple but accurate accounts of the issues;
- avoiding being patronising to consumers;
- speaking to consumers on their own terms;
- targeting messages to particular audiences, in terms of language, tone and content;
- avoiding unnecessary jargon;
- using appropriate messengers for different age groups.

Communicating uncertainty

Consumers in our research wanted greater openness and honesty to include better communication where facts are uncertain. This needs to include making all known information easily available. A key challenge for better communication is to help people feel comfortable with the fact that there is not always a firm ‘yes’ or ‘no’ to issues. At the same time, communication needs to avoid fuelling confusion and uncertainty over a range of perhaps contradictory factors.

The media

Working with the media is an important element of any risk communication strategy. However, newsworthy items such as debates about the introduction of GM crops, controversy over MMR vaccines, or reporting of health risks, have fuelled a sense of frustration within many scientific and policy-making communities about elements of the mass media that report risks to the public in an alarmist or misleading way.

Our research shows that consumers have a fairly realistic and sceptical approach to elements of the media. However, the media is seen as extremely powerful, and possibly manipulative, in the way it affects consumers’ perceptions of risk. While many consumers value the information and opinion they get from the media, they remain wary of the power that they feel it exerts over their lives.

In fact, nearly two-thirds of those we surveyed agree that ‘a lot of the information about risky products is exaggerated – it’s just scaremongering’ (25). This suggests a high

degree of cynicism about the validity of the information or how it is received. There is also a view that the media is connected to government in some underhand way.

But rather than blame the media, the NCC recommends that risk communicators work to build and better manage their relationships with the media by acknowledging its diversity. The key to this is understanding how the media works, and the need for timely, proactive and accessible information. In today's 24-hour news culture, lack of information creates a vacuum that fuels rumour and speculation.

The government should also consider using other means of communicating more directly with consumers and the public, such as the internet. We welcome the web-based toolkit government has developed on communicating risk (26).

Communication strategies

Risk communication is a specialist activity, and not something to delegate to an untrained press officer. We recommend that risk communicators need to:

- guard against telling fearful people that their fears are foolish;
- acknowledge risks and uncertainties candidly and compassionately;
- work closely with risk managers from an early stage to develop communication strategies throughout the whole risk governance process;
- identify key stakeholders and groups of consumers and the public that may have a particular interest in the issue;
- develop communication strategies that emphasise building ongoing relationships with relevant public, key stakeholders and media targets;
- ensure that feedback during dialogue and consultation is a key element of communication strategies;
- continuously and realistically evaluate the success of the strategy;
- be realistic about working with the media - avoid blaming the media for failure to get your message across;
- ensure communication - including with the media - is timely and proactive;
- consider different and new ways of reaching target audiences.

Helping consumers

While this report emphasises the importance of experts needing to better understand consumers rather than ‘educate’ them, we also recognise that there is an important job to do to help consumers and professionals (including journalists) unravel the complexities of many risk issues. This means using language and statistics in a way that is understandable to the audience. As Gerd Gigerenzer in his book *Reckoning with Risks* (27) points out, it is not just ordinary people, but also scientists and doctors and journalists too, who can be confused by statistics. He presents simple tools for communicating and understanding statistics. At one level this may be as simple as presenting percentages as natural frequencies, for example, ‘six out of ten’ rather than 60 per cent.

To help the understanding of risk issues – both among future professionals (for example, scientists, doctors, civil servants) as well as citizens – we also advocate the introduction of risk as a fourth ‘R’ into secondary school and university curriculums. Science and technology curriculums, for example, need to increase awareness among our future scientists of the social, culture and ethical contexts in which their work takes place, and the importance of understanding consumer perspectives.

Conclusion

Our research highlights the need for new approaches to risk governance that put consumers, and their interests, at the heart of the process. We highlight the benefits of this approach in helping to build public trust in risk decision-making and decision-making bodies, and its role in leading to better and more publicly accepted policy-making.

The government is committed to improving the way in which it handles matters of risk that have an impact on consumers. There is developing good practice – some of which we highlight in this analysis. Yet there is clearly a long way to go before political leaders, health officials and authorities of all sorts fully appreciate the importance of understanding and acknowledging how consumers and the public deal with risk and the vital role that this plays in effective handling of any threat or new risk.

In this report the NCC has set out the action that is need to redress this. In a world of new and uncertain risks, government must learn the lessons of past mistakes and ensure the effective implementation of its policy objectives to better handle risks that affect the public.

Appendix:

the Strategy Unit's principles of risk management



HM TREASURY

CabinetOffice

PRINCIPLES OF MANAGING RISKS TO THE PUBLIC¹

People face a range of risks – including direct threats, risks to their safety, welfare or livelihood, and risks to the environment. All life involves some risk, and any innovation brings risk as well as reward. Government's role will vary according to the nature of the risk – it may involve providing information and advice on risks that individuals manage themselves, regulating how risks and benefits are distributed across society, or intervening directly to provide protection from external hazards. The following five principles apply to the handling of all types of risk to the public:

- Openness and transparency
- Involvement
- Proportionality and consistency
- Evidence
- Responsibility

Government will be *open and transparent* about its understanding of the nature of risks to the public and about the process it is following in handling them

Government will make available its assessments of risks that affect the public, how it has reached its decisions, and how it will handle the risk. It will also do so where the development of new policies poses a potential risk to the public. When information has to be kept private, or where the approach departs from existing practice, it will explain why. Where facts are uncertain or unknown, government will seek to make clear what the gaps in its knowledge are and, where relevant, what is being done to address them. It will be open about where it has made mistakes, and what it is doing to rectify them.

Government will seek *wide involvement of those concerned* in the decision process

Government will actively involve significant stakeholders, including members of the public, throughout the risk identification, assessment and management process. This will support timely and targeted action. Two-way communication will be used in all stages of policy development, risk assessment and risk management. Where there are differences in interpretation it will aim to clarify these through open discussion, and it will seek to balance conflicting views in a way that best serves the wider public interest. It will explain how views obtained through consultation have been reflected in its decisions.

Government will *act proportionately and consistently* in dealing with risks to the public

Government will base all decisions about risks on what best serves the public interest. Action taken to tackle risks to the public will be proportionate to the level of protection needed and targeted to the risk. Government will seek to apply a consistent approach to its assessment of risks and opportunities and to its evaluation of the costs and benefits of options for handling them, and will ensure that these are clearly articulated. It will apply the precautionary principle where there is good reason to believe that irreversible harm may occur and where it is impossible to assess the risk with confidence, and will plan to revisit decisions as knowledge changes.

Government will seek to *base decisions on all relevant evidence*

Government will aim to ensure that all relevant evidence has been considered and, where possible, quantified before it takes decisions on risk. It will seek impartial and informed advice that can be independently verified wherever possible, and seek to build a shared understanding of the risks and options for action. It will consider evidence from a range of perspectives, including the public as well as experts. It will not use the absence of evidence alone to prove the absence or presence of threat, and will acknowledge alternative interpretations of the available evidence. It will make clear how evidence has informed its decisions and will keep them under review as new evidence comes to light.

Government will seek to *allocate responsibility* for managing risks to those best placed to control them

Government, where possible, will ensure that those who impose risks on others also bear responsibility for controlling those risks and for any consequences of inadequate control. It will aim to give individuals a choice in how to manage risks that affect them, where it is feasible and in their interest to do so and where this does not expose others to disproportionate risk or cost. It will seek to clarify where responsibility for managing risks rests and that those responsible have the authority and information to act.

¹ These principles are intended to be consistent with existing published frameworks, including: the Freedom of Information Act; the Code of Practice on Access to Government Information; the Principles of Good Regulation; the precautionary principle, and principles governing the production of Departmental risk frameworks.

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