

**British Crisis Management and the Dynamics of
Change: The Case of the Veterinary Disease
Policy Sector 2001-07**

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PhD Thesis

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Abstract

The purpose of the thesis is to examine the nature, dynamics and extent of post-crisis change in British crisis management arrangements for veterinary disease induced outbreaks following the 2001 foot and mouth crisis. Two fundamental questions guide the analysis. First, is the process of post-crisis change incremental or does a crisis stimulate radical change? Second, are existing categorisations of the nature of post-crisis change appropriate for understanding change within the veterinary disease policy sector?

These questions derive from a wide-ranging review of academic literatures concerned with the politics of crisis management, policy and organisational change, and Europeanisation. In examining the connections between these literatures the thesis identifies a gap in existing knowledge of how the reform of crisis management policies and organisation practices impacts upon specific policy sectors.

The 2001 foot and mouth epidemic provides the baseline case study from which the processes of change are analysed. In order to examine the nature and type of change the outbreak of foot and mouth in September 2007 is used as a comparator case study, with the avian influenza outbreak in February 2007 used to broaden the analysis to allow observations to be made about the generic nature of the management of veterinary diseases in Great Britain.

The major source of data for this study is semi-structured elite interviews. Major actors in the management of crisis, including UK and EU officials and significant elected representatives, provide deep insights into the nature and extent of organisational and policy change after the 2001 outbreak. The qualitative data derived from interviews is triangulated with official documentary sources and information obtained under the Freedom of Information Act.

In examining categorisations of post-crisis change the thesis concludes by calling for the deployment of perspectives from studies of both crisis management and policy and organisational change; and for existing categorisations to be refined to take into account the temporalities of change and the multi-dimensionality of change.

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Acronyms and Abbreviations

ACF	Advocacy Coalition Framework
ADPG	Animal Disease Policy Group
AI	Avian Influenza
BSE	Bovine Spongiform Encephalopathy
BRP	Business Reform Programme
CAP	Common Agricultural Policy
CCS	Civil Contingencies Secretariat
COBRA	Cabinet Office Briefing Room A
CSR	Comprehensive Spending Review
CVO	Chief Veterinary Officer
DBRR	Department for Business and Regulatory Reform
DCS	Disease Control System
DEFRA	Department for the Environment, Food, and Rural Affairs
EG	Expert Group
ECJ	European Court of Justice
EU	European Union
FAO	Food and Agriculture Organisation
FFG	Food and Farming Group
FMD	Foot and Mouth Disease
FSA	Food Standards Agency
FVO	Food and Veterinary Office
GIS	Geographical Information Systems
GNN	Government News Network
HRO	High Reliability Organisation
HPA	Health Protection Agency
HSE	Health and Safety Executive
IAH	Institute of Animal Health
ICT	Information and Communications Technologies

LDCC	Local Disease Control Centre
MAFF	Ministry for Agriculture, Fisheries, and Food
MP	Member of Parliament
MS	Multiple Streams
NAO	National Audit Office
NDCC	National Disease Control Centre
NEEG	National Emergency Epidemiology Group
NFU	National Farmers Union
NGO	Non-Governmental Organisation
OIE	World Organisation for Animal Health
OL	Organisational Learning
PE	Punctuated Equilibrium
ROD	Regional Operation Directors
RRFMI	Response to the Reports of the Foot and Mouth Inquiries
RSPCA	Royal Society for the Protection of Animals
SARS	Severe Acute Respiratory Syndrome
SCFAH	Standing Committee for Food Chain and Animal Health
SAG	Scientific Advisory Group
SAC	Scientific Advisory Council
SEAC	Spongiform Encephalopathy Advisory Committee
SG	Scottish Government
SNP	Scottish National Party
SPS	Single Payment Scheme
SVS	State Veterinary Service
UK	United Kingdom
UN	United Nations
US	United States
vCJD	Variant Creutzfeldt-Jakob Disease
WHO	World Health Organisation
WTO	World Trade Organisation

Introduction

In 2001 the New Labour government was faced with one of the most devastating British crises for many years – the foot and mouth epidemic. The epidemic raised significant questions about the legitimacy and credibility of the government’s crisis management armoury. Central-level government policies and institutional configurations were subject to societal and parliamentary scrutiny. Moreover, the epidemic exposed the UK government’s inability to manage a widespread crisis such as a veterinary disease-induced outbreak. The crisis also showed the severe political consequences that can emerge when the government’s performance is subject to both wide criticism and calls for reform. Indeed, the government’s lack of preparedness, and the fact that the crisis coping systems for a widespread disease outbreak were so poor, led to a commitment by the UK government to ‘learn lessons’ from the episode and implement change. This was to ensure that there would not be another crisis of the kind experienced during 2001. The purpose of this thesis, therefore, is to examine the nature, dynamics, and extent of post-crisis change to British crisis management arrangements for veterinary disease-induced outbreaks.

Key Literatures

The study seeks to contribute to an under-researched area in the crisis management field. The crisis management literature has been associated, traditionally, with rationalistic and positivistic approaches and has had a strong practitioner-orientation. Such writings have provided both public and private sector managers with a source when planning for and resolving a period of crisis and uncertainty. In recent decades, however, the crisis management literature has permeated the politics and public administration literatures of the social sciences. Indeed the crisis management literature is now paying attention to the *politics* of crisis which includes the role of political actors and the associated bureaucratic arrangements and responses (for example Wildavsky, 1988; Rosenthal et al., 1989; 1991; 2001; ‘t Hart, 1993; Bovens and ‘t Hart, 1996; McConnell and Stark, 2002; Boin and ‘t Hart, 2003; McConnell, 2003; Rosenthal, 2003; Boin, 2004; Boin et al., 2005; 2008; Perry

and Quarantelli, 2005; Drennan and McConnell, 2007). Crisis management research, therefore, has developed incrementally into a credible sub-discipline of political studies.

From a public policy and management perspective, crises cast a dark cloud of suspicion over existing policy practices and can thus threaten the legitimacy of public institutions (Drennan and McConnell, 2007). Even in times of so-called normalcy, public policy-making is complex because it 'consists of a series of decisions, involving a large number of actors operating within the confines of an amorphous, yet inescapable, ideational and institutional context, and employs a variety of diverse and multi-faceted policy instruments' (Howlett and Ramesh, 2003: 245). This 'normal' complexity is heightened during times of threat and acute uncertainty. Crises generally cause wide dismay amongst societal actors about how and why they came about and how to resolve the situation. They are situations in which decision-makers experience uncertainty and/or surprise and time compression adds to the pressures that they must deal with (Bovens and 't Hart, 1996: 20).

Moreover, the literature is also moving towards analysing the issues and debates regarding governance in the crisis aftermath and whether crisis leads to governmental learning and reform (Stern, 1997; 't Hart and Boin, 2001; Boin et al., 2008). This is the last 'phase' of the crisis management process which is preceded by the pre-crisis planning and prevention and the crisis decision-making (or the acute) phases. Each stage entails problems, challenges, puzzles and predicaments for responsible actors. Boin et al., (2005) also detail specific phases, in terms of the critical tasks of political leaders, which overlap with the pre-, acute-, and post-crisis management stages: sense-making, decision-making, meaning-making, terminating, and learning. However, it is the management of the crisis at the acute stage that has been subject to most attention in the media and in academic studies. The reason for this is that how governments respond to a crisis is a hot issue. The fate and popularity of political leaders can have a direct relationship with how they deal with a crisis (Boin and 't Hart, 2003). Crises, therefore, focus attention on *what the government does and how it does it* and may thus generate pressure for the government to break with existing practices. It can be said, therefore, that crises have the potential to be 'reform triggers' or learning opportunities (Keeler, 1993; Stern, 1997). Yet, the formula of crisis = change is not guaranteed. For example, it might be easier for politicians to reassert the status quo than to engage in a process of soul-searching in order to learn lessons and

invest in change. In addition, problems to do with institutional inertia, and an organisational culture that is not conducive to change, might persist despite the impact of a crisis. Alternatively, a crisis may stimulate entrepreneurialism by actors. Fresh ideas surface which favour change and innovation (Kingdon, 1984). In addition, avoiding a similar crisis situation in the future, by reforming policy and organisational arrangements, would show the government's ability to change and prevent officials and politicians from having to manage a similar stress-inducing crisis.

This thesis, therefore, is mainly concerned with post-crisis change. The pre-crisis and acute crisis management themes are also of importance to the study because studies that analyse change should test this change by considering how policy and organisational arrangements 'stand up' to future similar incidents. The process of learning and reform after a crisis involves understanding what went wrong and changing the pre-crisis and acute crisis management arrangements (this can range from contingency planning, through the use of data and information, to arrangements for ensuring politico-bureaucratic coordination). The 2001 foot and mouth crisis is used in this study in order to analyse and present empirical findings regarding whether this catastrophe led to learning and change. The 2007 foot and mouth and avian influenza outbreaks are the incidents which allow for conclusions to be drawn regarding the nature and extent of change. Importantly, therefore, the study aims to contribute, in conceptual and empirical terms, to the nature of post-crisis change and to the extent to which existing categorisations of change in the crisis management literature fit with the research findings of the thesis.

Given the emphasis on the 'nature' of change, the thesis examines how the processes of policy and organisational change can be understood, explained, and categorised in relation to the management of veterinary disease-induced crises. On this basis, the thesis examines the policy and organisational change literatures in addition to the crisis management literature. More specifically, the literatures concerning bureaucratic change, cultural change, agenda and ideational shifts, and Europeanisation are, where appropriate, connected with the notion of crisis and discussed alongside specific themes that emerge from the crisis management literature. These literatures inform and develop the research questions of the thesis. In conceptual terms, therefore, non-crisis and crisis literatures are both important in studying the nature of post-crisis policy and organisational change.

From this standpoint the thesis is underpinned by the claim that different analytical perspectives can be advantageous to the examination of an issue that is multi-dimensional in nature. In fact studies that do not consider the dynamisms and components of change would be accused of not considering the real-life complexities that are associated with the words such as 'change' and 'policy' (Hogwood and Peters, 1983; Bennett and Howlett, 1992; John, 1998; Howlett and Ramesh, 2003; Kay, 2006; 2009; Capano, 2009; Real-Dato, 2009). Different perspectives within one discipline can be refracted for the benefit of both fields but, in particular, for the benefit of formulating and pursuing specific research questions. As a result, change and learning are of importance for the direction of the thesis and are assessed by 'examining the variations along time of different empirically observable components' (Real-Dato, 2009: 122). Those 'empirical components', along with analytical themes, are developed in chapters 1 and 2 as a result of the assessment of the crisis management and the policy and organisational change literatures. Again, this is with a view to formulating specific research questions that will structure the empirical analysis and the presentation of the research findings.

Research Questions

The aims of the thesis can be distilled into the following research questions:

- Is the process of post-crisis change incremental or does a crisis stimulate radical change?
- Are existing categorisations of the nature of post-crisis management appropriate for understanding change within the veterinary disease policy sector?

The literatures reviewed in chapters 1 and 2 provide the themes and analytical direction required for exploring the above questions. Correspondingly, these questions are further developed by exploring specific questions that emerge from the literature that will help structure the empirical research and presentation of the research findings.

Methodology: Operationalising the Research Questions

The Case Study Method

The above research questions will be operationalised by using the case study method. Case studies are an effective method in political research for exploring, assessing, conceptualising, and refining explanations for the characteristics and dynamics of social realities or events (Lowi, 1964: 677; Eckstein, 1975: 104-108; Eisenhardt, 1989: 534-535; Flyvbjerg, 2006: 219; Yin, 2008: 3-4). Employing case studies can be extremely useful in terms of enhancing the analytical and comparative potential of research (Barbour, 2007: 60). A key advantage to the case study method is that it provides depth to studies in terms of detail, richness, completeness, and wholeness (Bryman, 2004: 49; Gerring, 2004: 348). They are often used by researchers to investigate subjects about which little is known (Gerring, 2004: 345) in the hope of learning something (Eysenck, 1976: 9). The exploratory aspects of case studies means that focusing on a specific instance, event, programme, or process allows for the probing of 'what', 'where', and 'how' (Gerring, 2004: 347; Punch, 2005: 147-148; Creswell, 2009: 13). Indeed case studies allow for the examination of correlative, causal, and proximate relationships (George and Bennett, 2004: 10; Yin, 2008: 9). For studies that are concerned with studying the relationship between crises and change, it is the case study method that is of most use and, in fact, essential.

In general terms, case studies have been subject to criticism for their 'fuzziness'. However, if fuzziness is not confused with sloppiness, then the fluidity of the case study method is an advantage for the present research. This is because multiple themes that emerge from events can be analysed. From this standpoint, Punch (2005: 147-148) confirms that the case study should be used in studies that are concerned with developing an understanding of the associated important features of events. Therefore, case studies afford the researcher freedom of exploration. The researcher is able to broaden their scope of analysis. Research that adopts a tight or rigid research design, such as those associated with survey methodologies, would not be beneficial to the research question and analytical contours of this thesis. This is because the utility of surveys to investigate the context of a phenomenon is extremely difficult (Yin, 2008: 18). Given that the study is concerned with

policy and organisational dynamics, the restriction of a rigid research design would be counterproductive to exploring the shifts and dynamisms of the change process.

In the present research the case studies are used as a source of empirical inquiry that investigates a contemporary phenomenon but also seeks to minimise the accusation that findings deriving from it cannot be generalised (Burnham et al., 2004: 55; Bryman, 2004: 52). The 2001 foot and mouth epidemic is the case study where, guided by analytical themes in earlier chapters, change will be studied. In order to examine the nature and extent of change, the September 2007 outbreak of foot and mouth (the first outbreak of the disease since 2001) will be used as the main comparator case study. The thesis also draws upon the avian influenza outbreak in Suffolk in February 2007 in order to widen the breadth of inference. The reason for this is that, in substantive terms, policy and organisational arrangements for responding to an outbreak in the veterinary disease policy sector are largely generic. The themes derived from the 2001 foot and mouth case study have implications for the management of other veterinary diseases. The generic nature of the crisis management arrangements bolsters the internal validity and reliability of the research (Yin, 2008: 42-43). There is no question that diseases of a particular biological type require special procedures at the operational level in terms of eradication, disinfection, and containment. However, the 'big' questions associated with central level crisis management processes and decision-making structures are generalisable within the veterinary disease policy sector. This has been confirmed in interviews with key actors in the policy domain and in official documentation.

Using more than one case 'allows the researcher to avoid the all too familiar and traditional pitfall of traditional, intensive single case studies' (George and Bennett, 2004: 69-70). That is, single case studies do not allow for wider lessons to be drawn from the study. It is acknowledged, however, that single case studies have key advantages and that the choice of the number of cases should only be guided by the research questions and boundaries of a given study rather than any kind of methodological prejudices (see Flyvbjerg, 2006).

In terms of pursuing the research questions of the thesis, in addition to building an analytical framework, the study needs a reference point from which change within the veterinary disease policy sector can be mapped. An entire chapter is devoted to the 2001 epidemic and is researched intensively by using interviews with key political and bureaucratic actors, primary documentary data, and secondary sources. The case study chapter provides a 'thick' narrative which, according to Flyvbjerg (2006: 237), is 'a sign that the study has uncovered a thick problematic'. Peattie (2001: 260) also argues that it is important to pay attention to 'the contextual and interpenetrating nature of forces' when summarising case studies. Case study designs are used where what is required is very detailed in-depth understanding that is holistic, comprehensive and contextualised (Yin, 2008). In terms of this particular study, summarising the complex case of the 2001 foot and mouth crisis would not only do harm to the context of the government's response to the crisis but also, in analytical terms, would make teasing out particular themes, from which change will be mapped, an impracticable exercise.

The case studies can also be justified in terms of the fact that the 2001 and 2007 outbreaks were managed by the same political administration. If policy and organisational change relies on experiential learning then a change of government may have adversely affected such lesson-drawing processes. Before the 2001 foot and mouth crisis BSE was fresh in the memory of policy-makers and approximately one year after the 1996 BSE crisis the New Labour government took office in May 1997. In turn, it was New Labour that was still in government during the foot and mouth crisis at the end of the first parliamentary term in 2001 and was returned to be the government in May 2005. Thus, the same political party was in government throughout the period covered by the case studies in this thesis. Methodically, this avoids the problems that may have arisen due to a change in government and associated changes in strategic political goals. To this end, wider lessons can be drawn from the analysis of change and learning in the veterinary diseases policy sector by considering the approaches taken to change by the same New Labour government. Moreover, the permanence of the UK civil service is such that many veterinary and policy experts, but not all, will be familiar with similar crisis management experiences. This is reflected in the interview data. This means that past experiences will contribute towards an 'institutional memory' in terms of what came before - especially if

those experiences were particularly damaging to the legitimacy of the organisation responsible for a policy sector and if those experiences challenge the sustainability of the existing policy and organisational frameworks.

In conceptual terms, this research agenda benefits from the prior development of conceptual and analytical themes to guide data collection and analysis (Yin, 2008: 18). What is more, a particular focus is required when analysing cases (George and Bennett, 2004: 70). The conceptual and theoretical propositions are developed in chapter 1 and 2 of the thesis. This is where particular themes are teased out of the crisis management and policy and organisational change literatures. These themes structure the analysis of the 2001 foot and mouth case study which is examined in chapter 3. The approach taken to the study of the foot and mouth epidemic is not haphazard but explicitly articulated by the deployment of systematic themes. This study, therefore, is not primarily concerned with theory-building but seeks to deploy analytical themes which act as 'blueprints' in order to explore the overarching research question (Yin, 2008: 33-34). This fits with what has been categorised as a 'disciplined configurative' (Eckstein, 1975: 99-104; George and Bennett, 2004: 75) or 'interpretive' (Lijphart, 1971: 692) case study in that established theoretical frameworks are used to explore and explain a particular case or a series of events. In short, this means that the thesis is case orientated.

Crises are extreme events. The 2001 foot and mouth crisis is an extreme case in the sense that it will have, for better or worse, strategic importance in relation to how the UK government responds to a future veterinary disease-induced emergency. Eisenhardt (1989: 534-535) supports the use of such case studies because it makes sense to choose cases such as 'extreme situations' and 'polar types'. Indeed crises test the responsiveness and resilience capacities of government which usually challenge particular departments of state (Boin et al., 2005). In this sense post-crisis dynamics cannot be generalised, automatically, to other non-veterinary disease policy-making sectors. Hence, it is important not to overstate the breadth of inference. Yet by analysing extremes this means that lessons can be drawn from such extreme situations. This is because cases are not only studies for their own 'intrinsic significance' (King et al., 1994: 15), rather, as long as they are relevant to an overarching research question, case studies can be developed on an

‘instrumental’ (Stake, 1995: 16) basis so that they allow for more general principles about phenomena to be derived.

In terms of addressing questions of ‘construct validity’ (George and Bennett, 2004: 42), and given that the thesis seeks to understand the case of the veterinary disease policy sector, the thesis respects the particular policy and institutional *context* of the case studies. Second, it is important to define the particular concepts of policy and organisational change. The use of definitions minimises the possibility that deciding on what constitutes change is based on the impressions of the investigator and maximises the possibility of identifying what actually occurred and what conditions genuinely reflected events in the aftermath of the 2001 foot and mouth crisis. The integration of the themes identified earlier in the thesis with the 2001 case study in chapter 3 can be taken to be the classification of measures that match the concepts considered in the earlier theoretical chapters (Yin, 2008: 41-42). Yet definitions in the social sciences are frequently subject to debate and disagreement. As a result, researchers must use definitions with the particular aims and scope of their research agenda in mind. In terms of definitions of policy and organisational change, this thesis does not regard policy and organisational development as entirely distinct because they are both subject to interlocking change processes (see Baumgartner and Jones, 2002; Streeck and Thelen, 2005) - the organisation is the main implementer of policy-orientated change. It is on this basis that policy and organisational change can be defined as the adaptation in organisational and policy practices, procedures, and processes. ‘Policy’ and ‘organisation’ are taken to be heuristics in order to facilitate empirical enquiry (Kay, 2006: 59-60). It is the assessment of the nature and, accordingly, the extent of adaptation that guides the analysis of post-crisis policy and organisational change in this study.

The case study allows for the use of a range of data collection methods (Hecllo, 1972: 94; Eisenhardt, 1989: 534-535; Yin, 2008: 11). The unique strength of the case study is its ability to deal with a full variety of evidence such as interviews with the persons involved in the events and documents (Yin, 2008: 11). This forms the basis of triangulation. Triangulation aims to view an object from more than one standpoint in order to provide researchers and theorists with more comprehensive knowledge about the object (Tarrow,

2004: 179). In short, triangulation strategies aim to maximise accuracy and consistency by ensuring that the evidence gathered is not unique. Thus, the next two sections provide an overview of the two main methods of data collection used in this study: interviews and documentary analysis.

Interviews

Semi-structured elite interviews represent a major research source for this study. Thirty three recorded semi-structured interviews were conducted over a three month period (April to June 2008) with key UK and European officials and elected representatives. The elected representatives interviewed were members of the UK parliament and included former Secretaries of State for MAFF and DEFRA, government and shadow ministers/spokespersons, and a selection of members of the Environment and Agriculture Select Committees. The elected representatives were contacted because of the relevance of their current or past positions to the policy area of veterinary disease outbreaks. In terms of the Select Committee members, they were contacted because of the appropriateness of the questions that they raised in the Committee's proceedings.

The officials interviewed were based in DEFRA, the Cabinet Office, the Scottish Government, and the European Commission. The officials were identified from official documentation, searches of the relevant websites, and snowballing. All officials were contacted because of their policy responsibilities for crisis management, specifically for veterinary-induced outbreaks before, during, and/or after the 2001 foot and mouth epidemic. The list of interviewees and the reasons for contacting each respondent is provided in Appendix One. All contributions made by officials were made anonymously unless consent was secured - with the exception of one senior civil servant, Sir Brian Bender (Permanent Secretary of MAFF and DEFRA 2000-2005), who was satisfied to be quoted without anonymity. All of the civil servants interviewed were prepared to be named in the Appendix and all of the elected representatives were happy to be quoted and named in both the main body and the Appendix of the thesis.

The process of identifying interviewees for this thesis was guided by the desire to obtain insights into the experiences, and to access the expertise, of key actors in a particular policy domain. It was not guided by a preoccupation with gaining fully standardised responses between individuals. Focussing on qualitative depth and breadth will inevitably trade off with reliability and comparability. However, the semi-structured interview, when used correctly, ensures that there is enough comparability guaranteed in the subject matter as well as allowing for a flexible approach. The exploratory nature of this study means that strict methodological rigidities would constrain the contours of the analysis. Inevitably, this would result in the exclusion of important data. In short, qualitative semi-structured interviews represent a significant source of information for this study.

The objective in all of the interviews was to gain 'rich insights into people's biographies, experiences, opinions, values, aspirations, attitudes, and feelings' (May, 2001: 120) in the process of 'data generation' (Silverman, 1993: 91). Semi-structured interviews are the most appropriate format for dealing with elite respondents (Fielding and Thomas, 2001: 124; Rossman and Rallis, 2003: 192; Burnham et al., 2004: 213). Elite respondents tend to require a stimulating and active form of conversational interaction with the researcher. In this light, semi-structured interviews allow the interviewer to probe, elaborate, and clarify the issues raised. In addition, elite respondents can become frustrated by a rigid and formulaic interview formats, mainly because the fully structured interview includes closed questions which do not allow for much in the way of expression (Fielding and Thomas, 2001: 124). Elite respondents need to draw upon their experiences and, as a result, should be given the breathing space to consider those experiences without tightly ring-fencing the field of inquiry (Rossman and Rallis, 2003; Punch, 2005: 146). The semi-structured interview format allows for comparable and specified questions to be asked and, at the same time, gives the researcher the freedom to manoeuvre beyond the boundaries of an analytical framework. The freedom afforded by semi-structured interviews enhances 'within method' (Denzin, 1989) triangulation by allowing for same issue to be explored through different lines of questioning. This is an important pursuit because this research aims to get respondents to talk as freely as possible so that new data can be generated on the subject of the processes and results of post-crisis change. This gives the researcher the opportunity to tease out further information from the respondents and pursue their ideas,

perceptions, and viewpoints. Any problems associated with interviewees being able to recollect events that happened in the past did not pose any problems given the contemporaneousness of the study and that the 2001 crisis has had such important implications for the governmental management of veterinary-induced outbreaks.

Furthermore, the interview questions were always posed in a neutral and non-leading fashion (thus avoiding the possibility that the responses were in some way 'shaped' to fit a pre-conceived theory – see de Vaus, 1996: 115). Seldon (1995: 126), drawing on his experience of interviewing government officials and politicians, notes that 'interviews can be the kiss of death to objectivity'. Richards (1996: 200) also argues that interviews reveal accounts of events that suit the personal, ideological, and political agendas of the respondent. With reference to the present study, any risk associated with political leanings or bureaucratic interests overwhelming the principles of objectivity have been minimised due to the sheer range of individuals who agreed to participate in the research process. Extensive comparison with government, non-governmental, and parliamentary documents and cross-referencing of the interview data has limited overt subjectivity. Richards (1996: 204) also argues that interviews cannot be relied upon to provide a complete account of a particular event or a series of developments. On this basis, interview data must be used in conjunction with other sources and research strategies in order to complement or supplement each other according to varying dynamics – thus bolstering what Denzin (1989) describes as 'between method' triangulation.

Yet, emphasising the combination of different methods should not deviate from the worth and necessary utility of the interview component in itself. In terms of the utility of the interviews, it is difficult to see how the scope and breadth of this study could have been maintained without talking to a variety of key actors. It is unlikely that the extent of policy and organisational change in the aftermath of the 2001 foot and mouth epidemic could have been evaluated in any meaningful way without the contributions made by the relevant Secretaries of State and ministers, shadow ministers, key civil servants, and other politicians (such as Select Committee members) who agreed to be interviewed. As a result, the need for this study was reinforced because there were clear gaps in knowledge about whether the UK government's commitment to change has been manifest since 2001.

Additionally, the completed empirical work on studying the nature of post-crisis change serves a wider purpose - to facilitate a wider understanding of policy and organisational dynamics in the aftermath of a crisis.

Documentary Materials

The thesis also includes a wealth of primary documentary data. Documents play an explicit role in any collection plan and are likely to be relevant for every case study topic (Yin, 2008: 101-102). Although many official documentary sources are drawn upon in the study (including DEFRA annual reports and contingency planning documents), the reports that were of most use for the analytical direction of the thesis were the independent 'Lessons to be Learned' inquiry report (HC-888, 2002) into the 2001 foot and mouth epidemic and the independent review of the 'Lessons Learned' in light of the experience of the 2007 outbreaks (HC-312, 2008) (and the accompanied interview notes with politicians, officials, and industry stakeholders published as evidence alongside the review). The official record of UK parliamentary proceedings (Hansard) is also used in the thesis - particularly the proceedings of the Environment and Agriculture Select Committees 2001-02. The research also benefits from the successful application for information under the Freedom of Information Act 2000. This Act allows UK residents to seek specific information from public bodies and is now a popular way for researchers to access primary data (Pierce, 2008: 103-104).

The literatures on research methods acknowledge the shortfalls in the reliability and validity of documentary materials in terms of the potential for bias in terms of the researcher's approach and agendas of the publisher (George and Bennett, 2004: 99-105; Yin, 2008: 101-104). Caution should thus be used when deducing meanings or 'truths' from documents. Indeed documentary sources must have a limited worth in explaining the intricacies of the policy process and, as noted above, this is where interviews have an important function. Yet the documentary materials drawn upon in this study have significant value. First, the study relies on independent inquiries to give a perspective on aspects of policy and organisational change. Crucially, the 2008 Anderson Review of the

veterinary disease control policy sector published, alongside the main report, proceedings and minutes from interviews with actors such as DEFRA officials, Cabinet Office officials, politicians, and industry representatives. By way of supplementing the many interviews conducted by the author, the Anderson Review triangulates the claims of politicians and officials by giving a more rounded perspective on the extent of policy and organisational changes.

Thesis Structure and Outline

The thesis is divided into two main parts. Part I includes the analytical framework and case study analysis. Chapter 1 provides an overview of the crisis management literature. An examination of the different crisis management stages, themes, and perspectives allow for the development of the research questions, and provides direction, for the thesis. The chapter includes a discussion of the approaches and definitions of crisis management and an examination of the multiple crisis management issues and debates structured around pre-crisis planning and prevention, crisis management decision-making, and post-crisis management. The final theme examined in chapter 1 acts as a precursor to chapter 2 in that it considers the dynamics and issues associated with post-crisis change and learning. Overall, chapter 1 provides signposts and key questions that emerge from the review of the crisis management literature and serves to structure the analysis in subsequent chapters of the thesis.

Chapter 2 complements the first chapter by reviewing the organisational and policy aspects to change and learning. Where possible, connections are made with the post-crisis change and non-crisis policy and organisational change literatures. The chapter includes an examination of the organisational learning and cultural change literatures as well as the literature on governmental agenda and ideational shifts. The chapter also considers the dynamics of Europeanisation as a precipitant of change. Europeanisation is included in the analytical framework because the veterinary disease policy sector is heavily legislated for at the EU level. This means that studies analysing central-level change to an area that has been subject to European integration must also consider the supranational forces for policy

change. In short, chapter 2 completes the analytical framework by providing signposts and developing further questions for empirical analysis.

Chapter 3 is informed by interviews and primary documentary materials in order to ‘tell the story’ of the 2001 foot and mouth epidemic. It provides a structured and detailed narrative and analysis of the 2001 foot and mouth crisis. The themes examined in chapters 1 and 2 are integrated with the foot and mouth case study. In empirical terms, chapter 3 is a key reference point for the subsequent chapters as this is where the initial policy and organisational conditions for change are mapped.

Part II of the thesis includes the research findings from the interviews and documentary analysis based on the themes and questions raised in chapters 1 to 3. Before the findings are presented, however, overviews of the 2007 foot and mouth and avian influenza outbreaks are provided in the introduction to Part II of the thesis. The overviews are provided at this juncture because the 2007 cases are intertwined within a substantial part of the interview data. The officials and politicians interviewed frequently use the 2007 episodes as comparators in order to make judgements about post-crisis change based on the 2001 foot and mouth crisis. In structural terms, therefore, it makes sense to provide some background to the cases before they are considered in the findings chapters. The findings chapters are also split into the policy-orientated and organisational aspects to change for reasons of analytical clarity.

Chapter 4 presents findings that concern the main policy themes derived from chapters 1 and 2. The chapter includes the regulatory aspects to change, under Europeanisation processes, and changes to contingency planning, stakeholder engagement, the role of scientific expertise, communications, and information and data management. Under each section of the chapter is a summary of the research findings which considers the nature and extent of post-crisis change. Chapter 4 concludes by revisiting further post-crisis themes such as the role of inquiries and the politics of crisis management.

Similarly, chapter 5 presents findings that concern the main organisational themes derived from chapters 1 and 2. The chapter includes organisational learning, cultural change,

politico-bureaucratic coordination, organisational changes, and multi-level UK governance. The chapter also provides summaries of the research findings under each section in order to make a judgement regarding the nature of organisational change in the veterinary disease policy sector.

Chapter 6 takes a more evaluative stance and considers the 'big picture' of change since the 2001 foot and mouth crisis. Chapter 6 provides more interview data and revisits some of the literatures detailed in chapters 1 and 2 and, in light of the findings in chapters 4 and 5, pulls key themes together in order to address the issues surrounding current categorisations of post-crisis change. It will be clear throughout the thesis that the interview and documentary data are logically structured around the issues raised in chapters 1 and 2.

Conclusion

The purpose of this thesis is to analyse the nature, dynamics, and extent of post-crisis change and understand the case of British government policy-making for veterinary disease-induced outbreaks. Over the next three chapters an analytical framework, based upon a combination of crisis management, policy, and organisational change literatures, is developed for the study of post-crisis change. The questions that emerge from the analysis in chapters 1 and 2 are of interest to public policy and crisis management scholars alike because they point to common themes that connect their respective fields. From this perspective, the creation of the framework and building research questions can be regarded as worthwhile in itself. When connections are made between the literatures on crisis management and non-crisis policy and organisational change, new research avenues are opened up for the benefit of public policy and crisis management researchers. As noted earlier, chapter 1 begins by introducing the definitions and research themes of crisis management which will be explored later in the thesis. In later chapters and sections, the application of the research themes to the case of veterinary disease management allows for the presentation of new findings about British crisis management for veterinary disease-induced outbreaks and the nature of post-crisis change.

PART I: Literature Reviews and Case Study Analysis

The next three chapters construct the analytical framework for the thesis and provide an analysis of the 2001 foot and mouth crisis. Chapter 1 develops specific research questions that emerge from the crisis management literature. Chapter 2 finalises the analytical framework by making connections between crisis and the organisational and policy change and learning literatures. The chapter also includes an exploration of key precipitants of change and the development of further key research questions. The questions developed in chapters 1 and 2 will be threaded through the subsequent chapters and structure the empirical analysis of the thesis. Chapter 3, guided by the research themes in chapters 1 and 2, presents a detailed narrative and analysis of the foot and mouth crisis. The chapter acts as the main reference point for charting and studying the nature post-crisis policy and organisational change.

Chapter 1

The Crisis Management Literature: Key Analytical Themes

Introduction

In terms of building an analytical framework, the purpose of this chapter is to identify key themes in the crisis management literature that will be of importance for posing the research question of the thesis. As stated in the introduction, the core endeavour of this study is to understand the processes, and present empirical findings, of organisational and policy change dynamics after a 'crisis'. The 'crisis' element to change is, therefore, of analytical importance. The crisis aspect to change and adaptation is a growing but under-researched area in the public policy and administration literatures (Stern, 1997; Boin et al., 2005; Boin et al., 2008). Crises allow for the exploration of the extent of change after a period of disruption and disorder. The managerial activities associated with crisis management or policy-making for crisis management presents policy-makers with complex challenges. The reason for this is that crises call for non-routine policy activities. In the aftermath of the implementation of such non-routine policy activities, existing standard operating procedures, policy frameworks, the configuration of institutions or, more rarely, policy paradigms can be reformed and rejuvenated. However, this may not always be the case because bureaucratic mindsets, and the wider externalities of political, economic, and social circumstances, may be such that change does not take place or is even resisted.

The crisis management literature, in a similar vein to many studies that are concerned with mapping out the policy process, often follows a stagist approach. This approach takes the form of engaging sequentially with the intricacies and debates surrounding pre-crisis management all the way through to how to resolve crises and learn from them. However, as noted in the introduction to this thesis, the realities of crisis management are such that they do not always follow a step by step or 'instruction manual-like' process. At face

value the stages approach portrays the crisis management process as a logical and sequential process or is akin to a 'policy cycle' (Howlett and Ramesh, 2003). This thesis does not make such an assumption. Crisis management stages are fused, interconnected and interlinked. Indeed the processes of pre-crisis planning, decision-making, and change can be non-linear, interwoven, and mutually dependent (Boin et al., 2005; 2008; Drennan and McConnell, 2007). Nonetheless, it is for reasons of analytical clarity that this chapter presents the key stages of crisis management in terms of pre-crisis, crisis decision-making, and the crisis aftermath. The latter stage of post-crisis management will act as a springboard for chapter 2 which analyses the different perspectives on organisational and policy change. In short, this chapter identifies analytical issues in relation to the pre- and post-crisis management stages. These issues help to structure the case study analysis and findings in later chapters.

Before a review of the literature is provided around the aforementioned stages, the chapter provides an overview of the key approaches to studying and defining crises. It will explore the definitions and approaches of crises and crisis studies.

Approaches and Definitions

In terms of the key approaches to crisis studies, Hermann (1989: 359, see also Hermann 1972, 1988) suggests three kinds: systemic (in which the stability of the international order is seen as at risk; see also McClelland, 1972), actor-confrontation (two or more actors engaged in conflictual communication and crisis bargaining; see also Williams, 1976; Lebow, 1981; Richardson, 1994), and decision-making (focuses on processes within state contexts; see also Rosenthal and Kouzmin, 1997; Stern, 2003). Yet, a fourth approach, that of the political symbolic approach to crisis studies, has been on the crisis management research scene for some time (see Lasswell, 1948; Edelman, 1988; 't Hart, 1993; Bryder, 1998). Although this thesis will touch on several approaches to the study of crisis, this study is primarily grounded in the *decision-making* mode of crisis management study. This mode, in the political context, assumes that policy-makers are responsible and are the ones ultimately held to account for coping with a given problem.

Crises lead to *uncertainty* with regards to how policy-makers will respond to unfolding events and to how future *risks* are managed. Clarke (1999: 10-11) argues that uncertainty is a time in which a particular set of social circumstances threaten the ordinary state of affairs. March and Simon (1993: 137) also specify that uncertainty is when ‘the consequences of each alternative belong to a subset of all possible consequences, but...the decision-maker cannot assign definite probabilities to the occurrence of particular consequences’. Risk, by contrast, is when there is ‘accurate knowledge of a probability distribution of the consequences that will follow on each alternative’ (March and Simon, 1993: 137). Put differently, but perhaps more directly, Clarke (1999: 11) contends that risk is when you know the possible range of things that may happen following a choice; uncertainty is when you do not. It is often the case that policy-makers will seek to transform uncertainty into risk (Hogwood and Gunn, 1984: 178-183; Clarke, 1999: 11; Boin et al., 2005: 24). The crisis management literature suggests that the drive behind this transformation is the desire by policy-makers and organisations to control uncertainties. This is with the aim of encouraging a process of rationalisation. Indeed, a rational-scientific approach to identifying contingencies inevitably leads to the ‘normalization of risks’ (Boin et al., 2005: 24) – leading to a calculated sense of security. By carrying out risk assessments, mapping out any possible pathways to failure, and assigning a quantified risk factor to each scenario, risk may be widely accepted as normal (Boin et al., 2005: 24).

Rosenthal et al. (1989: 10) argue that crises should be defined as:

A serious threat to the basic structures or the fundamental values and norms of a social system, which - under time pressure and highly uncertain circumstances - necessitates making critical decisions.

This definition of a crisis has been popular in crisis research (Rosenthal et al., 2001; Boin, 2005). Yet Boin (2005: 161) argues that this definition is overshadowed by regarding crises as ‘elite constructions’. In other words, it will be authorities or those with a democratic or bureaucratic mandate to ascertain the extent to which an obstruction or disruption has occurred. In western democracies electoral support from the public can justify a democratic mandate which allows political figures to make key judgements

during crises (or in 'normal' periods for that matter). Furthermore, experts in the policy field can have the indirect mandate to make judgements about the extent of obstructions or disruptions because of their position in the bureaucracy. Such individuals can push forward a policy learning process if their contributions are taken onboard by those in political authority (Hall, 1993: 277). Thus, the roles of political figures and experts within the bureaucracy are tied to the notions of 'input and output legitimacy' (Sckogstad, 2003: 956). Those in political authority have input and output legitimacy when individuals believe that those who make decisions have the right to do so and that those decisions 'meet social standards of acceptability and appropriateness' (Sckogstad, 2003: 956). Experts within the bureaucracy contribute to output legitimacy because they are tied into the process of decision-making. The fact that they are locked-in to decision-making processes means that experts have a mandate, and a political responsibility, to make judgements. The role of experts in crisis management decision-making will be revisited later in this chapter.

Universal definitions cannot address (and encompass) the direction and implications of all research questions (Mitroff et al., 2004: 176). For the analytical direction of this thesis a crisis can be viewed, therefore, as a period of discontinuity in which unexpected and undesired events call for government readiness and swift decision-making capacities. This departure from normalcy creates conditions of high uncertainty and poses real challenges to how policy-makers draw lessons, and manage change. 'Crises' can be defined, therefore, as episodic breakdowns of familiar or existing symbolic frameworks that legitimate the pre-existing socio-political order ('t Hart, 1993; Boin et al., 2008). This means that a crisis is a period of discontinuity and can be termed as a phase of disorder. Policy stakeholders suddenly consider routines and outcomes that used to be satisfactory as unacceptable or inappropriate. The discrepancies that arise between expectations and system performance lead to an erosion of the legitimacy of existing policy frameworks. On this basis, a crisis is a period of intensity that calls for government readiness and swift decision-making capacities (Keown-McMullan, 1997: 9; Boin, 2004: 197; Boin, 2005: 162).

The key point to be made in this section of the chapter is that no crisis is the same. Degrees of uncertainty vary considerably depending of the context of the crisis. Scholars have recognised this and have sought to use crisis typologies in order to guide and ring-fence the scope of their studies (Gundel, 2005). For example, crises have been categorised as *sudden* (Farazmand, 2001: 2; McConnell, 2003: 394-395), *creeping* (Rosenthal et al., 1989: 27; Booth, 1993: 56; McConnell, 2003: 394-395), *natural, man-made fast-burning, unexpected* (Richardson, 1994), *accidental* (Smith, 1990: 265), *cathartic, slow-burning, long-shadow* ('t Hart and Boin, 2001: 32-35), *informational, criminal, fiscal, environmental, political* (Mitroff, et al., 1988: 83-107), *ill-structured messes* (Mitroff et al., 2004:175), *modern* (Boin and Lagadec, 2000: 139; Rosenthal, Boin and Comfort, 2001: 11-12; Stern and Sundelius, 2002: 80; Boin and 't Hart, 2003: 545), *trans-boundary* (Rosenthal, 1998; 't Hart and Boin, 2001), and *international* (McConnell and Drennan, 2006: 211-212). Crises, therefore, manifest themselves in different ways and appear in several guises (Farazmand, 2001: 2). Some are long-term processes of deterioration and escalate rapidly; some have their origins in the past while others are created either by chance or due to the risks posed by a particular environment. Although it is understandable that scholars categorise crises in order to frame the direction of their analysis, uncertainty, threats, ambiguity and risk are inherent characteristics of crisis decision-making.

Crisis analysts are now coming to terms with describing crisis as a *process* (Quarantelli, 1995; Perry and Lindell, 2003; Rosenthal, 2003). This may make it difficult to give a proper label to crises at any given time (Rosenthal, 2003: 132). The process aspect could be considered as a linkage between three inter-related dimensions – ‘the characteristics of the phenomena, the conditions that lead to them, and the consequences that result’ (Quarantelli, 1995: 225). This dynamic view of crisis is a convincing one since the logic behind this is that crises take into account circular movements between causes and effects and circular movements between the stages in the process of a crisis. Viewing crisis in such a way is a step removed from the temptation to demarcate clearly a start and end point. This point is recognised by 't Hart and Boin (2003: 545-546):

Crises are dynamic and chaotic processes, not discrete events sequenced neatly on a linear time scale. A crisis may smolder, flare up, wind down, flare up again,

depending as much on the pattern of physical events as on the framing and interpretation of these events by the mass media, politics, and the general public. The scope of the crisis may expand and contract depending on which themes and issues command attention at different points in time.

Viewing policy and decision-making as a process is long-standing. A key reason for this is that it is not always easy to distinguish when a policy terminates (Hogwood and Gunn, 1984: 241-260). In policy analysis it is important to remember that policies are not always innovative phenomena that can be easily demarcated from policy succession. In relation to crisis management the crisis process may be fuelled by feedback that flows from sense-making processes (Weick, 1993) - some may perceive a crisis as formally terminated but it may only be beginning for some. Perceived degrees of uncertainty, threat and urgency may change at any given time and, in turn, the identity of a crisis may change over time. For example, a regional or national crisis may become a trans-national crisis or a crisis becomes a disaster (see for example, Keown-McMullan, 1997; Quarantelli, 1998; Shaluf et al., 2003; Perry and Quarantelli, 2005).

Crisis and Disaster

In continuing the theme of the labelling of crisis situations, the terms 'crisis' and 'disaster' are often mixed up and are frequently used synonymously by politicians, journalists, practitioners and scholars. Perhaps this is because they essentially stem from 'the branches of the same tree' (Boin, 2005b: 281). In a similar vein to crisis, no definition of disaster has been agreed upon in the literature (Hood and Jackson, 1992; Quarantelli, 1998; Perry and Quarantelli, 2005). Alexander (2005: 26) has described disaster research as being embedded in a 'definitional minefield'. Analyses have ranged from explaining disasters as the collapse of cultural protections (Carr, 1932), unique events (Rubin and Popkin, 1990), a form of collective stress (Barton, 1963; 1969), systemic events, and a form of a social catalyst (Kreps, 1998). What is more, the explanations and definitions given by Henry Quarantelli (1998) in his first symposium *What is a Disaster: Perspectives on the Question* are varied. The underpinning theme that permeates the symposium is that the authors define disaster as something that is a social construct. In Quarantelli's (2005) second symposium (co-edited with Ronald Perry), there is an attempt to move the debate

forward. Although there is a high degree of academic rigour displayed, it is fair to say that a cohesive understanding and encapsulation of how actors should understand disaster situations is still long way off. Indeed Jigyasu (2005: 49) asks the question: 'Disaster: Reality or Construct?' Disasters are not defined by fixed events and are liable to change. This resonates with the contention of Alexander (2005: 26) who suggests that 'models and interpretations of disaster abound, but the phenomenon is so multi-faceted that a general theory of explanatory power is unlikely to be ever formulated'.

Disaster management research differs in emphasis from public policy and administration-related crisis management approaches. This is due to the fact that disasters tend to be natural events which lead to large-scale damage to human life, damage to the physical environment and have vast economic and social costs. There is a considerable body of literature that has focused on the impact that physical (sometimes expressed as environmental) disasters have had on human activities (Comfort et al., 1999; Alexander, 2000; Steinberg, 2000). Indeed, human vulnerabilities have been an important defining factor in the classification of an event as a disaster (Comfort et al., 1999: 39; Smith, 2005). Again, however, there is an analytical grey area between what constitutes a crisis or disaster due to shifting identities and contextual change. For example, analyses have described a shift from accident to disasters (Rijma and van Duin, 2001) and from crises to disasters (Davies and Walters, 1998; Boin, 2005). As a case in point, the terrorist atrocities of September 11th 2001 elucidated the interpretive fuzziness between conceptions of crisis and disaster. Rosenthal (2003) describes such events as a crisis whereas Boin (2005: 164) notes that acts of terrorism should come under a widened disaster category. The definition(s) applied to analyses seem to be dependent on the discipline using the term and the aims of the researcher because 'actors create a definition with different ends in mind' (Perry, 1998: 214).

From this standpoint it is sufficient to argue that conceptualising crisis is not an easy matter. Crisis events are seen as featuring severe threat, a high degree of uncertainty, the need for prompt (urgent), critical and probable irreversible policy decisions (Kouzmin and Jarman, 2004; Boin et al., 2005). Extensive case studies have been carried out examining technological mishaps (Perrow, 1984); political crises and terrorism (Boin et al., 2005;

Rosenthal, 2003); and public sector crises (Bovens and 't Hart, 1996; Gray and 't Hart, 1998). The forces of subjectivity mean that authors categorise crises in different ways. This makes it difficult to come up with an agreed definition of crisis. To this end, studies adopt their own variation that acts as an analytical lens which reflects the overall ambitions and direction of studies (Mitroff et al., 2004: 176).

Crisis Management and Symbolic Politics

It was suggested earlier in this chapter that the politico-symbolic approach to crisis studies has shed light on the manipulation of symbols and political language as a regular feature of crisis decision-making. This has become an important part of the crisis management literature in recent times. Governments often make use of rhetorical devices during crisis periods to legitimise their authority and communicate to the masses that something is being done to manage uncertainty. For example, Clarke (1999) discusses the symbolic nature of crisis contingency planning by the use of 'fantasy documents'. It is the contention that governmental documents that attempt to tame crises or disasters are 'little more than vague hopes for remote futures and have virtually no known connection with human capacity or will' (Clarke, 1999: 16). As Murray Edelman (1977: 49) notes,

Every administration finds it politically useful to claim that its ... policies are working ... There is, accordingly, a systematic deflation in governmental rhetoric of the developments that call attention to unequal distribution to goods or services and a systematic inflation of the forms of threat that legitimize and expand authority. The latter are defined as crises the former as problems. As crises recur and problems persist, so does a governmental dramaturgy of coping.

Indeed 't Hart (1993: 37) argues that scholars and practitioners should bear in mind that the instrumentalist or managerial orientation in crisis research is not altogether unproblematic. 't Hart argues that the paradigms that emphasise control constrain the scope of crisis management research. That is not to say that symbolic aspects should be given preferential treatment in crisis studies but only that they should be accommodated in crisis research given that crises are defined and manipulated by multiple stakeholders, such

as interest groups, within and outside governmental circles (Rosenthal et al., 1991; 't Hart, 1993).

From a politico-symbolic perspective, framing is an important aspect to symbolic politics and crisis management decision-making. How a situation is framed will either enable or impair the articulation of demands and the formulation of public policies. The politics of framing transcends multiple disciplines in the social sciences (Goffman, 1974; March and Olsen, 1989; Rein and Schön, 1991; Schön and Rein, 1994; Jachtenfuchs, 1996). Rein and Schön (1991: 263) regard framing as 'a way of selecting, organizing, interpreting, and making sense of a complex reality so as to provide guideposts for knowing analysing, persuading and acting'. Jachtenfuchs (1996: 5) also defines a frame as a perspective from which an amorphous, ill-defined problematic situation can be made sense of and acted upon.

In this respect, labelling social conditions as a *crisis* is in itself a major communicative act with potentially far-reaching political consequences. Framing something as a disaster, crisis, threat, risk, hazard, accident, tragedy or incident may convey differing connotations in relation to the differing assessments of the situation and the allocation of blame. For example, the word 'accident' implies a lack of culpability as the unfortunate event(s) may have been unavoidable. Therefore, framing may squeeze or provide a policy-maker with room for manoeuvre in relation to what subsequent action should be taken. As Albaek (2001: 454) notes, in his study of the HIV crisis, 'the naming and framing of something as a crisis may generate the political momentum for a specific issue definition or policy proposal'. Issues that are perceived by societal actors as a threat, a crisis, or are in some other way related to security, demand to be handled with greater force, gravity and haste than other issues (Keeler, 1993).

Ritualistic Behaviours

In developing the symbolic approach to crisis studies, a key aspect to emerge from the debates on symbolic politics is the utilisation of ritualistic behaviours in crisis management

(‘t Hart, 1993: 42-44; Boin et al., 2005, 84-86). Rituals are often repetitive and enacted during or after a crisis situation (‘t Hart, 1993: 42-43). An example of this is when political leaders visit sites of crisis and disaster as in the case of when US President George W Bush visited ground zero in the aftermath of the terrorist atrocities of September 11th 2001. Official investigations or inquiries also fulfil a similar symbolic function since ‘ritualised and seemingly dispassionate inquiries reinvigorate the belief in the rational procedures of government’ (Boin et al., 2005: 86). It may be the case that aspects of the lessons emanating from inquiries are symbolic, or even ritualistic, in order to provide reassurance and purification by showing the public that every possible effort was being made to get at the root of the problem (‘t Hart, 1993: 43). A more traditional, but equally important, part of the crisis management discipline is to do with legitimacy.

The Legitimacy Aspects of Crisis Management

Conceptions of crisis become complicated further when some analyses broaden out the term to encapsulate periods of disorder or change in political, economic, or social systems. The term is routinely used to describe paradigm shattering periods in science (Kuhn, 1962), capitalist legitimation periods (Habermas, 1975), and punctuated equilibrium after periods of relative policy stability (Baumgartner and Jones, 1993). Jürgen Habermas (1975) provides a view of crisis in relation to the development of crisis in economic systems. Habermas asserts that a so-called ‘rationality crisis’ occurs when economic decision-makers can no longer manage economic growth. This will lead to a crisis of rationality or a ‘legitimacy crisis’. This means that followers withdraw their loyalty to decision-makers and their belief in leadership, social order and traditional beliefs and values. They question the state of social structures and institutional structures (see also O’Connor, 1987). Streeck and Thelen (2005: 13) also argue that a regime (i.e. those institutions that govern social order) is ‘legitimate in the sense and to the extent that the expectations it represents are enforced by the society in which it is embedded’. This means that regimes involve rule makers and rule takers whereby the former set and change the rules with which the latter are expected to comply and adhere. A lack of adherence

opens up the potential that the masses become ungovernable and, as a result, the avoidance of social conflict is difficult.

This legitimacy aspect to crisis may also be developed by picturing legitimacy in terms of policy monopoly (Redford, 1969; Baumgartner and Jones, 1993). Political legitimacy is secured as long as no publicly disclosed problems create widespread demands for improvement, accountability, or reorganisation in the policy area. Indeed, some scholars argue that policy stability is greatly enhanced by the fact that all subsystems tend to construct policy monopolies in which the approach to a subject is fixed. This is the conceptual basis for policy change as 'punctuated equilibria'. Punctuated equilibrium will be revisited in chapter 2 but, for the purposes of the present discussion of legitimacy, Baumgartner and Jones (1993: 1) note that punctuated equilibrium can be described as:

The emergence and recession of policy issues from the public agenda. During periods when issues emerge, new institutional structures are often created that remain in place for decades, structuring participation and creating the illusion of equilibrium'.

This means that normal and atypical policy dynamics are linked together to bring about an overall pattern of policy change – change occurs as an 'irregular, stepped function in which relatively long periods of policy stability are interspersed with long periods of policy stability and substantial change' (Howlett and Ramesh, 2003: 238). The competence of the state as the 'guardians of security' is called into question and, consequently, 'crises should be viewed as dynamic forces in ongoing, dynamic processes of legitimization, de-legitimization and re-legitimization' ('t Hart, 1993: 40).

In moving the crisis management analytical themes forward, it is important that, before a detailed analysis of policy change is provided in chapter 2, we acknowledge the themes relating to 'change from' and 'change to'. If policy changes are supposed to feed into crisis planning and decision-making efforts then there must be consideration for the pre-change stages. This body of literature is very important for the analysis of post-crisis change in the thesis. The themes below will structure the analysis and presentation of the empirical data.

Pre-Crisis Management Themes: Contingency Planning and Prevention

In order for issues relating to the threats and sustainability of existing policy areas to be minimised, crisis managers must consider preparing for and preventing crises. It is possible that threats may develop into crises, therefore, planning for crises is also at the heart of crisis management.

Crisis preparedness activities should always be high on the institutional and policy agendas (Carrel, 2000; Boin and 't Hart, 2003; Boin et al., 2005). However, in political terms, crisis prevention and preparedness draw little political credit and minimal media attention since they are non-events. At the same time, it is dangerous, in electoral terms, if policy-makers believe that societal actors do not care about pre-crisis planning arrangements. Crisis planning is about forward thinking and preparedness for all eventualities. Policy-makers will want to show that they are prepared for any crisis and that they will take appropriate measures to maintain public safety. If this fails to occur then this could have negative implications for public confidence in the competence of government. McConnell and Drennan (2006: 59) note that:

The key task for policy-makers and crisis managers is to institutionalise procedures and create cultural climates which develop capacities to cope with whatever extra-ordinary threats come their way.

Further, planning for crises avoids any potential accusations that political leaders are being complacent (Boin et al., 2005: 82). A strategy to institutionalise procedures, and to develop crisis preparedness capacities, is, therefore, via contingency planning.

Contingency Planning

Public authorities seek to quell uncertainty by simply showing that they 'have a plan' (McConnell and Drennan, 2006: 64). Yet, there are several broad rules that could be put

in place by policy-makers in the pre-crisis phase (OECD, 2003; Perry and Lindell, 2003). These range from encouraging flexibility in policy responses to crisis to promoting inter-organisational coordination to having the capabilities to adapt to ongoing processes in the light of new circumstances. In this pre-crisis phase, crisis managers will more often than not seek to synergise their crisis management activities. This is akin to Pauchant and Mitroff's (1992) argument that organisations are multi-layered or 'onion like' whereby each layer forms part of the whole such as human actors, technology, structure and culture. This could be described as 'joined-up' approaches within the existing organisation or indeed between organisations and agencies (see Kavanagh and Richards, 2001; Politt, 2003; Hood, 2005). It is often the case, however, that levels of preparedness are contingent upon not just resources but organisational cultures (McConnell and Drennan, 2006: 60).

Culture is of key importance to temporal and strategic decision-making – particularly of its perceived ability to respond to a crisis event (Smith, 2006: 152). Thus whether an organisation is 'crisis-prone' or 'crisis-prepared' (Mitroff et al., 1988) is highly dependent on certain organisational factors. These factors are whether an organisation can serve to precipitate a crisis by providing the environment within which such an event can be resolved or whether a prevailing culture of stagnation and low preparedness constrains the organisations ability to manage threats. In this context, crisis experiences in the 'real world' of contingency planning vary. The range of policy tools associated with contingency planning varies from 'hard'/formal laws to 'soft'/informal conventions.

Table 1.1: ‘Hard’ Laws to ‘Soft’ Conventions in Pre-crisis Planning.

LAWS TO CONVENTIONS	DESCRIPTION
Laws	Binding obligations on organisations to develop contingency plans. For instance, the EU requires member states to develop contingency plans for threats such as BSE, foot and mouth disease, and avian influenza.
Policy Guidelines	Non-binding guidelines but are taken very seriously by political authorities. For example, the World Health Organisation (WHO) encourages all countries to have plans in place to deal with outbreaks of pandemic influenza.
Codes and Protocols	Usually in the form of written documents but are non-binding agreements with regard to the practices to be followed. In addition to political institutions, these agreements may exist between organisations. After the London bombings in July 2005 a protocol known as Access Overload Control was swiftly put in place which shut down the mobile phone network to give priority to more important calls, such as those to 999 or between emergency workers. While many people across the capital struggled to get their calls to connect thanks to the sheer volume of traffic, only authorised calls were allowed through at incident hotspots.
Conventions	This is concerned with what is expected of an organisation and its stakeholders. Conventions in crisis management are not always written down in documents but are more aptly described as habits, customs, or psychological contracts.

Source: McConnell and Drennan (2006: 62).

Table 1.1 shows the different tools that govern pre-crisis efforts. These tools, and the general efficacy of pre-crisis management, can be tested in crisis simulations or exercises.

Training for Crises: Simulations and Exercises

The contingency planning process does not only involve policy-makers who sit in a Whitehall office drafting contingency planning documents. The plans themselves often draw upon the expertise and experiences of stakeholder groups who have a vested interest in the way in which the government will respond to future incidents that require the operationalisation of the written documents. The UK government is now in the habit of sending plans out for consultation to the client groups and the public at large, which are usually available via departmental websites or the UK resilience section of the Cabinet

Office website. After views are collected a final draft of the report will be written then presented to Parliament. This process has applied to contingency plans for areas including animal disease outbreaks, public health issues (such as influenza), and for terrorist attacks. Given the diversity of crises that can arise, it is important that planning arrangements are not overly prescriptive – specific measures are required to deal with certain threats. This means that although planning is generally about synergy (Drennan and McConnell, 2007: 126), this should not be at the expense of the formulation of tailored planning arrangements.

One way of ensuring a process of synergy, whilst maintaining specific measures and specialised training for potential crises, is through the use of crisis training exercises and simulations ('t Hart, 1997; Carrell, 2000, Borodzicz and Haperen, 2002). Exercises, involving the key actors who would be responsible for managing a given crisis, are used as a means of placing checks and balances on the effectiveness and robustness of the existing contingency planning documents and arrangements. They allow actors to draw lessons from a scenario that is as close to the 'real thing' as possible.

Drennan and McConnell (2007: 137) note that although exercises and training are essential, there are three main reasons why exercises might not always be the most efficient or effective ways to prepare for a crisis. First, the more that the exercise attempts to reflect a real crisis situation, such as managing disease outbreaks, the more costly in terms of money, time and staff resources it will be. Second, it should not be assumed that exercises generate adjustments to policy practices and habitual behaviours. It may be the case that the exercises are orchestrated in such a way that the post-scenario debriefs do not pick up on certain performance gaps that have been covered over but would most likely be exposed in a crisis situation. This orchestration may be linked to a lack of funding - a lack of funding means that lesson drawing becomes difficult and may not allow for a collective planning exercise. Third, crises do not always permit the execution of the pre-crisis training efforts. No crisis is the same and different situations stimulate unforeseen challenges due to unfolding threatening and chaotic circumstances.

There are several types of exercises that policy-makers may oversee in the pre-crisis planning phase. These include 'tabletop exercises' (case study-based or role play scenarios), 'simulations' (control room or virtual reality simulations using computer technologies), onsite 'function exercises' (hands-on approach on the ground involving multiple actors and respective agencies who test an aspect of the plan), and 'full-scale exercises' (the closest to the real crisis scenario as possible involving multiple actors and includes the deployment of all major crisis management functions) (Drennan and McConnell, 2007: 135). Yet it may be the case that some pre-crisis planning exercises include a mixture of the aforementioned types.

Training exercises are necessary because they test contingency planning arrangements. In reality, planning for crises can be described as 'mission impossible' (McConnell and Drennan, 2006) due to such factors as a lack of resources, motivation, human error, and the dynamics of the real crisis situation. This does not only apply to crisis simulations and training exercises but to the general processes of pre-crisis planning. The wider pressures, limitations, and challenges that face policy-makers can now be considered.

Wider Limitations or Challenges of Pre-Crisis Planning

Crises are low probability events. Policy-makers have other legitimate concerns other than safety (Sagan, 1993). The low probability of crisis events may have implications for organisational behaviours (Pauchant and Mitroff, 1988). Public sector agencies and departments of state may not regard safety as a high priority (although they may do so in rhetorical terms) (Boin, 2004: 166; Drennan and McConnell, 2007: 190). Organisations may suffer from non-adaptive behaviours from bureaucratic politics ('t Hart et al., 1993), poor information gathering (Turner, 1976: 389-90) and cultural inertia (Smith, 1990). Groupthink (Janis, 1982; 't Hart, 1994) can also contribute to poor crisis planning by adopting an 'it won't happen to me' frame of mind – a shared sense of invulnerability. Correspondingly, in crisis situations the ways in which different types of motivational biases – such as denial, wishful thinking and value conflict – can affect consequential decisions is important for analysing complex events (Lebow, 1981: 101-119). These

motivational forces may grossly distort information management and ethical judgement and contribute to policy fiascos (Bovens and 't Hart, 1996) of various kinds. Clarke (1999: 7) suggests that more functional approaches to crisis planning would be 'when actors have meaningful history to draw on and some reasonable, estimable probability that their plans can actually accomplish their goals'. As a result, lesson learning from previous experiences may enhance the formulation and, subsequently, the execution of contingency planning strategies (Elliot and Smith, 1993). Brändström et al. (2004) explore the 'historical analogy' side of crisis management and generally maintain that concentrating on past events impede upon forward thinking and may lead to a lack of awareness of threats that may be creeping around the corner.

A further development in the pre-crisis planning literature is the acknowledgment that the context of contingency planning is changing to accommodate internal failures in critical infrastructures. There is a growing literature on critical infrastructure that details the complexity of modern systems and takes into account the inevitability of failures which presents complex challenges for pre-crisis planning. The 'inevitability of failure' has been documented in policy-orientated literatures (see Turner and Pidgeon, 1997; Bovens and 't Hart, 1996; Boin, 2004; Boin and McConnell, 2007). The analysis of the inevitability of failure (and why some policy programmes succeed) has come under the auspices of policy pathologies (Hogwood and Peters, 1983), policy fiascos (Bovens and 't Hart, 1996) and policy disasters (Gray and 't Hart, 1998). In terms of the organisational crisis literature, in his classic *Normal Accidents*, Perrow (1984) illustrates the conception of complexity and tight coupling. Organisational systems that are complexly interactive, such as nuclear plants and aircraft, mean that small errors can interact in unforeseen ways and tight-coupling will lead to the large failures cascading within the system. In other words, one malfunction leads to another (Boin, 2004: 169).

Perrow (1984: 6) argues that 'given the system characteristics, multiple and unexpected interactions, failures are inevitable' and these failures constitute 'normal accidents'. Yet, given the risks associated with such technologies, this may encourage organisations to internalise a heightened degree of caution which permeates managerial activities. From an optimistic standpoint, this may lead to the organisation becoming 'crisis prepared'

(Pauchant and Mitroff, 1988; Mitroff et al., 1993) through the formulation and execution of safety programmes and preparatory strategies which may reflect the overall system design of the organisation (see also, Pearson and Clair, 1998: 65).

In terms of the inevitability of failure, Turner and Pidgeon (1997: 151) make the case that 'errors are only likely to develop into large-scale accidents or disasters if they occur in a organisational decision hierarchy ... at which point they are likely to be magnified, and compounded with other smaller errors'. This develops Turner's (1978) argument that in a rationally organised bureaucracy a combination of normal human errors and the normal configuration of the bureaucracy are key ingredients for 'normal' crises to occur. Mitroff et al. (1988: 286) concur with this analysis and suggest that an unstoppable systematic logic of the industrial (or indeed modern) world make crises almost inevitable. The interconnections of organisational and technical systems mean that crises could be regarded as increasing vulnerability and potential for failure. Modern society is characterised by the generation of risk and, in particular, by the deployment of high risk technologies. Gow (2005: 1) uses the example of telecommunications in this context by arguing that local accidents are more at risk of escalating into nationwide critical incidents in advanced industrial societies. With the growth of trans-societal power, communication networks and transportation, there are dangers of operational tight-coupling.

In a similar vein to the pre-crisis themes, the processes of post-crisis change will have implications for future crisis management decision-making. Therefore, this body of literature is very important for the analysis of post-crisis change in the thesis. The themes below will structure the analysis and presentation of the empirical data.

Coping with Crises: The Decision-Making Themes and Challenges

The underpinning theme in crisis prevention and preparedness literature is that crises may be challenging, unexpected, and complex and there is the requirement to employ stringent strategies for crisis prevention. It is important to be better prepared in order to manage future incidents in the future. But difficult managerial challenges are not confined to pre-

crisis decision-making. Rather, the acute stage of crisis decision-making poses several, often interlinked, challenges for policy-makers. This dimension of the crisis management process has received the most attention in the crisis management literature - especially the emergency and disaster management literatures (see Rosenthal et al., 2001; Perry and Quarantelli, 2005).

From Centralised to Decentralised to Multi-Actor Responses

A large number of organisational actors, at different administrative levels, are likely to be engaged in crisis situations (Allison, 1971; 't Hart et al, 1993). There is a well-documented literature stemming from business management studies that analyse (conceptually and empirically) the topic of organisational crises (see Perrow, 1984; Mitroff et al., 1988; Weick, 1988; Shrivastava, 1993). In this context, institutional complexity generally has both horizontal and vertical dimensions. The horizontal dimension concerns multiple agencies at the same level of governance that may have a stake in the crisis problem at hand. The vertical dimension of institutional complexity focuses on the potential involvement of actors across levels of government. Many crises begin at the local level, where an often uneven process of political-administrative escalation commences. For example, crises provoked by acts of terrorism and natural/ industrial accidents often begin in a specified geographic location and administrative jurisdiction before developing into national or international arenas. For example, avian influenza was initially regarded as a problem for Asian countries yet, due to the spread of the disease into the EU, there became a need for supranational coordination and integration between the World Health Organisation (WHO), the Food and Agriculture Organisation of the United Nations (FAO) and the World Organisation for Animal Health (OIE).

Correspondingly, crisis managers must wrestle with the organisation of crisis decision-making. Centralisation is an enduring feature of most crises (Boin et al., 2005). 't Hart, Rosenthal and Kouzmin (1993) discuss such an argument by revisiting the *Centralization Thesis* of crisis management and analyse the government-centric nature of crisis management studies. Although centralising decision-making to a small group of policy-

makers may circumvent arduous decision-making, there may be times in a crisis when decentralisation is encouraged ('t Hart et al., 1993). The preference for centralised crisis management activities departs from Quarantelli's (1988) theory in that looser command structures are needed to facilitate accurate information, which can be communicated quickly. This represents a dilemma for crisis managers since this poses the following question: who should be involved in responding to crises? Although crisis management and policy responses to fiascos are seen to be the domain of policy-makers (Bovens and 'Hart, 1996), there may be a case for delegating strategic considerations to stakeholders such as agencies, private organisations and the voluntary sector. Boin et al. (2003: 101) go as far to say that crisis management is predominantly a local or bottom-up affair. In other words, street-level bureaucrats (Lipsky, 1979) manage the emergency response and regional, national and supranational authorities offer assistance but will only take over overall control when 'a disaster outpaces local capacity' (Boin et al., 2003: 101). The realities of crisis management show, therefore, that crisis decision-making is more complex (Rosenthal et al., 2001b; Boin et al., 2005) and can, for that reason, involve multiple actors.

Multi-actor and multi-agency approaches to crisis management have a degree of attractiveness for policy-makers (de Vroom, 2001). In multi-faceted, dynamic, and complex crisis situations in 'decentralising the crisis response' (Boin et al., 2005: 54) to networks of actors or actor constellations (de Vroom, 2001: 529) may increase legitimacy through the participation, cooperation and coordination of actors between organisational actors involved in the crisis management process. Consulting multiple actors, and decentralising decision-making authority, thus stimulates a 'culture of reliability' (Perrow, 1994). This culture stems from the trading of expert advice (Gronvall, 2001) and by 'requesting and delegating, rather than ordering' (Quarantelli, 1988: 274). The responses to the December 2004 tsunami crisis displayed much evidence of a multi-actor and multi-agency approach to crisis recovery - there were several governments, aid agencies, non-governmental organisations, volunteers and local actors involved in the management of the crisis. This interpretation of crisis decision-making echoes the key sentiments espoused in organisational theory - that uncertainty means adhocracy and response flexibilities rather than predictable bureaucratic norms (Haas et al., 1977; Bronner, 1982). This also echoes

network governance scholarship in the sense that governance emphasises the roles of alternative delivery systems (such as agencies). It also emphasises the loss of functions by UK government to EU institutions, a shift towards new public management practices (Hood, 1991), and clearer political control through sharper distinctions between politics and administration (Rhodes, 1996: 666). Respectively, Boin and 't Hart's (2003: 547) study of public leadership and crisis show that responding to crises depends on many people in many networks. Although leaders vary in their propensity to delegate when it comes to critical decision-making (see Hermann and Hagan, 1998), serious doubt now exists regarding the mono-centric view of crisis decision-making. The empowerment of agencies (and crisis centres), and authorities in multi-levels of government is becoming the norm. However, although a multiplicity of actors may have a stake in the crisis decision-making process, it may be the case that, in politico-bureaucratic terms, crises fuel and foster different degrees of coordination and conflict.

Politico-Bureaucratic Coordination and Conflict

As a strategy to bridge the gap between government-centric and decentralised crisis management activities, policy-makers frequently advocate a coordinated approach to crisis management (Comfort et al., 1999: 43). There are, however, difficulties associated with crisis management coordination. With regards to inter-organisational relations, cultural and technological communication problems may foster coordination difficulties. This may be combined with the fact that different organisations may entertain different notions of the meaning and necessity of coordination. Bureaucratically, crisis situations do not necessarily eliminate pre-existing tensions. Crises create conditions in which there are pressures for cooperation and coordination, but they present risks which may induce political and/or bureaucratic actors to engage in conflictual and/or defensive behaviours – making incompatible bureaucratic norms evermore present (Stern and Sundelius, 2002: 79) - thus exacerbating levels of conflict. Schneider (1992: 135) notes that crises 'often produce newly emergent norms that are, in varying degrees, incompatible with previously existing bureaucratic policies and processes. This generates conflict, which, in turn, affects the perceived success or failure of the governmental relief effort'.

At the extreme, actors may compete forcefully in seeking credit for their contribution (and denigrating the input of others) (Stern and Sundelius, 2002: 79). As a result, rationalistic and tightly coordinated crisis policy-making and implementation may not necessarily occur. There are also shades of administrative politics in crisis coordination since public institutions 'tend to be recalcitrant' (Boin et al., 2005: 60). In other words, they are not always devoid of parochial interests and are not always rational-instrumental machines (Hood, 1976). In essence, therefore, organisational reshuffling may strengthen the 'tendency of crisis decision-making units to engage in defensiveness moves for protecting their territories' (Smart and Vertinsky, 2006: 329). In addition, cooperative interactions between 'horizontal' non-state policy networks can run into problems during implementation stages because they may not be seen as legitimate by those affected by their policies (de Vroom, 2001: 530) – particularly if their crisis policies require authoritative or coercive actions.

A certain level of conflict may be conducive to effective crisis management and crises may well be functional in several respects. Rosenthal et al. (1991: 225-227), in their analysis of bureau-political competition and tension in crisis management, argue that there are three main ways in which bureau-political rivalry can be functional. First, bureau-politics in crisis management puts 'crisis and crisis-relevant agencies to the test'. Agencies can be judged according to their ability to manage inter-agency pressures. An example of this would be the degree to which a public agency is willing to work with, and how it responds to, help by an external agency (Rosenthal et al., 1991: 225). This might be when charity relief operators (e.g. the Red Cross) rush to an area of devastation in the aftermath of a national disaster which will mean that they will be working with the official government relief agency (e.g. the US Federal Emergency Management Agency [FEMA]). Second, single-mindedness, where quick administrative reactions are called for by the media and politicians during crises, means that there is the potential for wider opinions to be brushed aside in order for the public agency to maintain momentum in their response to a crisis. Conversely, Rosenthal et al. (1991: 225) argue that although some circumstances require that the process of collecting multiple opinions need to give way to prompt and critical

decision-making, 'crisis decision-making benefits from the competitive exchange of views and the counter of agency interests put forward by the agencies at hand'.

In continuing this theme, it may be the case that competitive or conflictual activities influence crisis policy positively in managed environments (Sabatier and Jenkins-Smith, 1993). Crises feature many interests and shifting coalitions but there may be functional levels of concurrence in terms of shared understandings of the problem at hand of the best ways to communicate (Rosenthal and Kouzmin, 1997: 282). Hence, what synthetic organisations might have, when compared with more traditional and formalised administrative responses to crises and adversity, is a basic consensus among key actors regarding the state of affairs to be achieved. Third, bureau-politics may 'open up' the process of crisis management. In terms of information processing, bureau-politics and the competitive environment 'provide the basis for fertile sources of information' (Rosenthal et al., 1991: 226) (see also the section on information and data management in the present chapter). Administrative and/or political elites may be concerned that information leakages will lead to the media abusing vital information – meaning that the flow of information can be dysfunctional. On the other hand, the efficacy of the crisis management response often depends on the active role of the media, which governments will inevitably want to manage in times of crisis. An informed media can be effective in communicating to society how the government's response, and the crisis itself, are unfolding. Nevertheless it is most likely that governments will open up information channels to trusted sources. This is because the wider the information net is cast then the more likely the public agency will be subject to societal scrutiny (Rosenthal et al., 1991: 227).

The Implementation of Decisions

A related issue is that crisis situations require precise and quick implementation of decisions which can be a difficult task – especially in large organisations such as governmental bureaucracies. The established policy analysis literature provides several explanations as to why 'perfect implementation' may be unattainable in the real world of

policy-making (Hogwood and Gunn, 1984: 198-206) – akin to the model of perfect competition in economics (Hood, 1976: 6). In times of crisis the ‘holy grail’ of perfect implementation could be even further away. Smart and Vertinsky (2006: 329) provide solid reasons for this:

Difficulties in implementation [in crisis situations] seem rooted in three areas: action units are not motivated to carry out the decision selected; noisy channels of communication and inflexible procedures affecting coordination may delay receipt of messages and timing of actions; and the action units may not understand their orders.

It may also be the case that multiple implementation ‘units’ may lead to the discretionary action that may not always be conducive to effective implementation. For example, in the EU context, it might be the case that decisions made at the supranational levels of governance may not be fully ratified at all sub-supranational levels of governance. Take the UK as a case in point. An EU Directive concerning disease control requires ratification at the member state level but devolution and decentralised bureaucratic systems leads to multiple implementation units. Multi-level governance, therefore, poses key challenges for the implementation of quick and precise implementation of decisions – especially in terms of a ‘top down’ model of implementation (Pressman and Wildavsky, 1973). Institutional contacts between the EU and regional and local institutional authorities and those actors responsible for implementing policy are faced with ‘multi-layer’ (Hill and Hupe, 2003: 472) situations in preventing ‘implementation deficits’. One may think that ‘implementation gaps’ will disappear in times of crisis as participating actors will understand the importance of taking action efficiently and effectively in a cohesive/cooperative manner according to pre-established guidelines. However, as indicated earlier, political and bureaucratic tensions can potentially heighten during crisis.

Information and Data Management

Further challenges may arise due to information processing and handling. Without mechanisms for coping with flows of data, policy-makers may become paralysed or attentive to particular items of information, which may unduly affect their judgements

(Boin et al, 2005: 30-31). Without adequate information management systems, governments and policy-makers may create a cumulative pattern of interdependent practices that lead to massive failures of organisational, environmental, technical systems (Comfort et al, 1999: 40). At the cognitive level, there are fundamental limitations of the human ability to acquire and process complex information due to information overload (Bruner, 1957). Many writings exist on the subject of the cognitive and psychological aspects of crisis management (see Nystrom and Starbuck, 1984; Smart and Vertinsky, 1977) and on how cognitive capabilities and expectations can affect sense-making (Weick, 1988). The main point here is that crises have stress-inducing tendencies (Hermann, 1972; Holsti, 1989; Brecher, 1993; Flin, 1996). Yet the complete absence of stress is associated with lower performance, moderate stress is associated with high performance (due to enhanced alertness and motivation), and excessive stress is associated with declining performance (Stern, 1999: 38). Although this may be the case for crisis managers, those on the receiving end of a crisis are likely to suffer from stress-inducing problems. For example, Van Haaften et al. (2004) studied the impact of foot and mouth disease outbreaks on Dutch dairy farmers and they discovered that farmers experienced abject levels of stress due to income losses and the detrimental impact of the disease for the farming sector. This bleak picture was also shared by farmers in the UK. Research conducted in 2002 revealed that, in addition to the financial worries, farmers and their families suffered a great deal of emotional stress during the outbreak (Centre for Rural Economy, 2002). Many watched helplessly as every animal they owned was killed, and years of hard work died with their herds and flocks. This highlights the interface between issues such as motivation, emotion, and information processing and management.

Information shortage is a very common problem for bureaucracies in crisis situations (Rosenthal et al., 1989: 463-464). Crucial information may be lacking. Information deficits may concern the nature of the problem, the motivations, capabilities, dispositions of actors and stakeholders, and the merits and demerits of alternative courses of action. Humans are beset with limitations in complex situations when it comes to monitoring and analysing highly complex social and physical environments despite being capable of great intellectual feats (Vertzberger, 1990: 111-113; Purkitt, 1992: 221-224). Even when an issue is identified as important, and attention is devoted to it, crucial information may be

missing, uncertain (Dror, 1988: 206-261) or even distorted (Smart and Vertinsky, 2006: 325). Human actors draw on past experiences and other types of heuristics. However, Nisbett and Ross (1980: 15-16) note that experiences are often processed in a haphazard fashion due to a number of biases and other questionable patterns of information processing. At the extreme, policy-makers may 'mask' ('t Hart, 1993; Boin et al., 2005: 86-87) or downplay the seriousness of an emerging threat and not tell the full story. This can be translated as 'manipulating situations to stop short of the crisis point or to selectively define dominant recollections of what transpired during a crisis' ('t Hart, 1993: 44). According to 't Hart (1993: 44-45) this may be achieved by communicating a 'business as usual' image, displacing crisis perceptions, and obscuring the details of crisis management.

The Role of Expert Actors

Policy-makers may seek the professional advice of experts (from scientists to public-policy consultants to experts who work for the state) in order to prevent crisis situations occurring or to dilute uncertainty during the acute phase of crisis management. When policy-makers are faced with uncertainty in crisis situations, which is often due to a lack of information regarding policy options (Gronvall, 2001), experts have a potentially significant role in resolving complex policy issues (Radealli, 1999). Gronvall (2001: 158) outlines that 'uncertainty stimulates the need for information and expertise, a need that may put experts in a strong position during crises'. When policy-makers are faced with uncertainty, experts are called upon to dissolve such uncertainty by way of the provision of expert information.

In public policy-making, such as crisis management policy, it is important to remember that experts are not always a coherent set of actors who never disagree (Benveniste, 1977). It is possible that crisis situations are actually 'sustained' (Gronvall, 2001:167) by experts since not all experts share the same points of view regarding how a complex problem should be managed. For instance, in areas of technical complexity such as in military, anti-terrorism, and natural disaster operations, experts often disagree (Libertore, 1993: 34-

35). In sociological terms, social life is replete with, and even defined by, negotiation and social conflict between actors (Clarke, 1999: 103). Patterns of behaviour amongst expert actors can be determined by conflictual social behaviours which, ultimately, structure the advice that they give to policy-makers. Indeed Stern (1999: 46) notes that ‘the likelihood of expert dissensus increases substantially in areas where the state of scientific knowledge is less developed and where situational uncertainties create room for divergent interpretations’. Writings by Heclo and Wildavsky (1981) highlight the point that this kind of contestation may be acute in the bureaucratic or Whitehall community context. Their conceptual model of civil servant relations illustrates the fact that there are divisions and tensions that exist amongst civil servants themselves. This could be the case amongst officials, with a technical or scientific policy background, such as veterinary officials, who may disagree over veterinary disease control strategies. The 1996 BSE crisis in Britain showed that the science underpinning it was, and even now remains, highly uncertain and incomplete and this has led to expert contestation amongst Whitehall insiders and external actors regarding the future course of action (van Zwanenberg and Millstone, 2005: 3).

van Zwanenberg and Millstone (2005: 3, 5) note that policy-makers are not unaccustomed to misrepresenting or distorting scientific expertise. These authors note that UK agricultural Ministers frequently defended their policy on BSE in the House of Commons and in the media by insisting that they were doing what the scientists told them to do. At the same time they misrepresented their policy judgements as if they were predominantly or entirely scientific and, in turn, ‘did not reflect the scientists’ understanding or advice’ (van Zwanenberg and Millstone, 2005: 7). In terms of information dissemination and management, there are two significant examples of how information was restricted during the BSE crisis (van Zwanenberg and Millstone, 2005: 236). First, although knowledge about the extent and nature of BSE was highly dependent on sound epidemiological information about the disease, MAFF held the view that access to information about the disease must be tightly controlled for non-scientific reasons. It was not until 1998 that MAFF allowed the most highly regarded team of epidemiologists - yet not the broader scientific community - to access sufficient data to allow them to formulate predicative models of BSE and vCJD. Second, MAFF placed great emphasis on its representation of the

conclusions of its advisory committees – such as the Southwood Working Party¹ and the Spongiform Encephalopathy Advisory Committee² (SEAC) – but they were frequently fed distorted information and were not always told the full story. van Zwanenberg and Millstone (2005: 236) note that ‘when SEAC was asked to advise on slaughterhouse practices it was not told about concerns and anecdotal evidence relating to carcass splitting and cross-contamination that were being raised by the meat industry, abattoir inspectors, officials and Ministers’.

That said, and despite the contestation of expertise that often exists in policy-making, the assumption that technical inputs into decision-making are unimportant is very dangerous since this may have negative consequences for policy outcomes (Margolis, 1973: 51). Expertise can be regarded as a legitimating device in the decision-making process as the decision-maker can exude the organisational image to stakeholders that the eventual decision was well considered (George and Bennett, 2004: 101-102). Indeed Clarke (1999: 102-103) notes that:

A good measure of [expert] legitimation can come just from organizational affiliation. Experts and organizations are often ineluctably connected in that experts rarely have any claim to authority without occupying an organizational position. Organizational position seems especially important for experts who would contribute to huge issues and ambiguous parameters ... That experts are connected to organizations in this way means that organizational interests and forces can shape what an expert is, how an expert acts, and the rhetoric that an expert uses. This doesn't mean that experts are merely puppets or mouthpieces for those with real power, although this happens often enough ... Yet in any particular controversy ... one can usually discern an association between organizational interests and expert knowledge.

This introduces the argument that organisations can condition expertise. Also, expert analyses may, at times, be unwelcome in political circles depending on particular ideological traditions or persuasions of the government of the day (Bovens and 't Hart,

¹ This committee was named after its chair, Sir Richard Southwood, and it was established in the spring of 1988. It was only in existence for nine months but it played important roles during the BSE saga as it had a wide remit which involved ‘advising on the implications of BSE and matters relating thereto’ (Packer, 2006: 41).

² The SEAC was previously known as the ‘Tyrill’ committee which was created in spring 1989. This committee had the responsibility for advising MAFF and the Department of Health (DoH) on research into transmissible spongiform encephalopathies (TSE) research and provide expert policy advice. The committee was renamed the SEAC in early 1990.

1996: 37-39). The relationship between experts and (bureaucratic) organisations is an important area of debate in the sense that 'arguments between experts, and claims by experts to audiences they try to persuade, are meaningless unless explicit account is made of the institutional context' (Clarke, 1999: 104). In addition, policy-makers have a 'cognitive need' (George and Bennett, 2004: 101) to consult with expert actors, who are often members of stakeholder groups, and obtain information or evidence. It might be the case that there is a need for the policy-maker to be surrounded with emotional support when making a complex decision or expert advisors may be drawn into the policy process to give senior experts a 'feeling that they have been able to contribute to the decision-making process' (George and Bennett, 2004: 101) - thus allowing the policy-maker to gain support for decisions. This is a form of consensus-building.

What we can draw from this discussion is that disseminating and rationalising information within a department or organisation is very important for managing uncertainty but it is not without its complexities. Information complexities are inherent in the crisis management process. In times when policy-makers are faced with inconclusive information or complex circumstances, experts, who may be stakeholders (e.g. industry operators) are utilised in order to restore the policy path and to help dampen uncertainties. They often fill a void if the government lacks information about certain aspects of a policy or what the affects of that policy will be after it has been implemented. This means that experts are drawn into the crisis decision-making process to provide information to uninformed crisis managers.

The Management of Communications and Stakeholder Engagement

Another crucial component of crisis decision-making efforts is the facilitation and management of communications. Boin et al. (2008: 8) note that:

In today's age of high speed and global mass communication, a crisis necessitates immediate and comprehensive public information and communication activities. Simply put: governments need to tell people what is going on, what is happening next and what it means to them. Failure to do so in a timely and authoritative fashion opens up a Pandora's box of journalistic and web-based speculation, rumour, suspicion and allegations that can easily flame public opinion and sour the political climate.

Facilitating communications is an important activity for making sure that institutional actors know what is happening within the organisation, in terms of the processes of responding to the crisis, and external actors to instil confidence in those actors that the crisis is being resolved. This means that communications have both internal and external dimensions (Drennan and McConnell, 2007: 158-160). Internal contingency plans and protocols are used to communicate the steps to be taken when there is a crisis. Inevitably the suitability and the rigour of the plans will be tested by the real-life event. As noted earlier in the chapter, communication also tends to revolve around informal nodes, hubs, and protocols (Drennan and McConnell, 2007: 158). In external terms, it is important that there is a liaison with the front-line teams, stakeholder groups, and the public, through the media, to communicate what the government efforts are and attempt to predict future events that will unfold. By contrast, insider stakeholder groups may have direct contact with officials in the bureaucracy and, therefore, have privileged access to information (Grant, 2004). This relationship will also be advantageous for officials if they require information about the social and economic consequences of their decisions at 'street level'. The information provided by stakeholder groups can have implications for the course of action implemented by the government during a crisis. Another example would be communications between central government and regional/local veterinary offices when there is a widespread outbreak of an animal disease. Those on the ground who are affected by a veterinary crisis, such as the farming community, can be assured and/or provided with commentary on the unfolding events. This commentary will be transferred via communicatory mechanisms such as the television, SMS text messages, internet and radio. However, these kinds of communication systems are not devoid of problems. Drennan and McConnell (2007: 159) note that problems or challenges in this area include: multiple messages containing different emphases/information; information applicable to one area may be received by another but not be applicable; and inappropriate communication methods because of failure to anticipate how a particular social group will react.

Having established what can be termed as the 'pre-change themes' of the crisis management literature, consideration will now be given for the challenges of post-crisis management. The policy-making activities after a crisis episode has implications, which can be positive or

negative, for what happens the next time a crisis in the same, or related policy sector, occurs. This may include the reworking of contingency plans, a reconsideration of the role of expert knowledge, changes to the management of information, cultural changes in the department or agency, changes to standard operating procedures and so on. In substantive terms the next main section analyses the issues and puzzles associated with the crisis aftermath including the extent to which crises stimulate change, culpability avoidance and the 'blame game', the politics of post-crisis politics, and the debates concerning learning and change. This is followed by specific research themes and questions that emerge from the literature. Therefore, the section essentially finalises the crisis management aspects that will structure the analysis in subsequent chapters.

Post-Crisis Management Themes: Crises as 'Inducers' for Change?

The rest of the chapter is concerned with the tensions between reformist and conservative perspectives on post-crisis change. Crises as *drivers for change* and whether these drivers drive far enough to alter policy and organisational routines is the main crux of the analysis. Crisis learning and change can be viewed as different from routine change processes. This is because the 'scope of learning and change during crises is inherently greater, demanding new understanding of the most basic aspects of the causes, consequences, and solutions' (Moynihan, 2008: 350). Change in the crisis aftermath, which incorporates the notion that learning has the potential to complement change, will now be developed.

Learning and Change

It will be seen in this section that the thesis concurs with the stance that there is a relative congruence between change and learning. That is not to ignore the limitations of such an approach. Indeed Bennett and Howlett (1992) chart the difficulties in applying typologies of learning to explain policy change. The authors argue that 'it may be difficult to observe the learning activity in isolation...we may only know that learning is taking place because policy change is taking place' (Bennet and Howlett, 1992: 290). The scholars also rightly

point out that, in methodological terms, problems exist in terms of finding solid empirical evidence that 'X would not have happened had 'learning' not taken place' (Bennett and Howlett, 1992: 290). Learning can be difficult to disentangle from other forces, such as the developments in new public management (Hood, 1991) and modernising government (Massey and Pyper, 2005), which may affect the organisation and articulation of policy-making. Moreover, it is acknowledged that learning may not always be translated into policy change (Levy, 1994: 290). In terms of crisis management, political leaders may learn from experience at an individual level but, as indicated earlier, bureaucratic and operational constraints may not trigger any collective policy reform. Aldrich and Ruef (2006: 36, 50) also argue that separating 'action' from learning and change is not only daunting but impossible. Thus, this thesis holds that 'learning' is a *complementary concept for studying the process of change*. Studying change and learning as complementary conceptions is supported by scholars such as by Heclo (1974), Argyris and Schon (1978), Huber (1991), Bennett and Howlett (1992), Hall (1993), Farkas (1998), Alrich and Ruef (2006), and Demers (2007).

Learning has varying labels and different points of emphasis in the policy analysis literature (May, 1973, Sabatier, 1987; March and Olsen, 1989; Rose, 1991). Examples of such labels include policy learning (Bennet and Howlett, 1992; Sabatier and Jenkins-Smith, 1993), social learning (Dunn, 1971), government learning (Etheredge, 1981), organisational learning (Argyris and Schön, 1978; Turner and Toft, 1988; Corbacioglu and Kapucu, 2006; Demers, 2007), 'evidence-based' policy-making - which will encourage evidence-based learning (Cabinet Office, 1999; Sanderson, 2002). In terms of bringing about change, the specified conceptions of learning place differing emphasis on the experiential learning from a past or ongoing set of circumstances. The literature that focuses on *crisis* learning and change (Stern, 1997; Boin et al 2005; Boin at al., 2008; Moynihan, 2008) has similarities with the traditional learning and change-based literatures mentioned earlier in the chapter - they both view learning as a way of assessing the success of policy change efforts. This experiential learning process takes place in order for such lessons to be applied to a future set of circumstances and is guided by organisational and policy objectives. The extent of change (from minimal to radical) may only be fully deciphered by studying the ways in which crises management policy frameworks change

over time. On this basis, in terms of analysing the nature of change, this is what the present study aims to do by analysing how organisational structures stand-up to future similar crises that affect the policy sector. In this respect the thesis considers the 2007 outbreaks of foot and mouth and avian influenza as comparators to the 2001 foot and mouth crisis.

However, the difficulty surrounding the evaluation of policy (and indeed policy frameworks in the aftermath of a crisis) is the matter of perceptions (Bovens and 't Hart, 1996: 2; 't Hart and Boin, 2001: 35) and political rhetoric (Edelman, 1988: 31). As Bovens and 't Hart (1996: 21) note, 'judgements about the failure or successes of public policies or programmes are highly malleable'. Habermas (1975: 58) seems to support this position since he notes that crises cannot be separated from the viewpoint of the one who is directly affected by it. There is a complex (and indeed frustrating) trade-off that is highlighted by Bovens and 't Hart and Habermas. Although judgements regarding levels of success and failure are inherently subjective, 'the absence of fixed criteria for success and failure, regardless of time and place is a serious problem' (Bovens and 't Hart, 1996: 4). There is an ambiguity surrounding successes and failures because 'individual decision-makers often seem to be able to interpret their objectives or the outcomes in such a way as to make themselves successful even when the shortfall seems quite large' (Levitt and March, 1988: 325). In this context, performance failures and vulnerabilities can be difficult to uncover since they are often saturated by a host of different perceptions and interpretations by a variety of actors. As Stern and Sundelius (2002: 77) indicate:

Drawing appropriate lessons from dramatic and often emotionally charged crisis experiences is no simple matter. Crises are characterized by considerable degrees and multiple forms of complexity.

It is likely that political actors will draw varying lessons from the experience and, on this basis, it is possible for divergent interpretations to provide the basis for dynamic policy dialogue – which may not be conducive to collective learning (Boin and Lagadec, 2000: 189-190). In short, the sheer scale and complexity of crisis situations leads to difficulty in judging 'success' and/or 'failure' (Hogwood and Gunn, 1984: 224-225) in the post-crisis phase. It might be the case that an entire policy regime fails, whilst specific programmes

within a policy field may be designated as successful or unsuccessful (Howlett and Ramesh, 2003: 207-209). Although evaluation forms part of the beginnings of any kind of change, this thesis is primarily concerned with 'change'. This means that the survival of the crisis is not a sufficiently stringent criterion for success (Pearson and Clair, 1998: 60). Reform, based on lesson learning exercises, for similar crises episodes be prevented or managed effectively in the future, crisis managers must rework their approaches and managerial activities in light of their negative experiences. Drawing lessons, and stimulating a process of policy change, is a positive step towards setting out on a new policy and organisational path. Conceptually, therefore, policy change and learning can have implications for the next crisis episode in terms of contingency planning and crisis decision-making.

The objective of crisis management has been regarded as the accumulation of wisdom (Moynihan, 2008: 350). This may be assisted by 'after the event' reflections, for example, of governmental consideration of the recommendations provided by independent inquiries and of the consideration of the results of evidence gathering in legislatures through such forums as parliamentary select committees. Indeed the ideals of public accountability hold that public decision-makers should be answerable for their actions and provide information in public forums (Boin et al., 2008: 11). Official inquiries, parliamentary questions and investigative reports by journalists or pressure groups place scrutiny on the policies and decisions made by office-holders. Thus, an important feature of the post-crisis and learning debate, which has much relevance to the first empirical case study of this thesis as a 'stimulator' for change, is the roles and functions of investigations and inquiries.

Post-crisis inquiries as instruments of policy change

Inquiries are a 'learning device' (Parker and Dekker, 2008: 260). Official inquiries are frequently used in the post-crisis period in order to ensure the accountability of politicians and officials. They are a mechanism that policy-makers use in coping with crisis and they fulfil symbolic or ritualistic functions by demonstrating to government stakeholders that the causes of the crisis are being investigated (Resodihardjo, 2006: 199). Examples of reports

of investigative inquiries commissioned by the British government are the Scarman Report (1981) on the Brixton Riots; the Woolf (1991) inquiry on the 1990 riots in Strangeways prison in Manchester; the Cullen Report (1996) on the Dunblane shootings; the Phillips Report (2000) on the BSE crisis; and, importantly for the present analysis, the Anderson 'Lessons to be Learned' Report (HC-888, 2002) which presented findings and recommendations into the 2001 foot and mouth outbreak. Drennan and McConnell (2007: 181) note that inquiries come in a variety of forms:

- *'Blue Ribbon' and presidential commissions* – executive initiated (in whole or in part) which are wide ranging in their investigation of an event or events of national or sub-national/regional significance (for example, 2002-04 National Commission on Terror Attacks Upon the United States).
- *Executive statutory commissions* – where ministers and/or legislatures use specific statutory powers to set up an inquiry, although establishing an inquiry remains discretionary (for example, 1996 Cullen Inquiry into the shootings at Dunblane Primary School under the Tribunals Act 1921).
- *Executive ad-hoc inquiries* – where establishing an inquiry is discretionary and without recourse to specific legislation (for example, 1997-2000 Phillips inquiry into BSE; 2001-02 Lessons Learned inquiry into FMD).
- *Parliamentary/Legislative committee inquiries* – initiated at the discretion of legislatures as a whole or specific committees within the legislature (for example, 1997-98 UK House of Commons Defence Select Committee into the Chinook helicopter crash; 1999-2000 Belgian Parliamentary inquiry into the dioxin contamination of foodstuffs).
- *Internal departmental or agency inquiry* – where the initiatives come from the specific organisation responsible for a particular policy area (for example, 2000 Scottish Executive inquiry into the exam results crisis).

- *Accident board inquiry* - where the inquiry is conducted by a body which is charged solely with the purpose of accident investigation (for example, 2003 Space Shuttle Columbia Accident Investigation Board).

Inquiries face limitations in stimulating crisis learning and policy change. McConnell (2003) indicates that such limitations may include: a narrow remit, careful selection of chairpersons and members for their political viewpoints, reluctance of witnesses to appear and direct, and indirect, political inference by Ministers. Crisis managers can influence the scope, remit, membership of the inquiry (Prasser, 1994: 13). In addition inquiries may set the terms of reference and provide poor resources and setting unreasonable deadlines (Ransley, 1994: 26). The establishment of the vast majority of post-crisis inquiries are at the discretion of political executives which, importantly, have the freedom to shape the nature of the investigative process. This has great potential for inquiries to be widely regarded as 'cover-ups' (Drennan and McConnell, 2007: 191). Societal actors may be aware that the search for truths may collide with established norms and with the objectives of those in political authority (Edelman, 1977: 103). Although inquiries are established in order to establish truths, it may be the case that a holistic 'truth' is not 'out there' since perceptions will inevitably saturate the process of investigation. The perception of actors may mean that there is fundamental contestation regarding where the cause(s) of failure resides.

Paradoxically, Resodihardjo (2006: 199) argues that inquiries can have a decisive impact on the crisis management process by introducing a new problem definition that affects a paradigm of a policy sector. The Woolf inquiry is a case in point. Resodihardjo (2006: 203) maintains that the influence of the Woolf inquiry into the prison riots (and its wider implications for the management of prisons in the UK) 'cannot be underestimated'. This inquiry showed how, in the post-crisis phase, inquiries can act as a catalyst for reform. Indeed Resodihardjo (2006: 203) shows how Lord Woolf's investigation shaped public debate. In particular, by highlighting poor prison conditions, the inquiry acted as an interpretive authority by redefining and reframing the problem of riots as a lack of balance between security, control and justice instead of simply a problem of security and control. This, according to Resodihardjo, led to a realignment of the political mood of the day regarding prison conditions. In sum, inquiries have the potential to stimulate change or lead

to the maintenance of the status quo. This brings us to the debates associated with reformism and conservatism in the crisis aftermath.

Reformist versus conservative approaches to change in the crisis aftermath

Crises can have 'paradigm shattering' (Kuhn, 1962) qualities and, consequently, political actors may view a crisis as an opportunity for reform ('t Hart and Boin, 2001). Crises encourage policy change since they increase the likelihood that an issue will reach the policy agenda and that it receives serious attention from public officials. Crises present utopian-like windows of opportunity to take advantage of crisis discontinuities and start anew (Rosenthal and Kouzmin, 1997).

As noted above, in governmental decision-making there is a trade-off between reform and the maintenance of the *status quo* ('t Hart and Boin, 2003). Government institutions tend not to make rapid decisions and decision-making modes tend to be incremental (Braybrooke and Lindblom, 1963). This naturally supports the conservative side in the *reformist versus conservative* argument in post-crisis politics (Boin et al., 2005: 126-127). The reformist approach aims to redesign the features of governmental organisations in order to fit with the new environment and the new challenges that a crisis has stimulated. By drawing lessons, exposing and closing performance gaps, and breaking with past practices, policy-makers will attempt to renew and restore faith in the system. In organisational terms, renewal comes in the form of changes to organisational 'software' and 'hardware'. First, the 'software' of departments refers to the organisational cultures, values and operating assumptions which can include the individual view or operating codes of an department (Jordan, 2003: 264). The cultural aspects of change refer to embedded organisational beliefs as it relates to:

[a] deeper level of basic assumptions and beliefs that are shared by members ... that operate unconsciously, and define in a basic 'taken for granted' fashion an organisation's view of itself and its environment. These assumptions and beliefs are learned responses to a group's problems of survival in its external environment. (Schein, 1985: 6)

In fact Jordan (2003: 267) notes that 'the first thing new departments do is look for a culture to bind themselves together and define a mission'. This notion will be revisited later in the thesis in the empirical consideration of cultural reform within DEFRA after MAFF was abolished in the aftermath of the 2001 foot and mouth crisis. Second, 'hardware' refers to the harder structural aspects of an organisation such as the structures and the overall make-up of the government machine.

't Hart and Boin (2001: 39) discuss crises in the context of a 'reform opportunity'. The authors contend that there are several ways in which crises have the potential to punctuate routine policy-making. Crises *focus attention* amongst societal actors and this means that the mass publics are largely consumed by a single or small set of issues for a period of time. Similarly, the scale and adverse consequences of crisis situations raise public anxiety or *mass arousal* to such levels that there is an increased willingness to follow leaders who make claims that they are able to cope and resolve the uncertainties. Crises also lead to the *concentration of power* whereby previously dispersed decision-making powers are contracted or centralised in order to avoid potential veto-points in the policy formulation and implementation process. Finally, it is possible that the *political dynamics* during a crisis are such that there will be a degree of consensus that may be reached and adversarial behaviours in the political environment are abandoned in order 'to let the government govern'.

The main point to be drawn from this section is that crises are 'enabling' and may alter deep-rooted policy routines and lead to a departure from past policy frameworks:

... some crises give rise to what we may call enabling factors: external pressure to improve performance; a persuasive diagnosis of existing problems coupled with feasible proposals for change; a coalition of motivated advocates of learning and change who are influential in both the political arena and civil society; a motivated, capable, and patient bureaucratic machine. These factors seem to be required to produce radical, yet widely supported and effectively implemented departures from past policies. (Boin et al., 2005: 121)

The emphasis placed on 'may' before the quote above is a qualification of the argument that crises stimulate change. The quote, and this main section of the chapter, provides arguments which suggest that change follows on from crises. Yet the reformist versus

conservative tensions illuminate the point that this does not always happen. Crises are drivers for change but it should not be assumed that change always occurs because of a multitude of factors such as political interests and organisational inertia. There are, therefore, several significant issues which suggest that there are obstacles to governmental change and learning. Change will be minimal when there is a lack of acknowledgement of failure or shortcomings amongst individuals in an organisation. Without people sharing weaknesses (Lagadec, 2002) and a process of identifying what went wrong then any hope of learning lessons and changing the existing arrangements is unlikely. Furthermore, Lovell (1984: 134) argues 'organisational lessons are formulated through a process of negotiation or bargaining... [and is a] product of an organisational or political dynamic, rather than as the product of the application of logic and pure reason to the past'. Power structures and organisational mindsets dictate which lessons are overlooked since 'learning is likely to be highly selective' (Lovell, 1984: 139) and driven by certain performance measurement mechanisms, such as performance indicators (which are themselves driven by task orientations). Policy-makers are unwilling to devote the necessary time and effort for structured post-mortem initiatives. This may be due to organisational pressures to make up for business lost or delayed due to crisis. Rosenthal (2003: 132) notes further that 'models of crisis management in which immediate crisis response is followed by rational lesson learning, recovery, and rehabilitation may serve well as prescriptive arrangements but do not always reflect the reality of the process'. There is undoubtedly an idealistic sentiment inherent in the post-crisis recovery stage but one must give equal weight to the reasons as to why reform does not take place. The reality is that change is heavily dependent upon the priorities and resource allocations of the department which is responsible for managing a particular crisis. Yet the lack of reform in a policy sector may be exacerbated by what has come to be recognised in the crisis management literature as the 'blame game'.

Culpability Avoidance and the 'Blame Game'

The 'blame game' has also been a recurring feature of post-crisis politics. The 'blame game' refers to interactions between actors who seek to protect their self-interests - rather

than to serve the common good (Boin et al., 2005: 103). The blame game involves interactions between two sets of actors – the blamed and the blamers on the one hand, and the blame-shifters and shiftees on the other (Hood, 2002: 17). It might be the case that when things go wrong that policy-makers accept responsibility and embark upon changing the situation. However, Brändström et al., (2008) argue that most policy-makers will try to avoid being linked to the problem and, if they come under criticism for alleged policy failures, then they will try to escape blame and deflect it onto others. The party then accused will also engage in a process of deflection. This develops into a blame game which is a ‘verbal struggle between protagonists inside and outside of government about the allocation of responsibility for negative events’ (Brändström et al., 2008: 116). This is a regular occurrence in the politics of crisis aftermath. Defensive attitudes by actors inhibit change as a result of the fact that such behaviour deflects due attention from poor performance management and learning systems within public institutions (Rosenthal et al., 1989; ‘t Hart and Boin, 2001; Hood, 2002, 2002b). Blame games take place in political institutions such as parliaments (Judge, 2005), inquiry settings (Resodihardjo, 2006) and the mass media (Boin et al., 2005: 75). Brändström and Kuipers (2003: 279-280), in their analysis of the politicisation of policy failures, note that:

Accountability and blame assignment affect the political realm if during the reconstruction process the incident is recast as the product of failures of public officials or agencies. This involves specific temporal, spatial and causal representations of the problem, which highlight the responsibility of some and minimize the responsibility of others.

Even non-crisis studies in the social sciences have recognised the importance of the blame game. For example, Levitt and March (1988: 324), in concerning organisational learning, have made the point that ‘leaders of organizations are inclined to accept paradigms that attribute organizational successes to their own actions and organizational failures to the actions of others or to external forces’. Hood (2002b: 74), in analysing risk, contributes to this debate on the so-called blame game and makes the case that ‘the study of blame and its management is one of the central and perennial themes of political analysis’. Hood (2002b: 74) goes on to argue that the literature of political science suggests three main ways in which politicians or other public officeholders can try to limit or avoid blame:

- Presentational strategies – this is known as spin-doctoring or impression management. This is when officeholders use justifications, excuses, diversionary tactics and so on.
- Policy strategies – this relates to the choices made by policy-makers that avoid or limit blame, thus making presentational strategies unnecessary. An example of this in risk management would be the slogan used in fire safety strategies in the UK by the succinct message – ‘Excuses kill – fit a smoke alarm’.
- Agency strategies – this is when policy-makers make a measured choice in organising (or perhaps orchestrating) particular institutional arrangements that are expected to avoid blame, notably by delegation.

There are undoubtedly Machiavellian undertones to the blame and culpability dynamics in political science. The focus on the delegation of culpability by policy-makers harks back to Machiavelli’s dictum (1961: 106, quoted in Hood, 2002b: 74) that ‘princes should delegate to others the enactment of unpopular measures and keep in their own hands the distribution of favours’. The simplest way of playing the blame game is via delegation (Hood, 2002: 17; 2002b: 74-75; Boin et al., 2005: 103). This may have implications for blame game dynamics and for lines of accountability³ (see Pyper, 1996; Mulgan, 2000). In post-crisis management ‘the evaluation process must be guarded against the danger of runaway politicisation’, but in major crisis situations, there are often questions relating to who is accountable and/or who has the authority to play the guardian role.

Brändström and Kuipers (2003: 290-302) provide a fresh analysis of blame allocation by consulting the framing literature. The authors conceptualise a crisis-induced blame game as a decision tree that consists of the strategic choices that actors face in the accountability process. The authors maintain that actors make choices surrounding three dimensions: (1)

³ In public administration there have been wide-reaching debates on the notion of accountability and public governance. Richard Mulgan (2000: 555-573) reviews such debates by inquiring as to whether accountability has become an ‘ever expanding concept’. Furthermore, Boin et al. (2008: 10-11) discuss the links between accountability and post-crisis learning. They note that accountability forums, such as parliaments, often take an explicit interest in encouraging the government to draw lessons for the future.

severity, (2) agency and (3) responsibility. First, *severity* refers to whether core values have been violated. The degree to which political actors frame a series of events as violations of core public values determines to what extent these events become a matter of political and societal debate. If the dominant definition of the situation is seen as non-political, and not involving a threat to core values, then the events are depoliticised. Framing events as crises – as opposed to mere ‘incidents’ or ‘disturbances’ – can affect the definition of the situation and shared constructions of reality (Brändström and Kuipers, 2003: 290) and the extent to which it becomes the subject of political and societal debate. Second, *agency* involves questioning whether the situation should be seen as an incident or a symptom of underlying policy failures. Boin et al. (2005: 103) contribute to this debate by arguing that if a situation occurs due to the symptoms of policy failures then a crisis is usually depicted as a ‘crisis waiting to happen’. In such a situation ‘the underlying causes lie back in history, and tend to involve policy, strategic and top-level types of factors’ (Brändström and Kuipers, 2003: 295). This means that events are depicted as operational incidents or as symptoms of endemic problems. Third, *responsibility* refers to when defenders and accusers of controversial policies use framing techniques to support their claims (Brändström and Kuipers, 2003: 298). For example, this begs the question of whether events were caused by an actor or network failure. This will have implications for lines of accountability and for blame game dynamics.

The Crisis Aftermath is an Inherently Political Affair

Although there are several barriers or impediments to learning and change - from governmental resistance to change, to overly conflicting perceptions and interpretations - it does not mean that *every* crisis episode will be affected by the same issues. On the contrary, the political environment provides a functional basis for policy change. For example, the political context of the ‘war on terror’ under the Blair administration was conducive to change to homeland security in the aftermath of the London bombings on 7 July 2005. The political context could, as a result, be an enabler for change in certain situations but, as indicated, it is possible that change will be blocked by bureaucratic and political constraints and domestic political circumstances, such as the dynamics and

configuration of party and constitutional politics. Indeed in any account of change and reform in the aftermath of crises, the interests and demands of political parties are important as inter- and intra-party political bargaining may affect the trajectory of post-crisis reforms. Indeed if party disaffection and a lack of support (or, in the extreme, if there is a threat of a vote of no confidence being passed in the state legislature), then its leader (that may be prime minister, president or premier) may not have the support or mandate to oversee policy reform. As Boin et al. (2008: 27) note:

If support for a party is declining in opinion polls and among influential stakeholders, a crisis may accelerate the problems for leaders because it provides political space for critics to raise serious questions about fitness to govern.

Boin et al. (2008: 20) use the example of the arrival of SARS in 2003 in Hong Kong to illustrate this point. The already weak government faced popular protests regarding their responses to the crisis and, consequently, the Health Minister Yeoh Eng-Kiong resigned before the recommendations of the 2004 SARS inquiry report (set up by the Hong Kong Legislative Council) could be implemented. The Health Minister lacked political and public support to carry out the reforms suggested by the inquiry. A further recent example can be used to show that political factors can inhibit policy change in the crisis aftermath. The UK Labour Government, under the leadership of Prime Minister Tony Blair, despite a significantly reduced majority at the 2005 General Election attempted to introduce a Terrorism Bill in the aftermath of the 7 July bombings of the London underground. In particular, MPs rejected the Government's call to allow police to detain terror suspects for up to 90 days without any charges being made. This meant that, at the time, the Government had to compromise and MPs backed a proposal to extend the detention time limit to 28 days. This shows that crisis decision-making, in the crisis aftermath, may mean that political interests can lead to compromises over future policy actions. Drennan and McConnell (2007) note that, in political terms, a popular leader with strong party support, may be permitted to execute policy reform due to the political legitimacy that they command. A popular leader, as shown in opinion polls or support in elections, may be able to claim 'a broad representative mandate for reforms' (Drennan and McConnell, 2007: 194).

The extent to which governments execute policy reform strategies after a crisis sets the stage on which the fate of crisis leaders is decided (Boin and 't Hart, 2003). The nature, salience and timing of crisis situations assist in promoting or inhibiting change. Boin and 't Hart (2003) study the leadership issues and tensions in crisis decision-making (particularly in the acute and post-crisis phases) - dealing directly with the way in which crisis leaders are faced with a 'mission impossible' in balancing popular expectations and political realities in planning for crisis. The role of the public/political leader is crucial since they have the power to make critical decisions and bring about change. Boin and 't Hart (2003: 544) note, correctly, that it is a natural inclination in times of stress for societal actors to look to leaders 'to do something'. The challenge for leaders in crisis situations is to make sense of unfolding events (Boin et al., 2005: 10-13), bring a policy sector back to a normal state of affairs, minimise the threat emerging again, and take corrective action through the reformation of institutional structures and/or currently implemented policies.

Having established the tensions and complexities of post-crisis change, it is sufficient to maintain that crises do not always equal reform. To this end, much depends upon the leadership skills of crisis managers, the processes of accountability and the underpinning political context. The challenge for crisis researchers is to identify the conditions that facilitate effective learning and improvement in future management of crises.

Boin et al. (2005: 116) emphasise two main aspects of the tensions relating to reformist versus conservative post-crisis management approaches. There are the 'puzzling' and 'powering' sides to the crisis aftermath. This notion reflects Hugh Heclo's study of social policy-making in Britain and Sweden. Heclo (1974: 305-306) maintains that 'politics finds its sources not only in power but also in uncertainty - men collectively wondering what to do ... Governments do not only 'power' ... they also puzzle. Policy-making is a form of collective puzzlement on society's behalf'. In post-crisis policy-making terms, therefore, the 'puzzling' aspect refers to understanding what went wrong and what needs to be changed. Second, 'powering' pertains to the capacity to reform and whether policy-makers instigate substantial change in the wake of a crisis. In a later work Boin et al. (2008: 16-17) develop the puzzling and powering aspects to change by concentrating on

the fates of policies and institutions after a crisis. They discuss three different types of change: *fine-tuning*, *policy reform*, and *paradigm shift*. These categories echo Peter Hall's (1993) *first order*, *second order*, and *third order* elements of policy change. Hall appropriately considered the dominant tendency to conflate all elements of a policy into a single dependent variable as betraying the fact that policy is a complex regime. First, *fine-tuning* is the incremental and instrumental adaptation to policies and practices based on experience new knowledge whilst, at the same time, core political values, overall goals, and instruments of policy remain intact. Second, *policy reform* occurs when the hierarchy of goals of policy remain the same but the overriding policies, practices, instruments, and institutional configurations to achieve those goals subject to fundamental change. This is a form of second order change which is as a result of dissatisfaction with past experience (Hall, 1993: 278). This would be difficult to change in times of normalcy which demonstrates the 'crisis-induced' nature of change and the potential for crises to alter policy and institutional configurations. It is possible, however, if one considers Hall's (1993: 280) categorisation of second order change, that policy reform may allow for the 'development of new policy instruments may move one step beyond in the direction of strategic action'. This means that the *policy reform* categorisation allows for long-term or strategic changes in the post-crisis management phase (Boin et al., 2008: 16-17).

Third, and finally, a *paradigm shift*, although rarer than fine tuning and policy reform, concerns radical change. This is when entire policies, institutions and/or major values in a political system are fundamentally changed as well as practices, instruments, and institutional configurations. Boin et al. (2008: 17) and Hall (1993: 279) indicate that an example of a paradigm shift would be the changes to the concept of US homeland security induced by the September 11th 2001 terrorism atrocities. Kay (2006: 11) also notes that a policy paradigm is an interpretive framework and refers to a framework of ideas and standards that specify the goals, instruments, and very nature of a policy issue. Howlett and Cashore (2009: 36) support this by maintaining that 'paradigmatic change is a process in which there is a fundamental realignment of most aspects of policy development' and 'occurs only when the policy institutions themselves are transformed'. However, the three categorisations of post-crisis change are not only used in the present thesis to guide an analysis of the extent or quantity of change; but also the thesis is concerned with the

nature of change as much as the extent. In other words, the empirical analysis in later chapters of the thesis serves to question whether the *fine-tuning*, *policy reform*, and *paradigm shift* of post-crisis change are suitable explanatory categories for studying change. More intriguingly, change might be *multi-speed* in the sense that some areas may be reformed at a much quicker pace than others. For example, establishing an inquiry and the presentation of the findings may occur fairly rapidly but implementing the recommendations (such as building stakeholder relationships) can take much longer. So, on the one hand, policy-makers might drive a change in the direction of policy frameworks but they can also be slowed down by several issues due to the embedded institutionalisation of rules, practices, budgets, and the difficulties of rationalising the (often competing) desires of stakeholders regarding what should happen in the future. In this respect, change can be variable and this variability can be exacerbated by the fact that different policy sectors have different stakeholders and policy management challenges. These issues can be explored around the empirical case studies which are specifically concerned with the exotic veterinary disease policy sector. In terms of the development of crisis management, with the exception of the long-standing literature on social psychological literatures, Boin et al. (2008: 6) note that less research in the crisis management discipline 'has been devoted...to the wider impact of crises on political officeholders, governments and their policies'. This provides a basis on which the present research can be built. In short, the reform of policies and the institutions that structure them is not a one-dimensional phenomenon but complex and can occur at different rates of change (Hall, 1993; Sabatier and Jenkins-Smith, 1993; John, 1998; Kay, 2006; Boin et al., 2008). The next chapter will develop the differing propensities to change by considering the dynamics of organisational/institutional and policy change in greater detail.

Research Questions and Themes Emerging from the Crisis Management Literature

In empirical terms the nature and type of post-crisis change is the overriding research question that underpins the thesis. The present chapter is the first of two stages in building an analytical framework. The key crisis management themes identified in the present chapter will structure the analysis of the 2001 foot and mouth crisis and its aftermath are:

Pre-Crisis Management and Crisis Decision-Making

- Contingency planning
- Stakeholder engagement
- Politico-bureaucratic coordination
- The role of expertise
- Management of communications

Post Crisis Management

- Post-crisis learning
- The role of inquiries
- Politics of post-crisis management and the blame game

The deployment of these themes in structuring the interview questions and approach to analysing primary documentary data will lead to an evaluation of the nature of post-crisis change. As noted in the introductory chapter to the thesis, the analytical framework allows for the investigation of the following questions in relation to the present study later in the thesis: (1) Has post-crisis change been minimal/conservative or reformative? (2) To what extent are Boin et al's (2008) categorisations of *fine-tuning*, *policy reform*, and *paradigm shift* suitable in explaining the dynamics of post-crisis change in the case of veterinary disease-induced outbreaks?

This chapter has provided an overview of crisis and crisis management research literatures. After analysing the definitions, approaches, and crises it can be concluded that what constitutes a crisis is saturated by subjectivity (McConnell, 2003: 393; Kouzmin and Jarman, 2004: 188). Crisis scholars often choose their own definition of a crisis in order to pursue a particular area on the subject – it depends on the analytical direction of their analysis. There are, however, common characteristics associated with crises such as urgency, uncertainty, and time pressure. Crises are periods of intensity whereby policy-makers are subject to societal scrutiny to resolve the problem and initiate a programme of reforms which includes lesson learning from the episodes. This fits with the overall

analytical direction(s) of the thesis due to the emphasis placed on change, lesson-learning, and development.

The stages of crisis, although they are interdependent, are presented in the chapter. These range from the intricacies and complexities of pre-crisis and acute crisis management. Contingency planning, the resilience of institutions, the role of experts and the management of information, to name a few, all need to be managed. Crisis managers, therefore, must strike a balance between when managing these multiple challenges.

One of the most under-researched areas in the crisis management literature is post-crisis change. Much of the activities in the pre- and acute-crisis management stages are affected by what government does in the crisis aftermath. If there is a similar crisis episode in the future then changing 'what came before' (for example the rewriting of contingency plans and changes to internal and external communications) mean that the episode can be managed more effectively when it arrives. Whether reforms take place or not then this will mean that policy-makers will be judged on their performance at a later date. These judgements might range from the perception that the government has not learnt anything to the view that some aspects have changed to the perception that the government has meticulously learnt wherever possible and has applied these lessons accordingly. Nevertheless it is clear from this chapter that there are several factors that do not necessarily make crises 'inducers' of change. These include, but are not limited to, the blame game, institutional inertia, and embedded cultures that are not necessarily conducive to reform. By contrast, crises open new windows which might have been tightly shut in normal circumstances. Yet the overriding themes to be deduced from the review of post-crisis management literature is that change can take place but, equally, the opposite may occur whereby no or minimal change might take place. The nature of change might range from *fine tuning* to *policy reform* to *paradigm shifts* with new policy initiatives, new institutional structures, changes to the political system, and the values underpinning them becoming manifest. It is also the case that some policy initiatives, institutional arrangements, standard operating procedures, and values may be subject to change and others are not. From this dynamic perspective, change might be variable. For example, a change of the direction of the policy might take place but this might not be translated into

changes to the design of institutional configurations. Much depends on the political context (such as the 'blame games' and constitutional and party politics) as well as the approach taken in post-crisis investigations, and the leadership abilities and approaches of political elites.

The next chapter develops this by exploring organisational and policy change literatures in detail and their relationship to crises. For the purposes of the thesis, therefore, the chapter can be regarded as the beginnings of the consideration of the dynamics of change in the crisis aftermath.

Chapter 2

Organisational and Policy Change Literatures: Key Analytical Themes

Introduction

The present chapter leaps from the post-crisis change springboard and develops the organisational and policy aspects to change. This thesis refrains from viewing the organisational and policy aspects to change as entirely distinct but they are not regarded as 'synonyms' (Kay, 2006: 30). Streeck and Thelen (2005: 12) note that this is a question that political scientists should pay more attention to since they are both subject to interlocking change processes. Jones and Baumgartner (2002: 297) seem to support such a position when they note that '[p]olicy-making institutions evolve under the pressure of policy dynamics'. This is something that has been well established in the organisational theory literature, behavioural analysis, and in the study of public administration and management (Rhodes, 1995: 42-57). Policies can be described as institutions to the extent that they constitute rules that are implemented by actors who operate under an organisational/institutional framework – policies can constitute important 'rules of the game' (Pierson, 1993: 596). The dynamics of policy change can alter organisational configurations and realign standard operating procedures. On this basis 'the policy process itself can alter the manner in which institutions function' (Baumgartner and Jones, 2002: 4-5).

This chapter, therefore, will explore the frameworks and conceptualisations of organisational and policy-orientated change. As noted in chapter 1, crises require swift government response(s) and have the potential to lead to the emergence of new policies and the termination of what came before. We also found that change is not inevitable but dependent upon, as specified in institutional-based analyses, social, economic and political conditions and forces (Judge, 2005: 21). This analytical thread will be woven throughout the sections of the chapter. More specifically, the chapter discusses the 'crisis' aspects to

change alongside the more traditional conceptions of 'disruption', 'perturbations', 'critical junctures', and 'punctuation' (Collier and Collier, 1991; Hall and Taylor, 1996; Baumgartner and Jones, 2002; Duit, 2007).

The chapter also considers the 'multi-speed' dynamics of change. Institutions, as we will see later in the chapter, have been largely associated with conservatism and a lack, or sluggish rates, of change. It can be argued from the outset that conservatism is not a complete view of the ways that institutions change. Depending upon political, social, and economic forces, and, indeed, the levels of legitimacy enjoyed by the institution, change can be dramatic, gradual, or change can be described as an evolutionary process:

Sometimes institutional change is rapid and dramatic, as when new institutions are created and redesigned; at other times issues and institutions co-evolve in a more gradual manner. That is, institutional structures can co-evolve slowly over time in reaction to the changing nature of the issues that they face. (Baumgartner and Jones, 2002: 7).

In relation to the dynamics of policy change, there is support in this thesis for Peter John's (1998) central argument that approaches can be linked and synthesised in order to analyse the realities of change dynamics. Importantly, Schmidt and Radaelli (2004: 184) argue that when analysing change, a 'pluralistic approach' should be adopted as this allows for wider lessons to be drawn with regards to the dynamics and effects of policy change. Cairney (2007) also points towards the advantages of adopting a 'multiple lenses' approach. Cairney argues that, inevitably, researchers produce different explanations of change and, thus, multiple or pluralistic perspectives on policy change offer a more complete explanation of policy change. The 'constraints of one perspective' can be thrown off because 'policy change and variation emerges from the interaction of processes' (John, 1998: 167).

The chapter is structured as follows. First, it discusses the organisational aspects to change and learning. This will include the extent to which bureaucratic organisations can change and the ways in which change is manifested. Second, the dynamic perspectives on policy change will be discussed. This will include advocacy coalitions, punctuated equilibrium, multiple streams, and Europeanisation processes. The latter is considered due to the pertinence of the EU for the case studies under exploration. Europeanisation is an

important precipitant of policy and institutional change (Judge, 2005: 267-268) - especially when the government department and the policy area that is the subject of study operates under a European governing framework. Wherever appropriate, connections will be made to the 'crisis' literature for each perspective. These perspectives have been chosen because they all, despite having different characteristics, illustrate the non-linearity of policy development, in a similar vein to the characterisation of crises presented in chapter 1, and they allow for the orientation of new ideas and policy frameworks to emerge as a result of exogenous shocks, uncertainties, and crises. Conclusions will then be drawn to help structure the analysis of the case study. This allows for the presentation of the empirical findings from elite interviews and official government publications in the subsequent chapters.

Organisational and Institutional Change: Making Connections with Crisis

Experiential Organisational Learning: Feedback, Memories and Knowledge

Organisational theory literatures have questioned for many years whether organisations (either in the public or private sectors) can learn from their experience and change accordingly (for example, Levitt and March, 1988; Argyris, 1999; Aldrich and Ruef, 2006). Similarly, crisis management scholars have been drawn to this question (for example, Turner and Toft, 2006). Organisational learning (OL) does not have one agreed meaning in the literature but, largely, means the ability to identify and remedy errors/faults in the functioning of an organisation. For political institutions, an error can be taken to be a mismatch between organisational intentions and subsequent political outcomes (Argyris, 1999: xiii). OL gravitates towards learning from experience and focuses on 'how individuals, groups, and organisations notice and interpret information and use it to fit with their environments' (Aldrich and Ruef, 2006: 47). This means that the idea of 'feedback' (Aldrich and Ruef, 2006: 47) is important in making linkages between the past 'with those cues which might alert us to related patterns in the foreseeable future' (Turner and Toft, 2006: 191).

Levitt and March (1988: 320) emphasise three interpretations of OL. First, organisational behaviours are based on routines. The authors note that 'routines' cover a wide remit. They include 'the forms, rules, procedures, conventions, strategies, technologies around which organisations are constructed and through which they operate, the structure of beliefs, frameworks, paradigms, codes, cultures, and knowledge that buttress, elaborate, and contradict the formal routines'. Second, as will become clear later in this chapter, organisational actions are history dependent – routines are based on interpretations of what came before rather than what will come in the future. This, in a similarity to the point made above, is based on the 'feedback' of experiences whereby routines adapt to experience incrementally in response to such feedback. Third, organisations are target-orientated – 'organisational behaviours depend on the relationship between the outcomes that they observe and the aspirations they have for those outcomes' (Levitt and March, 1988: 320). What all of the three points identified by Levitt and March (1988: 320) have in common is that experiential learning from the past becomes 'captured by routines in a way that makes the lessons, but not the history, accessible to organisations and organizational members that have not experienced the history'. In other words, actors within the organisation should still be able to get access to the lessons of the past based on ongoing routines even if they were not *the* actors to draw the lessons for the event, such as a crisis, when it occurred. Lessons, through routines, become deposited in the 'collective memory' of the organisation. Kay (2006: 68) indicates that memory is a function of time and 'refers to the capacity for remembering, recalling, recollecting or reorganising' and is a 'mechanism that links past events and current intentions, actions, and behaviour'. This collective memory is often coherent but can be lost or jumbled as a result of interpretations of history (Levitt and March, 1988: 320). On the other hand, the memory of an organisation should allow for lessons, based on experience, to be maintained and accumulated within routines despite the turnover of personnel and the passage of time.

To ensure that organisational memories are not lost or jumbled then there is a need for organisational instruments to record history and shape its future path. An example of this, can be drawn from chapter 1. Crisis simulations are designed to prevent organisational actors from forgetting past crisis experiences and lessons will be drawn from the exercise itself to be applied to future crises or exercises. If such organisational mechanisms occur

at regular intervals then the lessons of experience will be maintained and accumulated within routines despite personnel and time turnovers (Levitt and March, 1988: 326). There will normally be a paper trail of documents, files, standard operating procedures to document and chart experiences. At the same time, there may be non-recorded ways in which lessons are transferred through time - such as knowledge. Yet the transfer of experiential knowledge is not a given because the limitations of time, an influx of a large amount of personnel, and the fact that new organisational actors may perceive themselves to be accountable to their own profession rather than the aims of the organisation (Levitt and March, 1988: 328). In terms of the management of the organisation, the knowledge generated from past experiences will be challenged when there is a lack of organisational control. This is likely to become acute when implementing policy across geographic locations (Brytting, 1986).

Furthermore, organisational learning has no inherent link to success (Aldrich and Ruef, 2006: 47). Glynn et al (1994: 63) also specify that 'not all changes in an organization's actions reflect learning'. The reason for this is that changes may occur randomly in organisations. Organisational actors may learn intentionally based on experience and undertake corrective actions but sporadic changes also reflect a form of learning. For example, Cyert and March (1963) maintain that organisations learn from experience by retaining and repeating apparently successful behaviours whilst discarding unsuccessful ones. By contrast, from an incremental or adaptive perspective, Aldrich and Ruef, (2006) argue that organisations evolve as a result of trial and error. The repetition of 'what works' is still a form of learning because organisational actors are aware of the fact that something works.

Studies concerned specifically with bureaucratic change tend to associate the propensity to change with words such as stagnation and conservatism. Anthony Downs (1967: 20) made the point that 'the law of increasing conservatism' makes it difficult for established and long-standing bureaucracies to be subject to reform. This reflects the view that experiential learning is based on trial-and-error learning or 'organisational search' which lends itself to the gradual adoption of routines, procedures or strategies that lead to favourable outcomes (Levitt and March, 1988: 322). A very pessimistic interpretation of

organisational adaptations is offered by Crozier (1963: 187) who argues that 'a bureaucratic organisation is an organisation that *cannot* correct its behaviour by learning from its errors'. He maintains that this is because '[b]ureaucratic patterns of action ... have been so stabilized that they have become a part of the organisations self-reinforcing equilibria'. In fact Baumgartner and Jones (2002: 24) argue that equilibrium is the predominant feature in most governmental institutions:

Institutions maintain rigidity because [they] are typically designed to encourage participation by certain groups and discourage participation by others. Institutions are also designed to facilitate the use of some aspects of information rather than others. Institutions often promote certain issue definitions by requiring that decision makers consider some types of information but not others. In times of heightened attention, institutions are likely to undergo some adjustment. When attention fades, institutions remain. In addition to the reflex to nip competing problem definitions in the bud, institutional rigidity is therefore related to the fact that the type of heightened attention required to cause institutional change is for the individual institution an infrequent phenomenon.

An alternative perspective is developed by Hedberg (1981: 3) who makes the case that it is individuals who learn within the organisation and organisational learning is, therefore, a consequence of wider learning processes between individuals. This is the knowledge development perspective and it treats organisations as sets of interdependent members with shared patterns of cognition and belief. This form of learning is inferential and vicarious and 'cognitive associations and causal beliefs are communicated and institutionalised' (Aldrich and Ruef, 2006: 47). This emphasises the point that an organisation has 'cognitive scripts' (Hall and Taylor, 1996: 948) or a 'cognitive schemata' (Aldrich and Ruef, 2006: 118-119) that can build an organisational memory - creating certain norms, behaviours, and values that become endemic within its fibre (Levitt and March, 1988: 326-327). In this context, organisational culture is unconsciously embedded in terms of how an organisation views itself and is conditioned and formulated in response to the external environment. Crisis management literatures recognise the importance of cultural readjustments to learning and change processes in that experience can have implications for future policy paradigms and organisational operating procedures (Stern, 1997; Boin et al., 2005; 2008).

Cultural Adaptations and 'Learning Loops'

Judge (2005: 7) observes that 'institutions are not simply to be understood in terms of formal rules, organizations and procedures, but also that the broader cultural context within which institutions operate needs to be taken into account'. Aldrich and Ruef (2006: 122-127) indicate that there are different ways to capture the cultural aspects to organisational change and that these ways are located in the observer's subjective outlook. First, there is the *integration* view of culture that emphasises the fact that organisational culture is composed of shared values and perceptions and implies an organisation-wide unity of orientation amongst members - often as a result of pressures towards consensus by organisational leaders or those in privileged organisational positions. At the very least the integration view holds that organisational founders/managers 'play a central role in whatever meaning systems emerge in organisations' and that 'the rules and guidelines created by founders channel information, resources, and member discretion' (Aldrich and Ruef, 2006: 124). Second, the *differentiated* view of culture posits a lack of consensus across organisational sectors and that culture is multi-faceted and largely contested which can lead to the development of discrete subcultures (Martin, 2002: 121). Cultural clashes can emerge as different organisational divisions adopt different practices and this may generate communicatory problems and conflictual behaviours (see Aldrich and Ruef, 2006: 125). Third, the *fragmentation* view of culture concerns the ambiguities that exist in organisational cultures. The ambiguities are associated with the 'lack of clarity, multiple meanings and beliefs, and weak organisational leadership' (Aldrich and Ruef, 2006: 126) which is a recipe for producing organisational complexity. This view of culture holds that there is a lack of consistency in organisational values and that there is no consensus surrounding an organisational purpose - it is best described as a 'jungle' of fluctuation across issues individuals, issues, and organisational life cycles. A milder perspective of fragmentation is articulated by Fine (1984) as the *negotiated order* view. Fine assumes that change is inevitable as organisations develop but this process is slow. Individuals within the organisation adjust to new situations and when there is no consensus on their sense-making abilities then no agreement may be possible. It is likely that organisations displaying signs of this form of culture will not survive if the disputes over meanings stop

organisational activity and lead to a breakdown in resource exchanges. In sum, types of organisational culture have different implications for organisational change. For example:

To the extent that an organization's culture is unified, change will mainly occur at the level of the entire entity. The greater the unity, the higher the likelihood of organization-wide change ... The differentiation paradigm focuses on inter-group conflicts as sources of change ... From this view, changes occur in a piecemeal fashion. (Aldrich and Ruef, 2006: 129-130)

With regards to cultural adaptations, Andrew Jordan (2003: 270-271), drawing on the work of Peters (1990), notes that there are three main elements of organisational culture on which the effects of change can be mapped: artefacts, values, and assumptions. First, *organisational artefacts* (for example, material and non-material objects that demonstrate an organisation's goals and values) include corporate mission statements, annual reports as well as operating codes and mechanisms for communicating with the rest of the world. Second, *organisational values* are the 'truths and realities' which justify the organisation's mission and activities to the outside world. These values are regularly examined and tested through the adoption of policies. Third, *organisational assumptions* are the fundamental presuppositions held by individuals about the organisation's function in the world, and the relationship between important parts of it.

In the crisis management literature there is a need for cultural readjustments in terms of possessing organisational foresight to deal with emerging threats and crises (see Boin et al., 2005: 2-4). Early disaster researchers such as Carr (1932) studied the concept of social change and noted that cultural change is part of this process. He suggested that 'a catastrophic change is a change in the functional adequacy of certain *cultural artefacts*' (Carr, 1932: 208, emphasis added). In terms of pre-crisis planning and the general process of horizon-scanning, a failure of foresight is akin to the existence of 'cognitive blinders' and can be regarded as a barrier to crisis recognition. This would be alongside the social and political framing of threats and whether a shared perception of the threat exists amongst organisational players (Boin et al., 2005: 19-28). Turner (2006: 117) elaborates on this by arguing that 'a failure of foresight may ... be regarded as the collapse of precautions that had hitherto been regarded culturally as adequate'. Turner goes on to make the point that small-scale everyday accidents, and accidents that occur in situations

recognised as hazardous, do not always provoke a cultural re-evaluation of precautions. Instead, when a crisis is large-scale then it can be 'sufficiently disruptive to provoke a cultural reassessment of the artefacts and precautions available to prevent such occurrences'.

Conversely, 'high reliability' theorists take an optimistic perspective on organisational change and learning (Rochlin et al., 1987; Roberts, 1990). This group of researchers make the case that well-maintained organisations are capable of absorbing human errors and external pressures while preventing normal organisational pathologies. Institutional literatures support such a line of thought (Selznick, 1957) and maintain that the configuration and administrative formation will be crucial to the level of effectiveness in organisations. However, the reason why high reliability organisations (HROs) are more conducive to effective crisis management reform is because matters of safety represent a significant concern of HROs. Examples include air traffic control systems and nuclear carriers (Roberts, 2006: 160-179). Culturally, HROs are configured to deal with errors and there are engrained organisational notions of understanding how lessons should be learned in the event of failure. This can be described as a process of *deutero learning* - learning how to learn (Argyris and Schön, 1978: 26). Drennan and McConnell (2007: 190) argue that public sector organisations sit at the other end of the spectrum in terms of the propensity to change and learn as, generally, this kind of organisation tends to tilt towards limited reform.

Issues to do with disaster readiness, safety, crises and risk management have to compete against core and powerful goals of organizations which are established for dealing with matters such as farming, transport, water, and education ... Of course, each institution needs to be considered on a case-by-case basis, and it is very probable that the vast bulk of institutions will sit somewhere between the two poles – but leaning towards the non-HRO element. (Drennan and McConnell, 2007: 190)

In relating culture to OL, and in addition to *deutero learning*, Argyris and Schon (1978) make the case, in their *single loop learning* argument, that cultural changes are minimal when organisational errors are detected and eradicated without further deeper change to the underlying values and assumptions of their organisation. In other words, the correction of practices within existing paths, policy frameworks, and underlying causal mechanisms are

not fundamentally questioned. Hence the existing organisational culture remains unthreatened. *Double-loop learning* occurs when actors change their interests and identities as opposed to merely adjusting their means and strategies. This type of learning can be linked to post-crisis politics since, according to Argyris and Schon (1978: 24), most reports of crisis commissions and investigative bodies contain vast numbers of recommendations, rule adjustments, and strategies - such as improved communication channels and routines. This involves changes to the culture of an organisation through adaptation or even 'unlearning' from the past and/or present situation. In order for cultural changes to occur, however, individuals must feel capable of challenging the *status quo* in terms of the existing approaches to solving problems. This means that critical self-reflexion or 'reflexivity' is important 'in order to challenge and re-shape the pre-existing amalgam of organizational culture ... to redefine their interests and identities' (Jordan, 2003: 280) - thus engaging individuals in a process of OL.

Institutional Rigidities and Crises

Institutionalist scholars suggest that the institutional make-up and the organisation of policy-making (Hall, 1986: 81) - in terms of organisational structures and institutional procedures (March and Olsen, 1984: 738) - can have implications for the extent of institutional and policy change. March and Olsen (2004: 12) argue that key behavioural mechanisms within institutions are history-dependent processes of adaptation which includes learning or selection. The authors note that:

Rules of appropriateness are seen as carriers of lessons from experience as those lessons are encoded either by individuals and collectivities drawing inferences from their own and others' experiences, or by differential survival and reproduction of institutions, roles and identities based on particular rules. Rule-driven behaviours associated with successes or survival is likely to be repeated. Rules associated with failure are not.

What we can draw from this quote is that actors within institutions can facilitate the movement in lessons from one point in time to another as a result from personal and/or collective experiential learning. This stimulates change but this change filters through the

negative lessons or failures - meaning that change can be a positive experience whereby the rules and organisational behaviours associated with success are carried forward. Yet this process may also be triggered 'when an existing order, its institutions, rules of appropriateness, and collective understandings, are challenged by new experiences that are difficult to account for in terms of existing conceptions' (March and Olsen, 2004: 15). Existing entrenched organisational behaviours no longer make sense. Furthermore, the rate of change will be accelerated by a crisis because such events lead to the unacceptability of the past and institutional emancipation (March and Olsen, 2004: 16). At the same time, crisis-specific studies show that institutional rigidities are likely to safeguard the sectoral *modi operandi* in the short-run but such minimal change undermines their continued viability in the face of changing external pressures (Alink et al., 2001: 294). In this vein, institutional theory is not traditionally associated with the substantial reconfiguration of organisational practices and policy frameworks but instead is better at explaining stability over change (Hill, 2005: 86-88). Judge (2005: 21-22) notes that although interpretations, such as historical and new institutionalism, recognise the importance of history and the constraints associated with path dependency, it is not deterministic in allowing for changing social, economic, and political forces and associated recalibrations of power relations and 'ideas' to impact upon organisational form'. This can be termed 'the stickiness of adaptation' (March and Olsen, 1989: 189). It may also be the case that, in a system that prefers stability to change, there is the danger that new actors distort or manipulate information in order to construct a reality in which information that bolsters the case for change deemed to be less threatening (Smart and Vertinsky, 2006: 325). In which case if an organisation eventually chooses to act then decisions may be made on the basis of the wrong information. The result is change as a consequence of the inaccurate need for change - otherwise known as 'superstitious learning' (Levitt and March, 1988: 325-6). This is not to suggest that institutional accounts do not conceive that learning does not happen because '[i]nstitutions have the capacity to learn and to modify behaviour as a result' (Judge, 2005: 14). Yet, as Judge (2005: 14) suggests, institutionalists (especially historical institutionalists) would make the case that the efficacy of such learning mechanisms is subject to considerable limitations in the political world. Macleod (2002: 58) would concur with this assessment and he articulates this by referring to the ideas of 'negative feedback':

It is relatively easy for politicians to exploit structures and policy procedures to maintain a state of negative feedback or head off positive feedback cycles that might gain steam ... This is mainly due to the ability of entrenched political actors to maintain the status quo by manipulating expectations of success and failure through political structures. Hence, policy studies mostly reflect incremental change and accounts of dramatic change are few and far between.

By contrast, March and Olsen (2004: 16) argue that crises and disasters are transformative periods whereby the established way of doing things becomes challenged more than at any other time:

Actors are likely to learn from disasters, crises, and system breakdowns – transformative periods where established actors are delegitimized, are challenged, or collapse. Then, institutions and their constitutive rules are discredited as unworkable, intolerable and change initiatives are presented as emancipation from an order that is dysfunctional, unfair, or tyrannical relic of an unacceptable past ... In situations of disorientation, crisis, and search for meaning, actors are in particular likely to rethink who and what they and others are, and may become.

The notion of crisis in institutional and organisational development debates come up time and again through concepts such as ‘critical junctures’ and ‘performance crises’ (March and Olsen, 1989; Collier and Collier, 1991). However, destabilising events, such as crises, may open new challenges and stimulate calls for institutional change. Political turbulence can ‘disrupt established ties between organisations and resources’ (Aldrich and Ruef, 2006: 232).

Evolutionary Change and Transformative Results

In their study of institutional change in political economies, Streeck and Thelen (2005: 1) argue that there is a *conservative bias* and a reliance in the institutionalist literature on a strong punctuated equilibrium model which emphasises long periods of institutional stasis that is only interrupted by some sort of exogenous shock – allowing for change or reorganisation. They note that:

[There] is a tendency in the literature to understate the extent of change, or alternatively to code all observed changes as minor adaptive adjustments to altered circumstances in the service of continuous reproduction of existing systems. (Streeck and Thelen, 2005: 1)

The authors do concede, however, that in the post-war development of advanced political economies change has been gradual. The reason for this is that fundamental change is engulfed by risk. This is a significant obstacle to reformism. It may be the case that the risks are too great to the point at which policy-makers view it as unacceptable (Drennan and McConnell, 2007: 71-72). However, for analysis of the institutional change to move forward, Streeck and Thelen (2005: 6) note that there should be a change from emphasising continuity and from viewing institutions as crystallisations 'frozen in time'. Streeck and Thelen see promise in the changeable nature of institutions within the path dependency literature. Yet although path dependency literatures regard change as a dynamic political process, because mechanisms of return and positive feedback sustain and reinforce institutions through time (Kay, 2003; 2005; Duit, 2007), 'increasing returns and positive feedback are more helpful in understanding institutional resiliency than institutional change' (Streeck and Thelen, 2005: 6). The main argument of Streeck and Thelen (2005) is that authors who study institutional change should look for *change with transformative results*. One way of doing this is to think of institutions as regimes or as 'building blocks of social order' (Streeck and Thelen, 2005: 9). Institutional change may thus be generated 'as a result of the normal, everyday implementation and enactment of an institution' (Streeck and Thelen, 2005: 11). This reflects on the idea that institutions are systems of social interaction whereby institutions are 'being continuously created and recreated by a great number of actors with divergent interests, varying normative commitments, different powers, and limited recognition' (Streeck and Thelen, 2005: 16). Thus, the emphasis is placed on transformative change as an accumulation of incremental modifications rather than on change arising abruptly and discontinuously.

In addition, the evolutionary aspects to change have been considered by some authors in recent years (John, 1998; Hay, 2002). Hay (2002: 156) notes that '[classic] evolutionary accounts identify continuous processes of social and political change which are incremental yet nonetheless directional and hence cumulative over time'. The defining characteristics of classical evolutionary works regard change as irreversible but also progressive, incremental,

and cumulative over time (Hay, 2002: 156). Evolutionary theorists focus on how 'institutions, ideas, groups and economies can evolve through the changing preferences of individuals that shape or are shaped by their external environment' (John, 1998: 184). This is similar to incremental models of policy-making in the sense that evolutionists view agenda, policy formation, policy outputs and policy outcomes as part of the same process. The organisational learning literature also points towards the fact that learning in organisations is inextricably linked to 'organizational evolution' (Aldrich and Ruef, 2006: 50). Bureaucracies are more likely to evolve than revolve. Revolutionary change gives way to evolutionary change and perhaps it is only crises that will stimulate discontinuity - thus initiating rapid moments of transformation (Hay, 2002: 151).

In continuing this theme, Streeck and Thelen (2005) are generally attuned to the evolutionary nature of institutional change by arguing that institutional change is an ongoing process of adaptation whereby institutions take on fresh functions and cast off old ones. It is possible, therefore, that institutions change and develop dynamically. On this basis we can deduce key 'modes' of gradual but transformative change. Streeck and Thelen (2005: 19-30) note that these can be categorised as displacement, layering, drift, conversion, and exhaustion. These place different emphasis on change and the mechanisms causing change:

- *Displacement*: This is the perspective that holds that change can occur through a process of displacement. For sociologists this means that displacement occurs due to new models emerging which question the current organisational form and practice. By contrast, political science literature places emphasis on the normative and cognitive aspects of change - with change arising due to shifts in the societal balance of power. This is a process of institutional rediscovery and activation whereby a number of actors defect to a new system which is quite different from traditional institutional forms and behaviours. Change through displacement, therefore, can occur endogenously through the rediscovery of held back or suppressive possibilities. Analysts place different emphasis on the meaning and implications of displacement. Some regard it as a process of change stimulated by endogenous elites and enterprising actors. Others place emphasis on the concept

of 'invasion' which is concerned with the planting of foreign institutions on the indigenous institution.

- *Layering*: Layering emphasises the 'lock-in' effects of change. According to this interpretation, change takes place differentially. Differential growth is associated with the introduction of fresh elements which set 'in motion dynamics through which they, over time, actively crowd or supplant by default the old system'. Put simply, layering involves the amendments and revisions to what is already in place – layers of change are in evidence when additional change gradually overrides previous changes. The institutional growth of new institutions is created on the edge of old ones and the new institutional layer destabilises support for the old layer.
- *Drift*: Drift means that institutions can erode because of a lack of strategic thinking or change. Institutional stability should not be taken for granted in this context. Institutions require ongoing care, attention and active maintenance. To avoid the pitfalls of drifting it is important that institutional actors continually monitor the external political and economic environment in order to effectively respond to external circumstances. The path of institutions requires continuous attention, recalibration, reformulation, and renegotiation. As is the case with the crisis management process, culpability avoidance (discussed in chapter 1) can exacerbate the drifting process since explicit political manoeuvring, and the abdication of responsibilities, is not conducive to change since actors may ultimately scale back their efforts. Thus this kind of a purposeful non-decision-making may not close performance gaps – allowing an institution to actively decay.
- *Conversion*: Conversion is significantly different from the above modes of change since conversion refers to the redirection of goals and functions of the institution. Existing institutional resources are redirected in light of environmental challenges. Conversion may also take place due to the revolutionary efforts of institutional actors that were not previously seen as a force to be reckoned with (i.e. actors not

heavily involved in the design of the institution nor in the construction of objectives). These hitherto unrecognised actors are involved in the change process. Rather than the actors adapting their behaviour around the institution the actors adapt their behaviour to the interests and strategies of new actors. The redirection of institutional resources may occur through political contestation over what the functions and purposes of an existing institution should serve. Political contestation, as a driver for change in conversion terms, is made possible by the gaps that exist by design or accumulate over time between the institutional rules and implementation. The gaps can occur due to a whole host of reasons but include the fact that institution-builders cannot foresee the implications of all decisions (leading to 'unintended consequences'). Also 'time matters' in the sense that it brings change in actors and in the nature of challenges and problems – thus opening gaps for the possibility of institutional conversion through the recalculation of goals and ends.

- *Exhaustion:* Exhaustion is more concerned with gradual, rather than abrupt, institutional breakdown as opposed to change. Drift emphasises a lack of direction but, in contrast to exhaustion, the institution retains its formal integrity. Institutional exhaustion occurs when the behaviours of actors are invoked to undermine the existing institutional rules. In a similar vein to conversion, time is also an important factor in the exhaustion and depletion of an institution. Institutions in their formative years require elaboration and justification for their meaning and existence and the wrong choices (i.e. a lack of justification or a lack of meaning) may limit their growth. The way in which institutions establish themselves is shaped by circumstances that develop externally and as well as its own strategic choices. In addition, institutions also age and they might run out of steam and have to face up to the limitations of their growth and, moreover, their resources to fund expansion become unsustainable.

The above discussion can be characterised as a conceptual swinging pendulum between the degrees of change. In relation to policy-making for crisis management, it is sufficient to argue that protecting the integrity of an organisation/institution and, the governing policy

framework, requires traditional policy paradigms and underlying values to be agreed and maintained. Deep-seated change requires a re-articulation of cultures, a high degree of absorption capability in order to take the strain of new developments, and the adaptation of dominant beliefs and policy ideas.

Having established key organisational change themes from the literature, the next main section of the chapter considers particular analytical themes that concern policy change. Given the crisis element of the thesis, the policy change themes have been selected because of the pertinence to the role of crises or external perturbations, and shocks. Moreover, the dynamic policy change perspectives are associated with a greater propensity to change.

External Shocks and Europeanisation as Key Precipitants of Change

This section of the chapter considers the impact of the notion of external shocks on stimulating an ideational shift and changing the policy agenda. This discussion will be structured by the punctuated equilibrium and multiple streams framework. In addition the dynamics of Europeanisation as a precipitant for policy change is considered. A brief note is required here in relation to the latter conception of change: because we now live in an era of multi-level governance, the following discussion incorporates the 'EU' dimension. National policy change is the main analytical 'arena' under exploration in this thesis but an added layer or pressure on national policy is the accommodation of EU policy. Dynamic policy change perspectives are an important aspect to the change debate, especially if a policy sector is structured by European *legislative* and *regulatory* frameworks, and this applies to the case studies in this thesis. Knowing how to manage the legislative forces and policy-making patterns of the EU is a learning process for government departments (Jordan, 2003). This means that the regulatory aspect of change is analysed alongside changes in policy. Indeed, legislative measures structure policy options and have implications for 'whatever governments choose to do or not to do' (Dye, 2005: 1). Therefore, if policy is viewed in the context of authoritative decision-making, then legislation and regulation could be regarded as 'policy' (Hood, 1986; Howlett and Ramesh, 2003; Hood and Margetts 2007).

First, it is important to note that, in the policy change literature, external shocks are not necessarily the same as the notions of 'crisis' established in chapter 1, yet 'the cumulative effect of events that disturb perceptions of the order of things may lead to the alteration of policy core beliefs' (Hansén, 2007: 106). Beliefs and ideas about policy become destabilised when they become circumscriptive and fail to make sense of events (Sabatier and Jenkins-Smith, 1993). John (1998: 170) notes that '[during] a crisis...it is possible that a set of beliefs is no longer sustainable because there are events which are hard to explain'. As Sabatier and Jenkins-Smith (1999: 125, original emphasis) further note:

The only way to change the policy core attributes of government policy in that jurisdiction is through some shock originating outside the subsystem that substantially alters the distribution of political resources or the views of coalitions within the subsystem.

What can be drawn from this quote is that external shocks or crises have the potential to have path-breaking qualities. This means that policy beliefs become realigned and, as a result, the agenda is potentially subject to reform. The extent of the reform will be highly dependent upon a change in coalition dynamics or the level of reassessment that the existing coalition decides to introduce. The advocacy of new ideas, as solutions to policy problems, can disrupt the pattern of interests that cement a coalition together and can strengthen new relationships between actors (John, 1998: 171). Yet, Mintrom and Vergari (1996) argue, and it is a theme taken up by crisis management scholars generally, that not all external perturbations (crises in this case) and policy-orientated learning stimulate sweeping change. This is recognised by Sabatier and Jenkins-Smith (1999: 147): when they argue that significant perturbations external to the subsystem may not alter the core attributes of a government programme.

Overall, advocacy coalitions are better at conceptualising policy stability processes as it assumes that some relationships in the policy process are stable. Policy change of any magnitude tends to be explained by external shocks (John, 1998). Even though coalitions can learn after a crisis, John (1998: 172) argues that they tend to group their ideas within the context of stable core values and beliefs. Much like policy network approaches and institutional development literatures, therefore, the advocacy coalition framework is much better placed to explain stability despite inevitable fluctuations within the policy

subsystem. Hansén (2007: 106) concurs with the argument that the advocacy coalition framework leans towards explaining stability rather than change when he argues that crises have the potential to alter policy beliefs, thus leaving room for policy learning, but, under advocacy coalition framework, this is unlikely to occur. With respect to the analysis of this thesis, and for completeness sake, it is recognised that the advocacy coalition framework is one approach for explaining change in the context of external perturbations. However, this framework is not central to the present thesis given the emphasis placed to the relationship between crisis and change and the likelihood for such an episode to change the policy agenda and break the policy consensus. With regards to the latter, the next section of the chapter discusses the relationship between crises and the reorientation of policy ideas in the context of punctuated equilibrium.

Crisis as Breaking the Policy Consensus: Punctuated Equilibrium

The term 'punctuated equilibrium' (PE) has been linked with a diverse range of perspectives in comparative public policy which reinforce the significance of crises, critical institutional events, and critical junctures (Collier and Collier, 1991; Baumgartner and Jones 1993). Scholars have argued that governance unfolds over time as a pattern of 'punctuated equilibria' - long eras of stability alternated by short-lived periods of uncertainty and conflict (Baumgartner and Jones 1993). The punctuated equilibrium (PE) model observes that decision-making takes various forms and need not be continuous – not unlike the long established account of disjointed incrementalism (Braybrooke and Lindblom, 1963). That is not to say that PE is a refinement of incrementalism. Despite the fact that policy-makers compare current policy choices with those that went before, PE 'is about the shifts in the rate of policy change and why they occur at particular points in time' (John, 1998: 177). As Debray (1973: 90) notes, 'political time moves faster in periods of crisis and stagnates in times of regression'. The crux, therefore, of PE is the exploration of how ideas become institutionalised and become salient over others in policy systems. This institutionalisation of ideas assists in overturning governing policy paradigms. Although the beliefs of elites in the political system are more conducive to the maintenance of the *status quo*, agenda-shifts, if the conditions are right, can break the

ideational consensus. John (1998: 177-178) elaborates on this point in terms of what happens when there is an upset in the consensus:

New agendas feed into policy outputs, and these sets of ideas can introduce new decision-makers and groups into the political system. In time these actors shift the rules about decision-making that institutionalize them into the policy process. Thus changing agendas in the political system create new monopolies which other agendas and groups challenge at a later date

PE holds that the media, decision-makers, and the public all have resource limitations in the form of time, knowledge, and attention which means that such actors cannot manage the full range of policy problems that they face. Priorities become important in the sense that a few issues are given more attention at the expense of others. This means that 'there is a virtuous cycle of interaction between policy entrepreneurs who stand to gain from a change in policy, the media who discuss an issue and public opinion that can fuel change' (John, 1998: 178). There is a bandwagon-like effect whereby each process feeds on the other. New ideas surface and take hold - challenging the policy monopoly and punctuating the equilibrium. In this context, ideas form agendas and PE instils the notion that policy-makers and the institutional framework shape the way policy problems are defined (John, 1998: 180). This means that what policy responses emerge from a particular policy problem is significantly dependent upon the framing of the situation. Subsequent decisions, based on the problem definition, will therefore shape policy responses.

It was established in chapter 1 that framing typically involves the selective exploitation of data, arguments, and historical analogies (Boin et al., 2005: 82). The actions taken to deal with a crisis can be affected by the definition of the situation allowing for support to be generated through the manipulation of cognitive interpretations. From this framing perspective, punctuated equilibrium theory argues 'that policy incrementalism depends on the degree to which policy makers succeed in defending their preferential right of interpretation' (Hansén, 2007: 108). It is possible that under conditions of heightened attention that policy adjustment becomes possible – reinforcing the point that stability of a policy is not constant but interspersed by short-lived periods of change (see also Cairney, 2007: 58-59). On this basis, punctuated equilibrium is an appropriate model. This is because crises can uproot what was taken for granted because crises are 'focusing events'

and can represent critical junctures (Boin et al., 2005: 122). For example, the mediatisation and politicisation of incidents (Boin et al., 2005: 75-72; Hansén, 2007: 108) may create a venue shift (change in the authority and where a decision is made), image shift (public understanding of the problem), and attention shift whereby the government places more attention on an issue - for example the attention provided to US homeland security after the 2001 terrorist attacks. Although intermittent and intense change is possible, it is important to bear in mind that, in terms of the policy agenda, issues may not always receive the same attention across time despite the fact that crises are often 'triggers' for change (Boin et al., 2005: 3). Hansén (2007: 110-111) substantiates this point:

Even if crises seem to provide fertile soil for policy change, PE [punctuated equilibrium] discusses the notion of 'triggering events' with some caution. It has been observed that both media and policy attention sometimes follow recurrent 'real-world' events such as riots, while this is not the case at other times. Timing is therefore crucial in PE reasoning on policy processes after crisis. PE argues that when heightened media and political attention actually follow a focusing event, the event as such can best be described as an "attributed trigger" ... The event becomes a symbol of a particular understanding of a problem. In this respect crises fulfil a more consolidating role, since the underlying problem is already publicly widespread.

Crises, therefore, create the *opportunity* for change. Those who assume the position of having the 'policy monopoly' may have their position destabilised and a rival policy venue may gain in prominence (Hansén, 2007: 110). Essentially, the feedback from policy decisions builds up critical problems to the point in which the process of movement from stability to crisis is accelerated (Hill, 2005: 87). Indeed PE is concerned with positive feedback. Instead of being concerned with explaining how institutions have a tendency to become self-reinforcing over time, PE is interested in the process of positive, rather than negative, feedback in terms of understanding the rapid fashion in which instability replaces stability. Thus PE is not concerned with minor change but with the acceleration of change through the adoption of the issue by new decision-makers, organisations and the public (John, 1998: 178).

Furthermore, PE holds that policy entrepreneurs are important actors in the policy subsystem. It might be the case that some individuals (entrepreneurs) are quite happy to

maintain the *status quo* as they may benefit from the current policy monopoly – meaning that crises may not be sufficient to change the course of policy. Self-interest also manifests itself in the other direction in the sense that certain actors strive to overhaul the existing policy monopoly to satisfy the adoption of their own policy agenda. They are ultimately agenda-setters in the form of change agents. When a destabilising crisis is matched by the motivation to change then reform is much more likely. In terms of crisis policy-making, therefore, PE is a useful guiding framework. The emphasis that it places on the interspersion of short bursts of radical change to policy stability rests neatly with the perception that crisis episodes can punctuate the course of public policy. It also is a useful tool for studying the framing of situations and its implications of attention-shifts. In crisis management parlance, under PE there can be a ‘threshold of urgency’ which makes policy change much more likely:

The natural tendency is to underemphasize new threats, new ways of thinking of things, new ways to organize public bureaucracies, until and unless some significant threshold of urgency is crossed. At that point, major changes can occur. While the 9/11 terrorism example is an extreme case of such a thing, similar patterns of overresistance, then overreaction, are general characteristics of government. *Crises seem necessary to drive change.* (Jones and Baumgartner 2005: 51, emphasis added)

Although crises drive change, it is also important to acknowledge the fact that studying the downtime or non-crisis or peacetime period is just as crucial as studying the crisis episode. If this does not happen then how can we begin to understand the direction in which policy frameworks have been taken? The ‘intervening periods of calm’ allow for the analysis to move towards understanding lesson learning processes and the dynamics of change which potentially structure plans and frameworks for managing crises that take place in the future. To quote Colin Hay again, ‘[w]hile it is important, then, to emphasise the significance of punctuating moments of crisis, it is equally imperative that this is not achieved at the expense of a failure to acknowledge what goes on between crises’ (2002: 163). This is not to neglect the period of disruption thrown up by crises and the immediate fallout from it. Rather, attention should be given to those periods when policy-making institutions themselves are reorganised (Jones and Baumgartner, 2002b: 4).

Crises and Agenda-Setting: Multiple Streams

Multiple streams theory is concerned with agenda-setting (Kingdon 1984; Hansén, 2007). Hansén (2007: 99) notes that multiple streams theory refers to three streams: problems, policies and politics. First, the problems stream examines what factors make certain issues visible and others invisible. Second, the policies stream pertains to ideas, which can basically be seen as solutions to problems. This relates to the ideas or solutions to policy problems which can be initiated by members of policy communities (for example bureaucrats and politicians). The sustainability or rate of survival of a proposed solution depends on whether the solution is technically feasible and its practicability. Third, the politics stream refers to the national 'mood' (Kingdon, 1984: 155) as an important element to this ideational interpretation of policy change. The mood to which Kingdon refers is not only public opinion but opinion polls, legislative changes, and pressure group campaigns. If multiple societal actors appear to be 'singing from the same hymn sheet' in terms of their policy preferences then this makes it more likely that political incumbents will take this onboard in bringing about change. In the event that there is conflict between decision-makers and non-decision-makers then political leaders are more likely to 'strike some balance between those for and those against a proposal' (Kingdon, 1984: 157). Interestingly Kingdon places emphasis on how a problem, such as a crisis, can speed up the learning process and reconstruct the policy agenda:

Problems are not self-evident ... They need a little push to get the attention of people in and around government. That push is sometimes provided by a focusing event like a crisis or a disaster that comes along to call attention to the problem. (Kingdon, 1984: 99-100)

In a similar vein to Baumgartner and Jones (1993), Kingdon makes the case that the opportunity for change is only present for a short period of time and makes the case that change takes place due to a combination of issue-recognition, political context, and when the potential constraints on change are not severe. The work of Kingdon, in terms of agenda-management and policy change, is widely cited in research that studies policy change as it encapsulates the entrepreneurial aspects of policy development which take place in opportunity windows. This is no different from the crisis management literature. In terms of agenda management, crises focus the mind of political leaders and, due to mass

public and media arousal, issues are more likely to come onto the agenda. Yet Kingdon (1984: 100) attempts to avoid making cross-sectoral generalisations in terms of the likelihood for change to occur. This means that a sudden crisis, such as an airplane crash, invokes a sense of urgency and calls for drastic change; whereas a problem such as patients dying in greater numbers in the health sector (due to MRSA infections for example) has incremental or 'slow-burning' characteristics ('t Hart and Boin, 2001: 32-35) which may gradually build up to a major crisis. In symbolic terms, public images can also have implications for change (Edelman, 1977; 't Hart, 1993; Boin et al., 2005). In addition, political figures may use symbolic language by putting a different label on change by using terms such as 'improvement'. This minimises any accusations that the policy changed because it was the wrong one. The key point here is that crises:

are clearly potential window openers ... in contrast to policy developments in normal situations' and ...provide more focused and discernible opportunities for policy innovation. Crises make policy problems visible. To achieve agenda prominence, someone in the policy stream has to present a potential or possible solution to the arisen problem. Of course, in the stream of politics, the crisis needs to be interpreted as a symptom or part of a familiar problem to promote policy change. (Hansén, 2007: 101-102)

The next section considers the final lens for analysing policy change that is of significance for this thesis. Given the nature of the case studies under exploration the supranational context is particularly relevant. Any study of change and adaptation in a policy sector, which operates in the context of multi-level governance, must consider the 'higher' or top-down pressures which exist above the level of the nation-state. This allows for an exploration of how, in terms of UK-EU policy dynamics, policy changes affect policy national styles and overarching policy standards (Börzel and Risse, 2000: 3; Hill, 2005: 22-23; Cini, 2006: 224-228).

Europeanisation Processes

Europeanisation is the key analytical mechanism for charting change in a policy sector that is governed by the EU and animal health and disease control is governed by the EU. As the former Permanent Secretary of the UK Ministry of Agriculture Fisheries and Food

(MAFF) (up until 2000), Sir Richard Packer (2006: 7, emphasis added), who was in his post at the height of the BSE crisis, indicates:

All aspects of agriculture and trade are covered by the EU Treaties; hence it is primarily EU rules that apply in these areas and there is little scope for independent national action.

This means that the ministry responsible for managing veterinary disease-induced outbreaks has its policy activities shaped by, and operate in the context of, EU policy and legislative frameworks (Jordan, 2003; Connolly, 2008). Even beyond 'hard' legislative drivers, such as framework legislation and regulatory requirements, the governing EU institutions often instigate their own evaluation reports and commission inquiries in order to investigate the merits or otherwise of policy actions of member state governments. EU institutions can prompt policy learning by putting the onus on member states to change certain practices or they can recommend changes to legislative frameworks. In this respect, the EU can be described as a driver for national policy change. Interestingly, Boin et al. (2006), in their report on 'Functional Security and Crisis Management Capacity in the EU', acknowledge that further research should be carried out that explores member state-EU relations in terms of policy-making for crisis management. The authors also note that '[r]esearch into EU-member state crisis management procedures should be supplemented by incorporating theories of Europeanisation' (Boin et al., 2006: 69). Indeed the crisis management literature has only begun to acknowledge the conceptual usefulness of adopting Europeanisation to study changes to crisis management practices.

Even if the ways in which the supranational EU levels and national levels respond to transnational policy developments are considered, post-crisis change could be hindered despite Europeanisation processes. Boin et al. (2006: 414-415) make the important point that EU initiatives, that may come about as a result of a crisis such as BSE and the Belgian dioxin contamination scandal 1999, are potentially faced with solid obstacles at the domestic level. Issues relating to a lack of administrative capacity, the lack of political will, and bureaucratic politics are key factors that inhibit policy change under the guise of Europeanisation. At the same time, the literature seems to confirm that governmental organisations will frequently want to be seen to be implementing measures that confirm

that a process of policy change is taking place in order to dispel past practices (Boin et al., 2005). This approach to analysing policy allows for an exploration of the implementation of EU policy in the crisis aftermath.

A key finding of Europeanisation research is that there has been 'no significant convergence towards a common institutional model, homogenising the domestic structures of European states' (Olsen, 2001: 15). Thus, Europeanisation is a differentiated phenomenon that has disparate implications across member states. For example, in the veterinary policy area EU directives have had differentiated effects on the national policy approaches. Studies that focus on one member state, in this case the UK, encounter fewer methodical difficulties in trying to gauge the implications of EU policy than studies across the whole of the EU (Radaelli, 2003: 48-50). Put simply, this means that it is conceptually and empirically unwieldy to chart the implications of the EU in the context of multiple member state comparisons (see also Bache and Jordan, 2006: 30). Concentrating on Europeanisation and crisis management change in one member state (the UK) avoids making cross-member state comparisons. This means that *Europeanisation is not viewed here as European policy convergence*. This is important because, as with the *enabling* nature of EU Directives, the EU decisions have differential impacts across member states and contain different rules for compliance. The EU regulatory framework facilitates a lack of homogenisation since the same EU Directive (framework legislation) must be ratified in member state legislatures and this legislation will be translated into national law based on the particular policy cultures (Major, 2005: 178). The ratification and transposition of Directives is also dependent upon the fit between EU policy and domestic policy patterns, legal and administrative structures (Knill, 2001: 41-50; Major, 2005: 178; Lenschow, 2006: 64). Despite the fact that the policy areas surrounding the case studies, for example animal welfare, trade, and agricultural policy, have been subject to the forces of European integration, EU disease control legislation is rarely applied comprehensively across member states at any given time. From this standpoint, therefore, a 'one size fits all' approach to crisis management in the EU is likely to run into trouble in domestic domains (Boin et al., 2006: 63).

The most cited definition of Europeanisation is provided by Ladrech (1994: 69). Ladrech defines Europeanisation as 'an incremental process re-orientating the direction and shape

of EU politics to the degree that EC political and organizational dynamics become part of the organizational logic of national politics and policy-making'. Taken further, this view of Europeanisation maintains that organisations or bureaucracies of government 'respond to the changes in the perceptions of interest and value that that occur in the principals, norms and institutional design of the regime in which they are embedded' (Ladrech, 1994: 71-72).

In recent years this academic field focused on a set of distinctive perspectives (Radaelli, 2000: 4-5; Bache and Jordan, 2006b: 13) and has become a systematically applied concept (Bulmer and Lesquesne, 2005: 11). From a policy change perspective, a multi- or bi-directional approach to Europeanisation (Bomberg and Peterson, 2000; Börzel, 2002; Jordan, 2003; Lenschow, 2006; Connolly, 2008) should be adopted. The dynamic form departs from studies that concentrate only on the domestic impacts of EU (Cowles et al., 2001; Bulmer and Burch, 2005). As Bulmer and Burch (2001: 78) note:

European integration is not just 'out there' as some kind of independent variable; it is to a significant degree the product of member state governments wishes. Given that the EU has its own organisational logic, it is necessary for national political actors – here the institutions of government – to accommodate some of that logic if the opportunities afforded by the EU are to be exploited.

This dual approach to analysing the effects of the EU on the UK emphasises the national policy responses to the EU *and* the overall execution of negotiating positions at the EU level. The effects of the EU on the work of the agents or handlers of member state-EU affairs (i.e. domestic officials and politicians in Europeanised policy sectors) cannot be said to be insignificant. This is because 'the [Europeanisation] process is much more complex, given among other things the involvement of national actors in the EU' (Schmidt and Radaelli, 2004: 191). Consequently, 'bottom-up' approaches are required in order to study how nation-states 'hit' Europe. This 'uploading' (Börzel 2002: 195-196) process usually takes place in the early stages of EU policy-making. Inevitably national government ministries/departments that will be required to ultimately 'download' EU policy inevitably have a vested interest in making sure that there is a 'goodness of fit' (Jordan, 2003: 268) between supranational and domestic policy and institutional arrangements. In other words, securing the national interest is often what the political

masters of officials seek to achieve as this will reduce domestic adjustment costs and institutional 'misfits' (Risse et al. 2001). Streeck and Thelen (2005: 27) also make reference to multi-level governance systems, such as the EU, and argue that lower-order institutions regulated by higher authorities are engaged in a dual policy process of change and influence:

Lower-order institutions regulated from above in a multi-level institutional structure are not once and for all determined by the latter: like rule takers in general, those in control of national institutions inevitably have some leeway to adjust the supranational rules that apply to them, and they can also try to change such rules by putting pressure on rule makers or rule enforcers. Moreover, those governed by a national institution which is in turn governed by a supranational one often have wide-ranging strategic capacities as they can try to use political resources mobilized at one level to influence decisions at the other.

This move away from a strict top-down approach is also supported by Schmidt and Radaelli who argue that an 'inside-out' or bottom-up view of Europeanisation is equally as important as the traditional top-down aspect of Europeanisation. National policy-makers 'learn' how the EU works due to their continual engagement with the EU institutions and policy-makers. In terms of the UK, it has been acknowledged that 'the adaptation of the UK governmental system is designed in part to ensure effective input into EU policy-making in Brussels' (Bulmer and Burch, 2005: 866).

It is important to note, for reasons of analytical clarity, that not all policy changes, and the organisational structures of policy-making that accommodate such change, are always as a result of the EU. Rather, there are several drivers that affect policy change in veterinary disease-control policy. Examples include: societal concern for the eradication of highly transmissible diseases by actors such as the National Farmers Union (NFU) and industry; pressure exerted by the media and advisory bodies such as the Royal Society, international drivers for change such as the International Organisation for Animal Health (OIE), the World Trade Organisation (WTO), the World Health Organisation (WHO) and Food and Agriculture Organisation (FAO) of the United Nations (UN). These drivers for policy change mean that the UK would have to respond to calls for policy change from actors beyond the EU. However, the intensity of such calls for change, and the supranational legislative backbone for change, would certainly not be as strong if Britain was not a

member of the EU. Jordan (2006: 243) acknowledges this in the study of environmental policy when he notes that the pace and depth of domestic change in Britain would, in all probability, have been significantly less than that which has occurred since accession to the EU in 1973. Nor would national officials have to take account of a higher level of governance in their day-to-day policy practices. Furthermore, it is becoming increasingly the case that member states of the EU are represented by the European Commission within international institutional bodies such as the OIE and WTO. It is, therefore, difficult to dispute that any other supranational institutions structure veterinary disease control policy frameworks as much as the EU. International policy thus filters through the EU as it is now recognised widely as an international actor. The EU, therefore, 'remains an important trigger for national action and a significant constraint upon the ability of national actors to pursue purely 'domestic' policy objectives' (Jordan, 2006: 244). EU member states now structure their policy-making timetable around the EU in that the EU's meetings, for example, in the Commission, the Council of Ministers, and in the European Council.

Research Questions and Themes Emerging from the Policy and Organisational Change Literatures

The main purpose of this chapter has been to expand on the analytical themes identified in chapter 1 which will assist in exploring the extent and dynamics of policy and organisational change to the UK government's crisis management arrangements for a veterinary disease-induced outbreak since the 2001 foot and mouth epidemic.

The chapter has also served to provide a detailed account of the dynamics of organisational and policy change. At the organisational level, it is more likely that bureaucratic organisations develop and evolve gradually - 'institutional change is intrinsically incremental' (Duit, 2007: 1098). Change in political or bureaucratic institutions have been commonly understood as an ongoing process of adaptation or bounded adaptation whereby historical precedent matters (Judge, 2005; Streeck and Thelen, 2005). If new functions are taken onboard within the organisation then this can be described as a process of functional conversion or layering rather than a departure and redirection from what came before. In terms of the function of crises, it may require a destabilising episode, such as a crisis, to

stimulate a process of realignment and change from 'what came before'. Varieties of path dependency emphasise the point that past choices restrict future choices - this means that any forms of change is underpinned by retrospectivity. Historical legacy-orientated studies, however, indicate how critical junctures penetrate periods of stability. Collier and Collier (1991: 29) define a 'critical juncture as 'as a period of significant change ... which is hypothesised to produce distinct legacies'. This means that certain events can affect long-term dynamic behaviour which structure future periods of stability or peacetime between crisis episodes - crises present non-reversible conditions for change. Thus it can be argued that some historical events are more important than others to reconfigure the *status quo*.

At the policy and regulatory level, there is a greater likelihood that policies will change as a result of a shift in ideas and entrepreneurial actions. Conceptions such as punctuated equilibrium and multiple streams help us to understand these dynamics and complexities. It is also possible that crises open opportunity windows for the emergence of fresh policy and legislative frameworks and this can, depending on the policy sector under exploration, be at both the national and supranational levels of governance. In this respect, those interpretations of policy change, which say something about the agenda change and the policy realignments, can help us to conceptualise crisis-orientated change and the dynamics that follow.

Based on the discussions in chapter 1 and 2, the thesis treats the preceding post-crisis management analysis, interpretations of institutional, and policy change as synthesisable 'organising perspectives' (Gamble, 1990: 405; John, 1998: 197-198). The post-crisis management themes, the interpretations of policy and institutional change complement each other – they allow for an analysis of the different propensities and rates of change. The exploration of change dynamics allows the researcher to study whether change is conservative, incremental, radical, evolutionary or even incremental with transformative results. Thus the post-crisis change categorisations of *fine-tuning*, *policy reform*, and *paradigm shifts*, detailed in chapter 1, will be adopted. Boin et al., (2008: 16-17) note that these aforementioned categorisations help us to understand the effects of crises on the pre-existing policies and institutions. Below is a brief reminder of these categorisations.

- *Fine-tuning*: the crisis only leads to the incremental adaptation of policies and practices within existing institutional and policy structures.
- *Policy reform*: policy principles and institutional values are fundamentally reformed by the crisis.
- *Paradigm Shift*: policies, organisations or even the political system are reformed entirely as a result of a crisis.

The present chapter has identified the literature that will help the analysis of the nature of post-crisis change. The chapter also allows for the assessment of an analytical framework to enhance the evaluative aspect of the thesis by considering the dynamics of policy and organisational change and by discussing the question of whether change can be evolutionary and transformative over time. The analytical themes that will help to structure the subsequent empirical chapters are:

Organisational Change

- Organisational learning and cultural adaptations
- Incremental and evolutionary change with transformative results

External Shocks and Europeanisation as Precipitants for Change

- Dynamics of Europeanisation: formulation and implementation
- Crises and agenda-setting
- Crises as ‘punctuating the equilibrium’

Coupled with the research questions posed at the end of chapter 1, the above literatures raise further key questions for empirical analysis: (1) What has been the nature of central-level policy and organisational change since the 2001 foot and mouth crisis? (2) What EU policy and regulatory changes have emerged since the 2001 foot and mouth crisis? These questions will be threaded through chapters 3, 4, and 5. This sets up the following question for chapter 6: (3) To what extent did the 2001 foot and mouth crisis ‘punctuate’ the policy equilibrium and lead to a shift in the government’s policy agenda? In addition, in a similar vein to the question posed at the end of chapter 1, the suitability of Boin et al’s

(2008) categorisations of post-crisis change (*fine-tuning, policy reform, and paradigm shift*) will be considered in the context of the evolutionary aspects of change.

Chapters 1 and 2, therefore, have provided the analytical themes and direction for the remaining chapters of the thesis. Indeed empirical analysis in the later chapters will establish the nature and dynamics of change in relation to the UK government's crisis management activities for veterinary disease outbreaks. Crucially, however, as a precursor to this analysis, it is important to *map out the initial conditions for the change*. It is important to have a starting point (at state S_1 at time T_1) to in order to make meaningful inferences in the process of making comparisons with an end point (at state S_2 and time T_2) (Kay, 2006). Put differently, there must be a reference point from which the extent of change can be judged. This represents the first empirical case study of the thesis - the British 2001 foot and mouth crisis. Chapter 3 provides a narrative of the case study. That chapter, and the subsequent chapters, include findings from official governmental and parliamentary publications alongside interview data from 33 interviews with veterinary and policy officials based in DEFRA (including the MAFF and DEFRA Permanent Secretary Sir Brian Bender, former and current Chief Veterinary Officers for Great Britain and the Director and Deputy Director of the Food and Farming Group); the Cabinet Office (including the current Head of the Civil Contingencies Secretariat and the current Head of Economic and Legal Affairs); the Scottish Government Environment and Rural Affairs Department (SG), and Health and Consumer Protection Directorate General (DG SANCO) of the European Commission. Interview data from elite interviews with politicians will also be presented. This includes interviews conducted with members of the Environment, Food and Rural Affairs Select Committee (including the former chairman, David Curry 2001-2004, who is also a former Minister of State for MAFF 1992-1993 and Shadow Minister for Agriculture June-November 1997); Shadow Ministers including Tim Yeo, Keith Simpson and James Paice; and former Government Ministers and Secretaries of State including John Gummer (Minister for Agriculture, Fisheries and Food 1989-1993 and Secretary of State for the Environment 1993-1997); Nick Brown (Secretary of State for the Ministry of Agriculture, Fisheries and Food 1998-2001⁴); Margaret Beckett (the first Secretary of State for the newly created Department for the Environment, Food and Rural

⁴ Brown was in his position during the height of the foot and mouth crisis. He was the political head of the department responsible for containing foot and mouth disease.

Affairs 2001-2005⁵); and Elliot Morley (Environment Minister 2003-05 and Minister for Department for the Environment, Food and Rural Affairs 2005-2007).

Chapter 3

The 2001 Foot and Mouth Crisis: Research Themes and Analysis

⁵ Beckett was the political head of the new department responsible for implementing the reforms and lessons from the 2001 foot and mouth outbreak

Introduction

The 2001 foot and mouth crisis is where the analysis of the dynamics and processes of change in the exotic disease policy sector begins. The 2001 foot and mouth crisis acts as the main reference point of the study. In analytical terms, the chapter aims to detail why the 2001 crisis should be regarded as a 'critical juncture' or 'external shock' in relation to UK crisis management policy-making for animal disease outbreaks.

The chapter begins by providing an explanation of what foot and mouth disease is in terms of the characteristics of the disease and the ways in which this highly infectious disease can spread. This is followed by a study of the events that unfolded in 2001 with respect to UK central-level responses to the epidemic. The period from February to May 2001 is the *main* focus because it was during this period that the crisis was at its height. It was at this time that the crisis management efforts of MAFF were tested the most. In May 2001 the number of confirmed cases of foot and mouth disease per week decreased substantially. For example, in the week commencing 27 March there were 299 confirmed cases of FMD and this decreased to 48 cases on the week commencing 1 May (HC-888, 2002: 169). From then on the amount of confirmed cases of foot and mouth disease decreased gradually.

In analytical terms, specific themes of crisis management preparation and prevention and crisis coping and decision-making, based on the themes identified in chapter 1, will be applied to the case study. The pre-crisis themes include contingency planning, crisis management exercises and simulations (discussed in chapter 1), and the debates regarding whether MAFF had an 'institutional/organisational memory' for preparing itself for the events that unfolded in 2001 (discussed in chapter 2). The crisis coping and decision-making themes include information management, scientific expertise, stakeholder engagement and communications, and politico-bureaucratic coordination (discussed in chapter 1). The crisis management themes are all part of the case study narrative which is designed to 'render various series of events into an intelligible whole' (Kay, 2006: 23) and 'is a single coherent story, albeit with subplots' (Stone, 2001: 74). This, inevitably, designates some elements and omits those that are not salient to the analytical framework

of the thesis. This can be described as a 'structured narrative' in the sense that themes are identified in order to provide direction to the study of change (Kay, 2006: 59).

The chapter examines the lessons derived from the main 'policy' inquiries into the analysis of the foot and mouth crisis. These are Dr Iain Anderson's 'Lessons to be Learned' independent inquiry (HC-888, 2002) and the report by the European Parliament's (EP) Temporary Committee on Foot and Mouth Disease (European Parliament, 2002). The Anderson inquiry was an independent inquiry commissioned by the UK government. The EP inquiry took into account the EU context in its assessment of the foot and mouth outbreak. There were, however, other inquiries into the foot and mouth crisis. The Royal Society of Edinburgh published a report on the outbreak in Scotland and, in Wales, the National Assembly's Agriculture and Rural Development Committee conducted a scrutiny of Ministers and officials. The Royal Society of Edinburgh conducted a scientific review into the transmission, prevention and control of outbreaks of infectious disease in livestock, chaired by Sir Brian Follett. In addition, the Policy Commission on the Future of Farming and Food, chaired by Sir Don Curry, was set up to advise the Government on how a sustainable, competitive and diverse farming and food sector could be created. At the local level, there were a number of local authority inquiries conducted in areas that suffered terribly from the foot and mouth disease epidemic such as Devon, Cumbria, Shropshire, and Northumberland. All of the inquiries noted above had important terms of reference but placed different emphasis on issues such as the farming sector, the science surrounding the disease, and concern specific regional or local geographical areas. Given that this thesis focuses on the UK government's management of the outbreak and the organisational and policy implications of the crisis, the Anderson and EP inquiries will be the main reports considered in this chapter. Alongside these reports, an analysis of the UK government's official report (Response to the Reports of the Foot and Mouth Inquiries [RRFMI, 2002]) and the parliamentary proceedings of the Select Committee on the Environment, Food, and Rural Affairs (2001-2002) are threaded throughout the chapter. Moreover, interview data from elite interviews with officials and politicians add depth to the narrative of the events that unfolded in 2001.

The 2001 Foot and Mouth Epidemic: Mapping the Initial Conditions for Change

What is Foot and Mouth Disease?

Foot and Mouth Disease (FMD) is a highly contagious disease of cattle, pigs, sheep, goats and wild ruminants. It is characterised by fever, vesicles on the feet, mouth and udder, and by death in young animals (Barclay, 2001: 10). The disease is caused by a virus of which there are seven types (O, A, C, SAT.1, SAT.2, SAT.3 and Asia 1). Within each type there are many sub-types, for example O1 and A22. The average incubation period is three to eight days but it can be shorter or may extend to fourteen days or even longer. The virus responsible for the 2001 outbreak in the UK was the highly virulent pan-Asiatic O type. The disease can be transmitted in a number of ways: (1) movement of infected animals; (2) contact with contaminated animal products; (3) contact with contaminated personnel and/or equipment; (4) windborne spread - this usually occurs over a short distance but long distance transmission can occur via the air up to 200 kilometres (HC-31/05, 2001: 10-11).

The disease is not simply the equivalent of the common cold (contrary to the views of some) because infected animals generally suffer acute stress and pain (HC-888, 2002: 40). There is not a cure for the virus and it is rarely fatal, except for young animals. Nevertheless the after-effects of FMD are serious. Affected animals lose body condition and secondary bacterial infections may prolong the period of recovery (DEFRA, 2008). The most serious implications of the disease are seen in dairy cattle. Loss of milk yield will be experienced and chronic mastitis may develop which leads to a permanent reduction in the economic value of a cow. Abortion, sterility and chronic lameness are commonplace and, in some cases, animals suffer chronic heart disease (DEFRA, 2008). When animals recover from infection by one type of the virus they have little or no protection against attacks by any one of the other types, which all produce similar symptoms. Animals do recover from the disease over a two to three week period, however, they are not left to recover by the authorities because the disease is highly transmissible – incurring far-reaching economic and welfare costs.

The Scale of the Disease in 2001

The 2001 foot and mouth outbreak signalled not only the first major outbreak of the disease in Britain since October 1967, but also the onset of one of the most serious economic and social crises ever to face rural Britain. Yet the bureaucratic context of the 2001 foot and mouth crisis differs from the 1960s. Britain joined the EU in 1973 (where animal health is an EU competence) and there has been a growth in rural tourism (European Commission, 1988; Lowe and Ward, 1998; Sharpley and Craven, 2001; HC-888, 2002). The 2001 outbreak was also different to that of the 1967 outbreak because the structure of the farming industry had changed. The (then) Chief Veterinary Officer, Jim Scudamore, emphasised this point on 31 October 2001 when giving evidence to the Environment, Food and Rural Affairs Select Committee:

I dealt with a number of outbreaks in 1967/68 and there were 50 cows. The first thing is the size of the farms and the way in which the farms operate. In that period there were quite a lot of small farms on the Cheshire Plain that had small acreages and had 50 dairy cows, so an infected farm did not involve killing a great number of animals. The second thing, I think, is in that area a lot of the farms were single premises. One of the difficulties we faced was that some people have a lot of farms over a lot of property, and they have people going backwards and forwards with equipment etc. So there are a lot of bigger farms with parcels of land and animals all over the place. So that involved more animals as well. (HC-323-i, 2001-02, Q.22)

The 2001 foot and mouth crisis led to the confirmation of slightly fewer outbreaks than the October 1967 outbreak (2,364 outbreaks in October 1967-June 1968 compared to 2,030 in 2001). However, 6,456,000 animals were culled in 2001 compared to the 433,987 animals that were slaughtered during the 1967-8 epidemic (HC-888, 2002: 170). The animal population and animal movements increased significantly between the late 1960s and 2000. For example, the sheep population increased by some 16 million between the late 1960s and 2000 (MAFF, 2001). By 2001 livestock were transported long distances to be sold and animal movements contributed considerably to the spread of the disease. Subsidies given to farmers under Common EU Agricultural Policy (CAP) had also contributed to the development of intensive animal farming over time which contributed to

the increase in land under cultivation and, in turn, increased the potential for the disease to take hold (Taylor, 2003: 537).

The National Audit Office (NAO) estimated that the direct cost to the public sector was over £3 billion and £5 billion to the private sector as a result of the 2001 crisis (HC-939, 2002: 13). The outbreak led to devastation to both the agricultural sector and to the tourist industry; for example, the main costs for the agriculture sector were due to the amount of resources required to control the disease and for dealing with animal welfare problems. The UK government compensated farmers for their loss of livestock by some £1.34 billion (HC-888, 2002: 133). With regards to the food chain, there was a loss of £170 million because movement and export bans imposed costs on auction markets, slaughterhouses and food processors (HC-888, 2002: 133). Tourism, in both the rural and urban sectors, lost between £2.7 and £3.2 billion in 2001 (HC-888, 2002: 133).

There were many more costs other than solely the economic variety - there were also political costs. The ability of MAFF to manage a large-scale animal disease outbreak came into the political spotlight, which led to the reorganisation of the Whitehall machinery during and after the outbreak. May 2001 saw the first post-war postponement of a General Election, the removal of the Minister in charge of MAFF, Nick Brown, and the creation of the Department for the Environment, Food, and Rural Affairs (DEFRA) after the election on 7 June 2001.

The Early Stages of the Epidemic

The 2001 FMD crisis began on 20 February 2001. The disease was notified to the authorities when it was identified during a routine meat inspection in an abattoir in Brentwood, Essex (south east England). Nonetheless, epidemiological evidence suggests that the first case occurred in pigs on Burnside Farm, Heddon on the Wall, Northumberland which was licensed to feed waste food under the Animal Byproducts Order 1991. The disease is thought to have been introduced to this holding at the beginning of February or the end of January 2001 (Cabinet Office, 2008). There is no definitive evidence to pin down what was the source of the foot and mouth outbreak but

the most likely explanation is that the farmer in Northumberland was feeding his pigs with untreated swill containing domestic and catering meat waste. It is presumed by the authorities that the meat carrying the virus entered the UK illegally. Nick Brown was asked in the Agricultural Committee of the House of Commons on 21 March 2001 as to whether or not infected meat was brought into the country. He replied by saying 'knowingly or unknowingly it is most certainly illegal. I cannot think of a way in which this could legally have happened ... because there is an absolute prohibition on bringing in meat from areas where there is the infectivity' (HC-363-i, 2001: QQ.94 and 95).

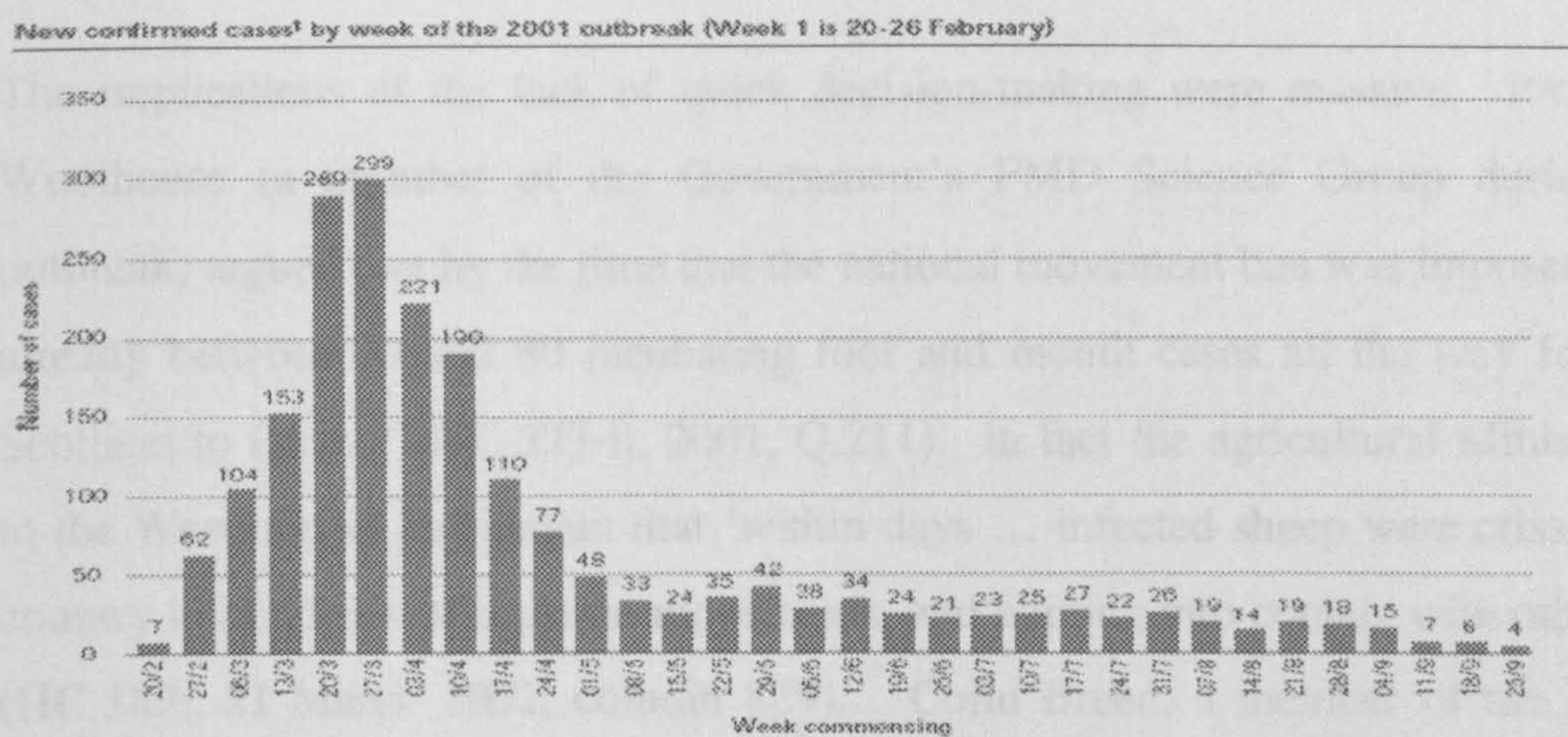
Under the terms of the European single market there are controls on the movements of animals into and within the EU. Veterinary inspection and certification procedures are administered by the UK and fellow member states (HC-888, 2002: 46). In terms of intra-community trade, animals (and their products) traded with other member states are not subject to a great deal of control and are 'not routinely inspected at the port or airport of arrival' (HC-888, 2002: 46). Instead, there is a reliance on inspection procedures taking place at the site in which animals begin their journey to the UK and, if live animals are traded, then they must have an appropriate health certificate. In 2001 goods traded between member states were subject to random spot checks at the premises of the destination. Whether or not those checks are carried out depends on the risk (HC-888, 2002: 46). If animals or animal products enter the EU from third countries outside the EU then the exporting country must be approved by the EU (as well as the premises from which meat and meat products originate). The approval process considers factors such as whether exotic animal diseases are endemic and the levels of animal health in the country. Thus, although the illegal importation of meat is the most likely explanation, the truth is that there is no clear answer to how the virus entered the UK:

We still can't be definitive, which Jim Scudamore [Chief Veterinary Officer during 2001] has agreed, as to the origins of the disease – of course we think pig swill is the most likely explanation for the 2001 outbreak. The fact is that the disease got in somehow even though we cannot pin down exactly where it came from. (DEFRA official A, 2008)

After the virus was identified by the authorities it brought considerable stress to the farming and tourism industries and governmental personnel. At the time of official

notification of the virus at the English abattoir the virus had already spread to a local farm and the sheep belonging to the farm were sold to a local market on 13 February and then sold to a larger market on 15 February. By the time the first outbreak was confirmed, approximately 30-79 farm holdings became infected with the virus (Fevre et al., 2006: 129). Despite the rapid spread of FMD, a ban on the UK-wide movement of animals was delayed for three days - although international movements stopped almost immediately. The European Commission banned all milk, meat and livestock imports. Figure 3.1 provides details of the amount of confirmed cases of FMD across the period between February and September 2001.

Figure 3.1: Confirmed Cases of Foot and Mouth (20-26 February 2001)



NOTE

1. Infected premises

Source: Department for Environment, Food and Rural Affairs

Source: National Audit Office (HC-939, 2002: 16)

One explanation for the delay in deciding to implement a national ban on animal movements was because the situation was politicised. The Secretary of State for MAFF, Nick Brown felt that he did not have the political authority to take such a major decision because Prime Minister Tony Blair was out of the country at a meeting with President Bush at Camp David. The shadow Minister for agriculture at the time, Tim Yeo, argues that:

The way that the government handled the foot and mouth crisis was politicised. I was involved from day one and it was a very busy period which occupied two

and a half months of my life. The government heard about the outbreak and MAFF were informed on the Monday afternoon. Tony Blair was away having his first meeting with President Bush at Camp David and the Minister, Nick Brown, didn't feel able to order dramatic action without clearing it with the Prime Minister. So the first thing that went wrong in 2001 was the failure to freeze animal movements straight away. The movements were not actually frozen until the Friday. If you look at the statistics you will see that huge amounts of animals were moved around the country. As soon as the farming community knew that there was an outbreak of foot and mouth disease, which became public either late on Tuesday night or the Wednesday morning, there was a different portion of animals moving to different markets on the Wednesday, Thursday, and Friday. That spread the disease straight away. If the government had introduced the freeze on movements straight away on the Tuesday it would have nipped the thing in the bud. They did not do so because that would be a drastic action. Nick Brown didn't feel able to take that major decision without Blair. (Yeo interview, 2008)

The implications of the lack of quick decision-making were massive. Professor Mark Woolhouse (a member of the Government's FMD Science Group during the 2001 outbreak) argued that by the time that the national movement ban was imposed there 'were already between 70 and 80 incubating foot and mouth cases all the way from southern Scotland to Devon' (HC-323-ii, 2001, Q.211). In fact the agricultural Minister indicated to the Westminster Parliament that 'within days ... infected sheep were criss-crossing the country in hundreds of separate movements, and coming into contact with other livestock' (HC Deb, 21 March 2001, column 829). Colin Breed, a member of the Environment Select Committee and Liberal Democrat agriculture spokesman in 2001, argues that:

The government was totally unaware of the way that animal movements were moving around the country. They were unaware of the practices of traders and of the way that animals didn't go from fields to the slaughterhouse but often went to different places and that they found themselves travelling hundred of miles around the country. I don't think that they were aware of that. I think they were also unaware of the lack of real bio-security in terms of markets and to a large extent on mini-farms and such. (Breed interview, 2008)

Accordingly, foot and mouth had spread widely by the time the disease was identified on 20 February. Professor Woolhouse made the case that if the ban had been introduced on the 20 February that 'our estimation is the epidemic would have been between one third and one half smaller than it actually was' (HC-323-ii, 2001, Q.211; see also European Commission, FVO, 2001: 14).

The extent of animal movements, the number of animals, and the implications of the spread of the disease, were not initially appreciated. In short, the delay led to a 'material effect' on the spread of disease as movements took place in that 'critical window of time' (HC-323-i, 2001, Q.76). In giving evidence to the Environment, Food and Rural Affairs Select Committee in August 2001 the Chief Veterinary Officer (CVO) Jim Scudamore made the case that the government was slow in implementing a nation-wide ban for a number of reasons. Government officials were caught up in managing local outbreaks and there was the belief that had a national movement ban been introduced immediately this would have been a draconian measure and, additionally, officials did not know that the virus had affected sheep (HC-323-i, 2001, Q.76). Scudamore argued that between 20 and 23 February 2001 government officials 'were working completely in the dark' (HC-323-i, 2001, Q.77). However, David Curry, the chairman of the Select Committee, argued that the fact that foot and mouth disease (type O) is one of the most contagious viruses known to man should have 'immediately set off an alarm bell' (HC-323-i, 2001, Q.78). Yet, a key reason for the spread of the disease, identified repeatedly in an interview with Nick Brown (the then political head of MAFF), was that the disease went unreported and was allowed to incubate:

The single most important point is that the outbreak, although it was noticed but wasn't reported, was that it was allowed to spread and therefore it had a three week head start on those that were trying to stop it. It was by far the single most important factor in all of this that the disease was allowed to incubate, it was not reported and allowed to spread so we were trying to catch up after the event ... It was an exceptional event and to discuss it in terms of more ordinary run of the mill would be wrong. It was a crisis. Frontline safeguards failed. The public safeguard is the legal obligation of the farmer to report disease when it is apparent. That failed because the farmer just didn't do it. Farmers should prevent the incubation of the disease by reporting it - that failed. That allowed the disease to incubate, not just in any animal, but in a pig or in a small number of pigs. These are very efficient incubators for producing the virus. The pigs can churn out the disease to cattle and it is much more virulent in pigs and they negligibly allowed all of this to go on. When it got into the sheep the sheep were moving and they spread it to a market and then on the wagons that further spread the disease. (Brown interview, 2008)

The Initial Crisis Management Effort by MAFF and the SVS

The initial response to the epidemic was controlled by MAFF and the State Veterinary Service (SVS), with Nick Brown and Jim Scudamore as the respective political and veterinary leaders. The government used restriction zones around the areas of infection (such as the Essex and Northumberland farms) and secondary 'dangerous contact' premises which included businesses with livestock links with the infected premises. These restrictions were applicable to animal and human movements within a 10 kilometre radius of the farm. The movement of livestock was completely prohibited due to the high risk that they would act as transmitters of the disease and human movements were also regulated. The ban on the export of farm produce began on 21 February 2001 and the nation-wide ban on animal movements essentially made Britain a 'control area'. Human activity was restricted in rural areas and animal movements were prohibited. Only animals issued with licences could be moved but this was only if the risk was deemed to be minimal.

The devolved administrations also had key responsibilities in managing the crisis. The Scottish Executive's Environment, and Rural Affairs Department (SG), led by Ross Finnie, had the legal powers to manage the disease in Scotland. In Wales animal health policy was a reserved legislative competence at Westminster, however, the Welsh Assembly Government's Agriculture Department, led by Carwyn Jones, played a key role in the management of disease control policy (from formulation to implementation). Policy responses were tailored towards the conditions experienced in Wales despite the overarching policy being officially reserved as MAFF's responsibility.

All of the actors who were interviewed for this thesis acknowledged that the early responses to the crisis were overshadowed by a sense within UK government that they were always 'behind the curve' or chasing a situation that was spiralling out of control. The SVS was becoming overwhelmed by the number of outbreaks and there was a deep sense of panic that pervaded the government's response to the crisis. An official, who worked in the Cabinet Office during 2001, and in 2008 was a senior policy management position in DEFRA, described this sense of crisis:

FMD was out of control. You had a situation whereby the government lost its sense of strategic purpose. It was not always clear what we were trying to do and I do not think that we always had the right leaders and delivery mechanisms. For a situation to become a crisis I think you need to have a vision failure and a structure and delivery failure. I think that is one of the big things that DEFRA learned, and the government learned, in 2001. (DEFRA official B, 2008)

The sense of crisis can also be seen in the political diary entry of the former head of communications at Downing Street (1997-2003), Alastair Campbell. On 16 February 2001 he stated that 'foot and mouth disease was getting worse and was clearly moving towards a sense of crisis ... both of us [Tony Blair and Campbell] were having alarm bells ringing louder and louder' (Campbell, 2008: 508). Indeed Campbell's diaries are of importance here again because he notes in his diary entry on 27 February:

More cases of FMD ... and a growing sense of crisis. I told Tony Blair that I had no sense of it being gripped properly and no confidence in the machinery of government. Though Nick Brown was getting quite a good press, he was beginning to look strained and I wasn't convinced MAFF could handle it, despite all the assurances. ... FMD was not only bad in reality but also now damaging the government on the level of competence. (Campbell, 2008: 508)

There was a realisation within government that the resources in place to manage a disease outbreak were outstripped by the amount of outbreaks. By 27 February the policy for controlling the disease was a 24-hour cull policy under the terms of the Council Directive 90/423/EEC which compelled MAFF to instruct veterinary officials on the ground to slaughter infected livestock within one day of diagnosis. The Directive also provided for compulsory notification of FMD and, if confirmed, a surveillance zone of a ten kilometre radius a three kilometre protection zone from the suspected premises in addition to the slaughter of susceptible species. It became increasingly clear that there were considerable shortfalls in the implementation of the cull policy. From the statistics provided in the report there were only two disease control centres - Taunton and Leeds - that managed to slaughter infected animals within 24 hours in over 50 percent of premises (HC-888, 2002: 172-173). The poorest performance was in the Chelmsford control centre which only managed 10 percent. The fact that the operationalisation of the policy did not match the objectives of the policy resulted in the disease being uncontained at that point and had a negative impact on the control of the disease. The cull strategy was supplemented by the

ban on animal movements and a policy to close off footpaths in all infected areas - basically empowering local authorities to close footpaths within their boundaries if they chose to do so (HC-888, 2002: 66). At this point the government did not realise that the disease had been undetected for up to three weeks.

Central-Level Intervention: COBRA Bites into Action

The government's frustration at MAFF's inability to stop further outbreaks was reaching tipping point and 'it was clear that MAFF didn't have a grip on the disease' (Campbell, 2008: 513). MAFF and the SVS needed to work within a new decision-making and organisational structure. The accumulation of the problems associated with the early stages of the crisis - including the lack of communications and the lack of overall control over the outbreaks (discussed later in the present chapter) - led the Cabinet Office and the Prime Minister to take the view that the response was failing. The Cabinet Office, through the Cabinet Office Briefing Room (COBR) (which took place in room 'A', hence COBRA), would become the key forum for major disease control decision-making and MAFF and the SVS would remain as the main delivery organisations. A senior Cabinet Office official involved heavily in these developments in COBRA, and who remains a significant actor at this central-level, summarises the key functions of COBRA:

COBRA is there to do three things. One is to provide support and help, for example, push for military intervention or push for new legislation for example. COBRA is also there to gauge whether what is happening out there looks and feels right. In 2001 things were getting out of control so it was COBRA that is responsible for saying 'this does not look like an operation, stop kidding yourselves'. The third role is a more bureaucratic one. It is to make sure that everyone has the same information so that they speak from the same information. You bring in forty or fifty great minds who know what is happening but the people around the table in COBRA also have to have the same information. (Cabinet Office official A, 2008)

From 22 March 2001 onwards significant disease control decisions were passed 'upwards' to COBRA because the FMD situation was 'dire' (HC-888, 2002: 100). A few days before on 19 March Alastair Campbell noted that MAFF would have to deal with the fact that the response was becoming more centralised:

I felt we [Number 10] had been far too sensitive early on to MAFF's concerns that a Number 10 takeover would spark the feeling of a crisis. If there is one thing we should have learned by now, it's that once you are in crisis mode, you need more not less centralisation. With Tony Blair clearly signalling that we were taking it over, I now sensed relief rather than alarm across the table. (Campbell, 2008: 513-514)

In the aftermath of a top-level emergency meeting with the Prime Minister, the Minister for Agriculture, and other officials in Number 10, the Cabinet Secretary gave instructions for COBRA to be opened immediately. The Permanent Secretary, Sir Brian Bender, who did not choose to keep his interview contributions anonymous, was involved in this top-level meeting and stated that:

What the Cabinet Secretary did in 2001 was to set up in the secretariat in the Cabinet Office. Funnily enough MAFF were not actually too keen on the idea. That was a very important institutional change even before the Anderson report was published. There was a very clear understanding how we in MAFF, now DEFRA, and the Cabinet Office would operate and coordinate if there was another animal disease crisis. The necessity for a renewed form of structure did not seem appropriate or at least we were not really pushed in that direction until the 2001 foot and mouth outbreak. (Bender interview, 2008)

The Permanent Secretary noted that 'MAFF were not actually too keen on the idea'. The reason for this is that the Minister did not want other departments and the public to view MAFF as being incapable of managing the disease. Implicitly, centralising the crisis response exuded the image that the situation was moving from a bad situation to a crisis. Nick Brown was involved in the same meeting with the Prime Minister along with Sir Brian Bender and he argued 'that the politics of the outbreak was getting to a stage which meant that there needed to be a step-change in the response' (Brown interview, 2008).

There was severe economic damage to the farming industry together with emotional trauma for farmers (and government personnel) and the constant imagery of burning pyres was having an impact on the tourism industry. The situation had to be resolved as quickly as possible for both political and economic reasons. The Prime Minister had the decision-making capacity to scale-up the outbreak response in terms of the deployment of resources. The former agriculture Minister confirms these points:

COBRA was effective in part during foot and mouth in 2001. But I also think that the politics of this particular outbreak and all the other things that surrounded it conditioned to some extent what was happening. It is only Prime Ministers that can move resources from one department to another. Agriculture Ministers cannot call up the Lancashire regiment for logistical help. (Brown interview, 2008)

Given that, in decision-making terms, the Cabinet Office sits 'above' the level of Whitehall departments, the structure could also address MAFF's 'silo mentality' problems (HC-888, 2002: 102). Margaret Beckett, as the first Secretary of State for DEFRA after the 2001 election, reflects on this period and argues that 'on reflection COBRA played a significant role in ensuring that partnerships were maintained' (Beckett interview, 2008). Cross-departmental coordination became realisable; but this was not actually a new development in Whitehall because COBRA coordinated the responses to the Fuel Crisis in 2000. The people who attended COBRA were senior officials from MAFF, appropriate Permanent Secretaries from all government departments, Cabinet Office and Number 10 officials, and representatives from the devolved administrations. The meetings were often chaired by the Prime Minister. Decisions made within COBRA were informed by government and external experts. With regards to the latter, a senior Cabinet Office official indicated that 'the attendance of the government's Chief Scientific Advisor means that that the CSA provides a peer review for what science in-house and external scientists provide us with' (Cabinet Office official A, 2008).

Once the central-level decision-making structures were in place one of the first big decisions to come out of COBRA was to implement a 'pre-emptive contiguous cull' policy. The aim of the policy was to control the disease but it would be operationalised by culling all livestock on premises that were contiguous to infected premises within a three kilometre radius. Even if the animals were healthy they would be culled in an attempt to stop the spread of the disease. The government sought to implement the cull policy within 48 hours of diagnosis. In order to do this more resources were deployed including the mobilisation of the army. It is perhaps a solid indicator of the severity of the crisis that the armed forces became key logistical facilitators in coordinating the crisis. Yet the timing of intervention by the army was criticised in a report by the Environment, Food and Rural Affairs Select Committee. It stated that the mid-March 2001 involvement of the army was

much later that it should have been (HC-323, 2002: paragraph 30). A report by the Public Accounts Committee at Westminster also noted that the armed services made an important contribution to eradicating the disease but the contribution could have been more effective without the three week delay in intervention (HC-487, 2003: 6). One of the lessons from the 1967-68 outbreaks had been that the earlier the military was called in the greater their impact in resolving the crisis. The reason for this, as Keith Simpson explains (not just in his capacity as a former shadow agriculture spokesman but as a military historian and former advisor to the Ministry of Defence), is that ‘a brigadier is different from a government official in the sense that they can do things and have a “can do’ attitude” (Simpson interview, 2008).

The structural changes at the centre were matched by structural changes at the local level. The number of Local Disease Control Centres (LDCC’s) was increased. In addition, there was a change in the command structure which saw the creation of Regional Operation Directors (ROD’s) who would be in charge of the administrative and policy work and who would enable the SVS to concentrate on veterinary activities. At the beginning of the crisis the government was criticised for ‘a lack of coordination between the administrative and the veterinary side’ (Curry interview, 2008). The new structure was a step in the right direction that attempted to remedy the shortcomings of the early responses to the crisis. The changes were viewed as a positive development by the European Parliament inquiry:

The organisational response of the UK authorities to the outbreak of FMD has been efficient and effective at both central and local level. The speed with which both the central and local disease control centres have been established was impressive. Staff at all levels involved in the efforts to control and eradicate the disease have been working long hours under very difficult conditions. Their determination and expertise was particularly noticeable, and has contributed significantly to avoiding an even worse disease picture. (European Parliament, 2002: 48)

The Food and Veterinary Office of the European Commission watched the developments closely in early April and, in their report to document their visit to the UK, stated that the structural changes improved the effectiveness of the response:

The organisation and operation of the FMD eradication programme improved significantly ... Responsibilities are assigned to specific Ministers and Executive agencies in a planned, coordinated manner. Major policy decisions are taken at the highest level. The veterinary services now focus on the veterinary aspects of the programme ... The effectiveness of the campaign has been increased by quicker veterinary reaction times, pre-emptive culling, culling on contiguous premises and a significant reduction in the slaughter and disposal times. (European Commission, FVO, 2001b: 28-29)

The enthusiasm espoused by the Commission was shared at the UK national level. The NAO report noted that:

Organisational structures improved as the crisis developed. Operations were initially directed by the Department's veterinary officers. But by mid-March 2001 the size of the outbreak was placing impossibly heavy demands on the State Veterinary Service and new structures were introduced. The Cabinet Office Briefing Room was opened, supported by a Joint Co-ordination Centre at the Department's headquarters, and senior administrators were appointed to the main Disease Control Centres as Regional Operations Directors. These new arrangements improved the response to the disease: state vets were given more time for veterinary work; resource bottlenecks, particularly those affecting slaughter and disposal, were eased; and measures were taken to promote cross-agency co-ordination and improve communications with stakeholders. (HC-939, 2002: 5)

Although the structural changes were widely regarded as a positive change in approach, because it finally seemed as if the government was going to get on top of the disease, the pre-emptive contiguous cull policy was not matched by the same level of enthusiasm. The slaughter of healthy animals was never going to be a popular shift in policy despite the overall aim of the change. There was an increase in public hostility towards to government's actions at this time. Certainly, there were far-reaching accusations from the public, media, farmers, and other stakeholders that the policy was not legitimate on scientific, moral, ethical and practical grounds - with disagreements over the scientific basis for the policy and its legality as examples. Dr Alex Donaldson, who was the head of the Surrey-based Pirbright Institute for Animal Health, believed that the risk of airborne spread from infected animals had been overestimated (HL Deb, 5 June 2002, columns 1274-1290). Yet the government's Chief Scientific Adviser, Professor David King, insisted that the correct policy had been followed on the grounds that the policy was based on 'an analysis of the outbreak in its early days and a forecast was then made' (BBC,

2001). A number of stakeholders were also concerned about the legality of the government's powers to enter and cull on premises. The legal challenges and some of the successful injunctions by farmers against government vets slaughtering their animals led to the controversial Animal Health Act 2002. The Act provides DEFRA officials with greater powers to enter farms for culling, vaccination or testing. The government argued that the legislation was needed in 2002 to prevent the spread of an animal disease on that scale again. The government's thinking was that any kind of standoff with the government would mean that the disease can perpetuate and spread. This legislative change, however, was viewed by one of the drafters of the legislation as 'a Bill that transformed into being a lot of draconian legislation which they found they were short of during the foot and mouth crisis such as their power to intervene and gain entry' (Breed interview, 2008). Contention still remains regarding whether the Animal Health Act 1981 justified the government's cull policy but the government purposely removed any ambiguity within the 2002 Act.

The contiguous cull policy was not implemented as effectively as intended by MAFF. The 24-hour target from disease confirmation to slaughter was met in 75 percent of cases and information detailed in a report compiled by MAFF's Joint Coordination Centre during the epidemic noted that, due to farmer resistance, that only three percent of contiguous culls had been completed in Exeter, England with the 48-hour target (European Commission, FVO, 2001b: 13). On 3 April 2001 information provided to COBRA confirmed that, at that stage, only 31 percent of farms were culled within 24 hours (Campbell, 2008: 516-517). Nick Brown's successor, Margaret Beckett, indicated to the Environment Select Committee that MAFF and the SVS tried 'desperately hard' to meet the target of the 24-hour cull policy and the 48-hour cull on contagious premises 'but it was not always easy' (HC-274-i, 2001: Q.56).

The culling policy also had an impact on disposal methods. The disposal of carcasses presented an enormous logistical problem as there were no contingency arrangements - even though the Drummond Report noted that MAFF should direct much more attention to disposal options and capacities (HC-888, 2002: 108). There were problems in terms of the location of the disposal sites (for example, some farms were accessed via very narrow

lanes). The public already had to endure the closure of footpaths but they were getting uncomfortable with the use of mass pyres and on-farm burning (HC-888, 2002: 108) - this was the most used disposal method used during the epidemic (HC-888, 2002: 171). The disposal strategy (or lack of) led to the horrific sight of burning carcasses. This was featured in newspapers and television news programmes around the globe (HC-888, 2002: 108). A senior official made the point that the scale of the outbreak outweighed what MAFF had to deal with before and that there was simply no alternative to using the pyres:

There was one area that I was very worried about, and at that time I was in the field service, and that was disposal. In the end what we had to resort to was the open and large-scale burning of carcasses which everybody disliked but, actually, that is something that we should have addressed a long time ago. Not only did we not have the capacity, we also didn't have the alternatives. (DEFRA official C, 2008)

Both the public and the officials responsible for disposing of carcasses for controlling the disease were affected by the site of the burning carcasses. A former shadow Minister for MAFF, latterly Environment Minister (2003-05) and DEFRA Minister (2005-07), argued that the 'there is no doubt the pyres had a very bad public effect and the public and media perception cannot be ignored' (Morley interview, 2008). Another interviewee provides a first-hand portrayal of what it was like working in such conditions:

I remember coming back from the Newcastle control centre in the early evening and we were doing a lot of burning in Cumbria in the Penrith to Carlisle strip and I came over the hill on a clear day and the sky was full of smoke. It is horrible and, as a vet, you cannot stand back and think about it for too long. I met lots of vets who came out to help us and they hadn't been ministry vets. They were people from private practices and from abroad and it affected absolutely everybody. Some people had to go home early because they just couldn't cope with it. It was really tough for everyone. (DEFRA official D, 2008)

To Vaccinate or Not to Vaccinate?

There were, however, ongoing debates within government and within industry about the use of vaccinations as a strategy to get a grip on the disease. The government seemed to support the policy to vaccinate early on because of the public's reaction to mass slaughter

and due to the high potential of the disease spreading to multiple locations. The Prime Minister's office recommended vaccination in the worst hit areas of Devon and Cumbria as a pre-culling measure - in line with the 1969 Northumberland report that 'ring-vaccination' should be immediate if there was another outbreak even if routine vaccination should not be administered (Report of the Committee of Inquiry on Foot and Mouth Disease, 1969). The government actually sought and obtained EU permission to vaccinate livestock on 27 March 2001. The European Commission introduced Commission Decisions that would allow for emergency vaccinations to be deployed in order to curb the spread of the disease (European Commission official A, 2008). These decisions were on the basis that vaccinations would be suppressive - animals would be vaccinated then slaughtered at a later date. This would allow for resources to be deployed in such a way that there would not be such a rush to slaughter animals and the disposal could be managed more effectively (DEFRA official A, 2008). In the end the vaccination policy was not implemented due to the concerns - of National Farmers Union (NFU) and parts of the farming community - that the farming sector would be damaged economically (HC-274-i, 2001: Q.59). Furthermore, the epidemic was such that it became clear that any hope that vaccinations might provide some degree of protection was lost (HC-274-i, 2001: Q.57). A senior MAFF and DEFRA official noted that:

As for vaccinations, we got battered in 2001. We had a vaccine bank for FMD for a very long time. There were times when policy-makers would have done a ring-vaccination in a particular area but the balance of the policy argument was that it shouldn't be done and stakeholders were involved in that. But 2001 was not an outbreak that was containable via vaccination in classic terms. So we always considered vaccination and we always would when it is the appropriate disease control method. (DEFRA official A, 2008)

The former Secretary of State Nick Brown and a Cabinet Office official stated that the case for vaccinations was not a convincing one at the time and that the interests of the industry were crucial in influencing government policy:

I was not in favour of vaccination in the specific circumstances in which we found ourselves except possibly to protect very high value pedigree animals which, in any case, we had a lot of bio-security ... The only use of vaccination when there is a case for it is to vaccinate high value dairy animals and breeding animals. The milk from vaccinated cattle would not be acceptable to the industry

and the market and the animals would then become worthless. There is no scientific reason why the industry could not accept the milk but the industry said to us loud and clear that 'we will not stock the products that our customers regard as inferior'. The government might want to vaccinate and some farmers would resist, some wouldn't, and the government could then go ahead and vaccinate. The herd then becomes devalued and we get sued and then who pays for them? In the circumstances that we were in we would be wrong to vaccinate. I am not against it in principle but in those circumstances it would have been wrong and I stood firmly against it. (Brown interview, 2008)

To be fair to the NFU they were only looking after their member's interests and that is what they were there for and if they felt that there was going to be a consumer reaction against vaccination and that the vaccinated product would be devalued then they would be really against it. So I think it was really driven by the industry and all of the supermarkets and all of the rest of it who were putting out these messages about the safety of vaccinated meat which was complete rubbish. (Cabinet Office official B, 2008)

There has been much emphasis placed on how influential the NFU was in persuading the government not to vaccinate in the media and even in social science research (see Grant, 2003). It would be wrong, however, to presume that the NFU were all 'singing from the same hymn sheet' and that a non-vaccination policy was agreed by all. A senior official who has had a long career in MAFF and DEFRA made this point in referring to the high density of outbreaks in Cumbria:

I am not breaking any confidences here, but during foot and mouth in 2001 we had the NFU in Cumbria and the South branch of the NFU could not agree with the North branch about what should be done. All of the disease had been in North Cumbria, most of the cattle in the North had been slaughtered out. They didn't feel that vaccination was the right strategy to adopt because they felt like it is too late for that and it would hinder us getting our disease free status back again. By contrast in South Cumbria, where they didn't have the disease, they were thinking that vaccination still did have a big part to play because it would protect them. Each of them was a perfectly legitimate argument and it is difficult for me in trying to reconcile and rationalise these competing positions and, in the end, we couldn't. I had to come back to the Chief Veterinary Officer and say 'I am sorry I am not able to reach a consensus and I am not sure what to do on this'. As it happened we had missed the boat anyway for vaccinations. It turned out later on, and looking back at the epidemiology of the disease, that it would have been the wrong thing to have done. For practical reasons it was just a waste of time at that stage because vaccinations would not have controlled the disease and it wouldn't have made any material difference. We already had permission from Brussels to vaccinate and we could have but it was not the right decision at the time given the circumstances. (DEFRA official D, 2008)

Even if a vaccination policy was implemented the government maintained that, in line with the Northumberland Report, that slaughter would be used as a disease control measure in addition to vaccination (HC-274-i, 2001: Q.57). If a vaccination policy was pursued then it would be emergency⁶ as opposed to prophylactic (routine) vaccination. The latter is not permitted under EU legislation⁷. With respect to the use of vaccinations in 2001, there were several logistical problems in terms of whether the vaccines would have controlled the disease. The government did not have a rehearsed or clear policy programme for an outbreak of FMD. Indeed Nick Brown's shadow in 2001 argued that:

MAFF was wrong in that they dithered over the actual policy, the slaughter policy and the disposal of carcasses. I thought it was the right policy. I didn't subscribe to the view that vaccination was the answer. Vaccination had its disadvantages in that you lose your disease-free status for quite a long time, it was not proven to succeed anyway, and the logistics of it were actually quite difficult. (Yeo interview, 2008)

Soon after 2001 vaccination became a much more economically viable option to pursue when controlling foot and mouth disease. This is because of changes to the rules issued by the International Organisation for Animal Health (OIE). It is the main standard-setting body for trade in animal products beyond the EU and it adapted its code on FMD after 2001. The OIE sets rules for foot and mouth regarding whether exports can be resumed to third countries. In particular, it has reduced the minimum waiting period before a country that vaccinated animals can request the restoration of its FMD infection free status from 12 to six months (European Commission, 2002: 2). In 2001 the infection free status time period was 12 months and this was a major consideration made by the government in the

⁶ Emergency vaccinations can take two forms. First, emergency vaccination can be suppressive which means that the animals will be slaughtered. Second, emergency vaccination can be enabling or on a 'vaccinate to live' basis whereby the animal can live out its full economic life. The Animal Health Act 2002 places emphasis on vaccination as this legislation compels the Secretary of State to consider emergency vaccination before exercising any additional preventive slaughter powers.

⁷ The UK government agrees with the EU in its opposition to routine vaccination. In Devon and Cumbria 180,000 animals were initially considered for vaccination against FMD. This would have cost £900,000 because in 2001 it cost £5 for one shot of the vaccine. Second, the impracticalities and lack of government resources to vaccinate means that routine vaccination is highly unlikely to be pursued as a preventative measure in future outbreaks. There are 60 million cattle, sheep and pigs in Britain and one million deer and an exponential number other wild animals which can contract or carry the disease. A routine vaccination programme would require that vaccinated animals would get a booster vaccination and new generation of animals would require the same treatment (HC-274-i, 2001: Q.59). Consequently, 'ring-vaccination' around specific, high risk, abattoirs and infected farms is the only likely form of preventive vaccination beyond emergency vaccination.

decision to not vaccinate livestock. A senior Cabinet Office official made the point that OIE rules did (and do not) allow for flexibility - 'the period of banning animal product exports was a very restrictive policy that we had to deal with which. That is something I still carry with me today' (Cabinet Office official A, 2008). However, Margaret Beckett, when giving evidence to the Environment, Food and Rural Affairs Select Committee in October 2001, made the case that although culling had brought down the number of foot and mouth infections, bio-security and precautionary measures would remain in place and that no-one had a 'closed mind' on the issue of vaccination (see HC-274-i, 2001: Q.59). This was reiterated by the government when it accepted the view of the Anderson and the Royal Society inquiries that emergency vaccination should be considered as part of the control strategy from the start of any future outbreak, in addition to culling of animals on infected premises (RRFMI, 2002: 72-76).

The End in Sight?

The decision not to vaccinate livestock led to the decision by the Prime Minister on 2 April to postpone the planned General Election on 3 May. Prime Minister Blair did not want to disrupt the democratic process because it would give the impression that the UK was paralysed by the crisis (Rawnsley, 2001: 469). At any rate, the decision to postpone the election until June allowed the Prime Minister to present himself as putting the country's needs before political considerations (McConnell and Stark, 2002b: 667). In late April the UK was certainly not rid of the disease, but on the 25 April Number 10 announced that the rules on animal movements and contiguous culling would be changed. This change was articulated by the Minister for Agriculture, Nick Brown, as an 'improvement' in the policy rather than a 'relaxation' in crisis management controls (HC-323, 2002: paragraph 31). Local vets were given the discretion to relax the implementation of contiguous culls but were under instructions that pigs and sheep on farms bordering infected sites would still be slaughtered, but cattle might be spared if there was adequate bio-security (Nick Brown interview, 2008). This decision was based on the fact there was the lowest daily amount of FMD cases since 24 February, and for the first time since 1 March, there had been no new cases in Cumbria (the worst affected county) (BBC, 2001b).

At this time there was a great deal of publicity generated about a calf known as 'Phoenix' located on a Devonshire farm. The calf survived for five days after being buried under a mound of dead carcasses and it became an enduring symbol of the 2001 crisis. A media campaign to save Phoenix gave the impression that the government changed its culling policy. It is disputable as to whether the public campaign for Phoenix and the government's policy change resemble an X-Y relationship but the developing media and public interest in the crisis, and the political circumstances of an election in the midst, provided the stimulus for change. The shadow agriculture Minister at the time maintained the government's response had been inspired by Labour spin doctors after they saw pictures of Phoenix on the front pages of the newspapers (Yeo interview, 2008). The Prime Minister's chief media advisor, Alastair Campbell, noted in his diary that the Phoenix story was 'a screaming pain in the ass for us'. Campbell goes further to note that:

MAFF were saying it [Phoenix] had to die. After a lot of to-ing and fro-ing we got them to agree that it could be part of a softened contiguous cull policy. In other words, the policy was not being changed to reprieve it, but a reprieve would be the effect of a change in policy happening anyway. I suspect many members of the public thought that it was a sentimental load of bollocks given how many thousands had already gone up in flames, but it became that thing most loved by our wretched media - a symbol - so we had to play along ... They [the media] wanted to say the contiguous cull policy had been changed because of one calf in the news, and the whole spin thing was back up in lights ... [i]t was one of those media frenzies that came along from time to time, and we were just going to have to get through it. (Campbell, 2008: 520)

The government sought to ensure the end of the crisis, especially given the fact that an election was due in early June. The government's chief scientist, Professor David King, told MPs that the epidemic was almost over but would not be completely eradicated until later in the year (BBC, 2001c). There were bursts of outbreaks in the aftermath of the change in the rules of control but they were not of the scale of February and March (see Figure 3.1). The last confirmed case of FMD in England and Wales were on the 30 September and 12 August respectively. Scotland was declared free of the disease on 11 September. The whole epidemic came to an end on 5 February 2002 as it was at this point that the European Union's Food and Veterinary Office lifted all restrictions on the

export of UK farm produce⁸. From February 2001 to January 2002 2,030 farms were infected with FMD and 10,157 had their livestock destroyed in order to control the spread of the disease and 6,456,000 animals were slaughtered (HC-888, 2002: 169).

The next section of this chapter examines the key crisis management themes identified in chapters 1 and 2 which provide insights into how the government managed the crisis. This provides context to what needed to be changed in 2001 and acts as a starting point for analysing the dynamics of policy and organisational change. Structurally, the themes correlate with the pre-crisis and crisis decision-making themes identified in chapter 1 and chapter 2.

Specific Pre-Crisis Management Themes

Contingency Planning

MAFF based one-third of its contingency planning on Council Directive 90/423⁹ (HC-888, 2002: 32). Beyond Directive 90/423, the European Commission's report of March 1991 'Recommendations or Guidelines for Contingency Plans against Foot and Mouth Disease DGVI/1324/9' included recommendations for having staff trained to deal with up to 10 outbreaks at any one time (DEFRA, 2002: 4). The contingency plan for Great Britain was approved by the European Commission in 1993 (HC-888, 2002: 34). The cull policy met the requirements of MAFF's contingency plans, however, the government's control methods were based on the pre-existing assumption that outbreaks would be relatively small and that they would be contained quickly. Thus the contingency plan met EU requirements but the weaknesses in the national contingency plan was an unfortunate combination of a lack of pre-crisis planning that could be 'scaled-up' and the way that the extraordinary 2001 crisis manifested itself. Detailed below are some excerpts from the

⁸ One month before the European Commission agreed to lift restrictions on some British meat exports and the EU standing veterinary committee (SVC) (now known as the standing committee for food chain and animal health) agreed to lift all the special restrictions and controls in place relating to the export of live pigs, however the ban on exports of live sheep remained in place.

⁹ The other two thirds of MAFF'S contingency plans were based on instructions issued by the SVS on FMD control and instructions given in local Animal Health Divisional Offices (HC-888, 2002: 32).

interview data and official documentation which highlight the unique nature of the 2001 crisis:

The nature of the foot and mouth outbreak would have overwhelmed any structure. At the time the Americans and the Australians were telling us that they would have been unable to cope because we didn't know on day one of the disease being first detected that the virus was active in between fifty and one hundred farms. (Bender interview, 2008)

My counterparts in the USA, Canada, Australia and New Zealand came across to help us out during foot and mouth and these were quite senior people and they all said, independent of each other, that they would have struggled to deal with an outbreak on the scale of what we had. (DEFRA official E, 2008)

What was unique about this epidemic was not just its scale and geographical extent but that it occurred in sheep, at a time of year that favoured virus survival and against a backdrop of structural changes in an industry which favoured spread of disease. The significance of the fact that the epidemic was sheep based should not be overlooked. Not only is the disease more difficult to diagnose than in cattle and pigs but there is little global experience and expertise of dealing with (a) FMD outbreaks in sheep and (b) outbreaks of this size and nature in countries which were free of disease. Each FMD outbreak is bound to have its unique features and it should not be assumed that controlling an outbreak in sheep is the same as dealing with outbreaks in cattle or pigs. (DEFRA, 2002: 7)

The problem was that no outbreak of this scale had been experienced before as it had been spread all over the country before it was identified. It was never reported by the farmer responsible and that made the job of getting it under control superhuman. (Morley interview, 2008)

I think the reason why 2001 went like it did was mainly because of the nature of 2001. The scale, and the fact that the disease had spread very widely before it was even detected, and the amount of sheep movements around the country that we just were not aware of were crucial factors that contributed to the crisis. (Cabinet Office official B, 2008)

Interestingly, the management review of the MAFF's 'animal health and veterinary group' (the Lebrecht Review) indicated in the mid-1990s that '[t]he EC Commission considers that the UK's readiness for disease outbreaks is the best in the Community which suggests that the present staff numbers are adequate or more than adequate' (DEFRA, 2002: 4-5). However, the plan did not take into account the possibility that more than 10 outbreaks would occur and, in reality, 57 premises were infected before the initial diagnosis was

made. This led to the 24 hour culling policy, which was the primary measure, to be unsuccessful in terms of its implementation. The Food and Veterinary office of the European Commission noted that there was an average delay of 8.5 days between the clinical inspection of animals and ultimately the slaughter of livestock (European Commission, FVO, 2001: 15). Unsurprisingly, officials on the ground were working in extremely difficult conditions which were shrouded by dire media reports of the situation - badly affecting morale within MAFF and the field service (for example, Brown interview; Morley interview; Cabinet Office official B; DEFRA officials A, C, D, E, F, G, H, I, J, K, 2008).

The availability of veterinary resources is critical to the success or failure of contingency planning and control strategies (European Parliament, 2002: 10). The CVO, in his submission to the Anderson inquiry, stated that 'the competing resource demands placed on the SVS, as a result of BSE and bovine tuberculosis ... had implications for FMD crisis management capacities' (DEFRA, 2002: 7). This is supported by DEFRA official C also who made the case that:

I do not think the political commitment was there in 2001. We were starved of resources. I was in the field service in Somerset at that time and we were always trying to get on top of contingency planning but it is worth remembering that up until 1993/4 we had spent two thirds of our resources in the West Country on BSE. Huge amounts of effort went into BSE. There were 30,000 cases of BSE a year that we had to deal with and 200 veterinary officers were dealing with those so that is about 150 cases per officer and sometimes we, as individual officers, had to deal with 50-60 cases per week so that was a great deal of work. The peak of the disease in cattle was in 1993 but the crisis point or the link between animal and public health was identified in 1996 and this was when the disease was waning. But that meant we had to do all of the clear-ups. So inevitably our eye was off of the ball – this explains what happened regarding a lack of pre-crisis planning for foot and mouth rather than excuses it.

As the official indicates, different departmental priorities had implications for the extent of pre-crisis planning arrangements. The interviewee is right to suggest that the SVS was 'starved of resources' and this runs deeper than the BSE crisis. The availability of staff was a long-standing issue that most of the interviewees picked up on when referring to the pre-2001 planning arrangements (see also HC-939, 2002: 51-54). The European Parliament report stated that the number of full-time SVS staff in the UK had been

reduced by about 50 percent in the past 20 years (European Parliament, 2002: 10). More specifically, between 1979 and 2001 the number of field veterinary officers reduced from 597 to 286 and between 1969 and 2001 the number of the service's divisional offices were cut from 70 to 23 (HC-323, 2002: paragraph 33). There were not enough staff to cope with escalating numbers of infected farms or to carry out the requisite inspection and eradication measures, especially at the early stages of the outbreak (HC-888, 2002; HC-323, 2002; HC-939, 2002; European Parliament, 2002; Brown interview, 2008). The CVO admitted in his parliamentary evidence that there were problems in training people to bleed animals and also in recruiting veterinarians (HC-323-i, 2001, Q.57). The government had to request assistance from other EU states and non-EU countries. There was not an international assistance plan in place and large numbers of vets had to be recruited rapidly from overseas to help combat the epidemic (European Parliament, 2002: 10).

In the aftermath of the 2001 crisis the government admitted that there had been problems with regards to resources and recruitment into the SVS. The Government committed itself to maintaining a strong and effective veterinary service capable of meeting the challenge set out in this response (RRFMI, 2002: 14). The government made the case that they wanted to see a modern SVS but qualified the statement by saying that 'there are growing demands on the SVS as well as competing priorities elsewhere in DEFRA and the Department may need to make some difficult choices on resource allocation' (RRFMI, 2002: 14). These 'competing priorities' are what contributed, as noted by DEFRA official C, to a lack of pre-crisis planning. The government replied to the major criticisms concerning the staffing levels of the SVS in the Anderson inquiry report by noting that:

DEFRA would increase veterinary staff numbers immediately an outbreak was confirmed, depending on the national and local requirements of the Disease Control Centres. It would achieve this by drawing on other parts of the State Veterinary Service, and DEFRA agencies, and then as necessary from local veterinary practices, the Food Standards Agency, the Meat Hygiene Service and other Government departments, other areas of employment within the UK, internationally agreed protocols for vets from other countries, and recruitment of temporary veterinary staff. Following their valuable contribution in 2001, DEFRA would also seek assistance from veterinary colleges for veterinary students to assist and support the vets in specific areas, such as blood sampling and possible vaccination. (RRFMI, 2002: 36)

A Scottish Government official also argued that there 'were serious problems surrounding training and funding'. The official went on to say that, 'you cannot fund an organisation at a level that is required during an emergency time. It just cannot be done - the country would grind to a halt' (SG official, 2008). It is true that funding an organisation to the level required during the 2001 crisis would be very costly in terms of time, staff, and finances. Yet the downfall of the government's crisis management activities in 2001 was a failure to recognise that contingency planning arrangements should be such that they can be 'scaled-up' to match a response required by multiple outbreaks. This means that the use of resources should not be at a constant. Instead, having plans in place for accessing extra staff, as noted in the European Parliament, NAO, and Select Committee reports, and having a clear decision-making structure in place so that everyone knows their role (for example who they are responsible to and what they are responsible for), supports the efficacy of the crisis management response process. Being able to draw upon extra resources when the time is right allows the authority to resolve the crisis rather than redirect the focus from controlling the disease to worries about having the staff available to actually meet that challenge. The lack of staffing, poorly constructed contingency plans, and the lack of personnel forced officials to 'go with the flow' and respond to developing events (DEFRA official D, 2008).

In summary, both the Anderson and European Parliament inquiries noted that the situation in 2001 would not have been as bad if adequate contingency planning arrangements were in place. The European Parliament report noted that 'contingency plans and the logistical and staffing preparations for an outbreak of FMD or other notifiable exotic animal diseases in the United Kingdom were suffering from considerable shortcomings' (European Parliament, 2002: 9). The report goes on to cite an internal MAFF report of February 1999 commissioned by the state veterinary service authored by Richard Drummond. The European Parliament noted that '[h]ardly anything had been done to implement this report's recommendations for remedying the shortcomings before the crisis arose, even though in July 2000 the head of the State Veterinary Service expressed extreme concern about the state of preparations, particularly with regard to slaughter, disposal of animal carcasses, staff training and the availability of up-to-date contingency plans' (European

Parliament, 2002: 9). Although Elliot Morley made the case that contingency planning did take place (Morley interview, 2008), those planning arrangements were limited in scope and far from comprehensive in their foresight and capacity (Brown interview, 2008; HC-888, 2002: 10). Plans were rarely tested and were unavailable to many stakeholders. Anderson's inquiry report confirms this point:

we found the plan limited in scope, out of date in some respects and not integrated into a national programme of rehearsal and testing. Some local government representatives and other stakeholders claimed that they were not aware of these plans. One of them referred to them as the "best kept national secret" (HC-888, 2002: 32).

The lack of diffusion of the contents of the contingency plans to stakeholders and the notion that they were the 'best kept national secret' was supported by the chief army officer in charge of the foot and mouth operation. Brigadier Alex Birtwhistle was frank in his assessment of this situation in his evidence to the Devon County Council inquiry when he said that 'no organisation or agency in charge had a plan to deal with the crisis. I had a contingency plan for everything - aeroplane crashes, nuclear disasters - but not foot and mouth' (BBC, 2002). Two months later the Brigadier told BBC News online that 'there had been a startling level of incompetence at every level on the part of the authorities in the initial stages of the crisis' (BBC, 2002b).

Crisis Management Exercises and Simulations

Chapter 1 identified the point that if authorities do not rehearse contingency plans then they run the risk that other organisational priorities will take over. The European Parliament urged that 'Member States should regularly carry out training measures and crisis exercises to control epidemics' (European Parliament, 2002: 26). Yet the SVS *did* hold simulation exercises for animal disease control before 2001 (HC-939, 2002; Morley interview, 2008). The NAO report notes that:

The State Veterinary Service held simulation exercises for animal disease control (not necessarily in respect of foot and mouth disease) at regular intervals during the last five years. Between 1995 and 1999 the United Kingdom held 84 simulation exercises - more than any other country in the European Union. The exercises varied in scope from desk exercises which focused on particular aspects of handling disease outbreaks, such as tracing the movement and location of animals, to field exercises involving a simulated disease outbreak and subsequent actions. During this same period, as well as handling its routine work, the State Veterinary Service also dealt with bovine tuberculosis and an outbreak of Newcastle disease in poultry, investigated 32,000 cases of Bovine Spongiform Encephalopathy (BSE) and traced and culled 60,000 cattle at risk from BSE. The last major disease control contingency exercise before the 2001 outbreak was held in Ayr in 1999. It involved staff from a wide range of organisations, including the State Veterinary Service, the Scottish Executive, the Scottish Environment Protection Agency, local and water authorities and the police. (HC-939, 2002: 41)

Nevertheless, when the exercises were carried out the 'frequency and quality of the simulation exercises varied between divisional offices' (HC-939, 2002: 41). There tends to be long time intervals between disease outbreaks in the UK, therefore, simulations are important to keep the veterinary and policy staff in a fresh frame of mind for managing an animal disease outbreak. Although chapter 1 noted that simulation exercises do not necessarily match the real-life pressures of animal disease outbreaks, and the long-term commitment that would be required from personnel, they are useful in making sure that the organisational mindsets of personnel are engaged in thinking about their roles and responsibilities. Before 2001 few MAFF and SVS staff would have had direct experience of a foot and mouth epidemic (HC-939, 2002: 40). The problem is that the pre-2001 simulations, like the contingency plans themselves, were not scaled-up to a national scale even though disease outbreaks can occur at multiple geographical locations. Importantly, it was noted earlier in the present chapter that the foot and mouth contingency plan only catered for up to 10 simultaneous outbreaks but, even with this number 'the contingency plans were not tested to their limit' (HC-939, 2002: 41) - the exercises were not tested to crisis levels. The exercises did not match the scope of the contingency plans at the time, and, especially at the UK-level, stakeholders were not consulted formally in preparing contingency plans (HC-939, 2002: 40). There were wide discrepancies as to whether divisional offices invited local authorities (which were crucial in helping to eradicate FMD in 2001) to participate in the exercises. The key points of 'scaling up' the exercises and

the involvement of stakeholders (for example, local authorities and agencies) was, according to the UK government, an important lesson to be learned:

The development of contingency plans requires the training of all staff involved and practice in implementation to check that the plans work. Separate elements of the plans will be tested and independently assessed to ensure a common understanding and application of the arrangements is achieved across the country and to check the links between local and central offices and that all the national structures operate effectively. DEFRA will involve stakeholders in developing and exercising these plans. Centrally run exercises in local offices and in the national centre will take place. (RRFMI, 2002: 19)

The NAO report made a similar point when it noted that DEFRA 'envisages that the revised contingency plans will be regularly tested at both local and national levels through simulation exercises ... The plan will also be revised and amended as necessary in the light of the recommendations of the Lessons Learned [Anderson] inquiry' (HC-939, 2002: 42). With respect to the current analysis, these contingency planning shortcomings had important implications for how the government managed foot and mouth in 2001.

Institutional Memory Loss: A Cultural Deficit

A loss of institutional memory exacerbated the problems associated with MAFF's preparedness for foot and mouth. In relation to organisational learning it was noted in chapter 2 that the development of an institutional memory over time is dependent on the lessons of the past which are accumulated through experience within routines - despite the turnover of personnel and the passage of time (Levitt and March, 1988: 326). This should allow knowledge to move from point A to point B, even if people move around the organisation. This is assisted by record-keeping (or 'organisational instruments' to use the organisational learning terminology). An interviewee offers an example of this for the animal disease policy sector as a result of their direct experience of structural changes that have taken place in MAFF and DEFRA:

There is, within any team operating in a particular area, an element of continuity. So the fact that I have worked in a number of different areas and now don't does not necessarily mean that I have taken knowledge away from those areas when I

left. I have taken away a lot of personal experience and personal memories that get hazy with time but the continuity that exists within the team ensures, not to mention that we have to keep files on everything, that a corporate knowledge in the place where it is needed. This may be slightly utopian but in principle at least in the current team, for example, the newer members do not need to come to me to seek out the benefit of my experience and knowledge because what I knew and learned has not been lost from the new team. (DEFRA official H, 2008)

This quote provides an account of personnel changes but also points to the notion that the transfer of experience and knowledge features within the change process. It is likely that the memories of individuals, as the interviewee indicates, become 'hazy' through time but a corporate or organisational knowledge should remain. Conversely, the interview data, collected from those officials or politicians with an occupational interest and/or experience working directly in the animal disease policy domain in MAFF, suggests that MAFF's institutional memory was lost in the 'passage of time' (Levitt and March, 1988: 326):

[T]he government, State Veterinary Service, and MAFF had barely been tested for dealing with a major animal disease for many years. There had been thirty-four years since the big 1967 outbreak and there were a host of things like Newcastle disease, swine vesicular disease, particularly during the seventies. I joined the service in 1985 ... So there were fifteen years and probably a couple of years before that. You end up with a degree of institutional memory that is lost. (DEFRA official C, 2008)

In retrospect it is fair to say that the 1960s foot and mouth outbreak was a distant memory and that those in authority had not caught up with the circumstances like the much more rapid and frequent transportation of animals, mostly by roads, the way that they were sold in markets, the way that the industry worked, and the European Union's interventions - these were all new developments. As the industry evolved the contingency plan had not evolved with it. (Brown interview, 2008)

Really what seemed to have happened was that after the 1967 outbreak people understood that lessons had to be learned and a great deal of those lessons had been forgotten or at least untouched because nobody had any experience of it up until 2001. (Beckett interview, 2008)

I expect the institutional memory in the ministry was not as good as it should have been. Foot and mouth is not a high-tech problem like some of the other challenges that the government has faced but with foot and mouth we knew what foot and mouth was about. We had a major outbreak in the 1960s and there was a perfectly good report written. That was a major thing that went wrong - losing the institutional memory. On the first day they should have gone back and

looked at what they did the last time. They weren't doing that and people like me were doing it. That institutional collective memory was lacking. I would argue that this is symptomatic of the fact that MAFF was never a particularly well run department at the civil service level. (Yeo interview, 2008)

One thing is for certain and that is that the government gave insufficient attention to the Northumberland inquiry after the 1960s outbreak. All that time had moved on but the fact is that the inquiry report sat on a shelf. The way in which the government handled foot and mouth in 2001 looked as if they had never dusted it off and looked at it. (Paice interview 2008)

I think it was quite difficult to see the lessons learned from the original 1967 outbreak over time and the lessons learned from that in MAFF. (Gummer interview, 2008)

Based on the evidence provided in the chapter so far it is reasonable to maintain that the disease outbreaks might not have been prevented in 2001 - because the disease went undetected and was allowed to incubate - but, at the same time, the outbreak would not have escalated into a crisis if scaled-up contingency planning arrangements had been in place. Indeed, Nick Brown admitted that 'it is true that the contingency plans had not been reviewed by the department in the immediate run-up to the disease outbreak in 2001' (interview, 2008). Quite prophetically, the Northumberland report into the lessons from the 1967 outbreak noted that when the country 'is free from FMD for long periods there is the danger that farmers, and those veterinarians with little or no experience of foot-and-mouth disease, may be slow to recognise the early signs of the disease' (Report of the Committee of Inquiry on Foot and Mouth Disease, 1969: 23). In conceptual terms, chapters 1 and 2 made the point that governments do not always draw lessons from past events, even if those events are a crisis. The distinguished historian Sir Michael Howard has suggested that politicians fail to understand or wilfully ignore what has happened in the past. He has argued that 'anybody who says that history teaches lessons knows no history and less logic ... History is a sort of ragbag you can pick from to justify whatever you want' (Sunday Herald, 2008). One particular lesson from the past should have been the immediate ban on the movement of animals, as had happened in 1967. Yet the delay in introducing a ban made managing the disease an uphill struggle (HC-323, 2002; HC-888, 2002; HC-939, 2002). Even the leader of the army operation, Brigadier Alex Birtwhistle, said that he was convinced that if strict measures had been put in place immediately then the disease could have been contained (BBC, 2002). The fact that the government did not

pay enough attention to the lessons of the 1967 outbreak, including the fact that the number of veterinary personnel fell substantially in the intervening period, led to the outbreak being transformed into a crisis. With this discussion in mind, the next section sheds some light on the main 'competency traps' (Levitt and March, 1988: 322-323), 'major institutional problems' (Simpson interview, 2008), and 'organisational failures' (Breed interview, 2008) endemic in the crisis management effort.

Specific Crisis Coping and Decision-Making Themes

Information and Data Management

Without having prior knowledge or systems in place to track developments as events unfold, which is particularly important for crises such as multiple disease outbreaks, policy-makers have to rely on judgements. The interview data confirms that MAFF's lack of information and understanding of how the farming industry worked contributed significantly to the response to the outbreaks and led to badly informed judgements on events. For example, the former agriculture Minister and chairman of the Environment, Food and Rural Affairs Select Committee, David Curry, made the case that:

The government didn't have the faintest idea of the extent of movements of livestock in this country. They were shocked rigid when they tried to track these movements. They also thought that a farm was a nice little place down in Somerset somewhere with a hedge around it all in one place. In my part of the world farmers can have holdings in six or seven different places. MAFF and then DEFRA was no good at mapping. I just thought that the whole thing got off to a hopelessly bad start and the government were prepared to do absolutely anything to bring it under control. (Curry interview, 2008)

This quote provides an insight into the mentality of MAFF in terms of its understanding (or lack of it) of the structure of the industry. It is worth noting that David Curry is a former agricultural Minister who has firsthand experience of working in MAFF. It might seem that his sentiments are overly critical but even officials and Margaret Beckett confirmed the point that knowledge about industry and animal movements was not adequate in 2001:

MAFF failed to understand farming industry practices and this contributed to the failings of the government. We were always behind the curve with the disease and once the genie is out of the bottle it is very hard to get back in. (Cabinet Office official B, 2008)

It did become more and more clear that when you looked at what happened there was an enormous influence on how the disease spread in relation to how animals were moved around to the countryside because of the nature of the industry, and the way that companies operate. Although officials put in a great deal of effort, this was not fully appreciated by MAFF. (Beckett, 2008)

DEFRA official A also recognises the fact that MAFF had to make decisions without basing them on solid information:

There was not always an adequate level of information. 2001 was a good example of where decisions had to be made in advance of the information coming in on which you would sensibly base those decisions. Another thing that we need to guard against is ensuring that we do have information so that, insofar as we can, we have all of the information that we need to make sensible decisions. (DEFRA official A, 2008).

Chapter 1 made the point that information shortage is a very common problem for bureaucracies in crisis situations and this was a problem for MAFF in 2001. A key example of this was with regards to the issuing of movement licences. Margaret Beckett admitted that there were 'very real problems' (HC-274-i, 2001: Q.8) in relation to this issue, especially given that the software for information processing was inadequate. DEFRA's computer collapsed under the strain of applications for movement licences even though it, ostensibly, should have had the capacity to process 75 percent more applications. MAFF's information systems were not capable of satisfying the demands for information by farmers. This is a general problem highlighted by the Anderson inquiry in its criticisms of the government's management information systems (MIS). In particular, Anderson noted that 'the situation was not helped by the difficulty in obtaining robust and reliable management data' (HC-888, 2002: 71):

[w]hen FMD broke out, MAFF's ability to record and analyse data about the spread and management of the disease was still based largely on a patchwork of unconnected systems operated by individual regions, some of which used only paper records' (HC-888, 2002: 71).

Despite the fact that the SVS displayed signs of enthusiasm for applying new technology to planning and disease control in the 1990s, by the time of the 2001 outbreak, 'MAFFs computer systems had suffered protracted underinvestment' (HC-888, 2002: 71). This is not to say that MAFF was not praised by the inquiry team. The inquiry commended the department's commitment and ability to build a new computer system during the outbreak - known as the Disease Control System (DCS). The DCS was set up within a fortnight at the beginning of the crisis. The system fulfilled an important function as a database for recording information about foot and mouth cases which included restriction information (HC-888, 2002: 71). Changes, however, were recommended to the government's use of MIS systems for future veterinary outbreaks - especially in terms of greater investment (HC-888, 2002: 19). Related to these technical information management issues were the problems experienced by MAFF with regards to information management from a stakeholder and communications standpoint.

Stakeholder Engagement and Communication Breakdowns

In any organisational structure it is important that effective systems and structures of communications are in place. This becomes particularly acute in times of crisis. The parliamentary proceedings of the Select Committee on the Environment, Food and Rural Affairs (HC-274-i, 2001: Q.2, Q.56; HC-323-i, 2001: Q.57-59), the Anderson inquiry (HC-888, 2002: 19), interview data, and a co-authored veterinary publication by John Scudamore (Scudamore and Marris, 2002: 703-704) show that external and internal communications were flawed in 2001. For example, DEFRA official E confirms that 'hasty' decisions had been made - often on a non-transparent basis. This points towards one of the key recommendations of the Anderson inquiry that stakeholder engagement ensures that the government will not be out of touch with the developments in, and with the concerns of, the industry. According to one interviewee these problems were acute in MAFF:

I have been in this game a little while now and have a duty to understand these processes and use them. They are there for a reason. In the old MAFF it was quite easy for hasty decisions to be made. Decisions would be made behind

closed doors, civil servants would decide what is good for the industry, and decisions would be made without being fully aware of the facts and not taking everyone's views into consideration. Things would then go wrong and the government would get the blame. (DEFRA official E, 2008)

The lack of diffusion of information to stakeholders, whose cooperation is crucial in times of crisis, especially if the crisis has wide economic implications like foot and mouth, was criticised by the Anderson inquiry. It went on to recommend that the interests of all sectors 'likely to bear the brunt of any costs should be properly represented and taken into account when designing policy options to control animal disease outbreaks' (HC-888, 2002: 12). This recommendation seemed to be anticipated by the CVO in the Environment Select Committee when he noted that change must take place in this respect and that there needs to be a national contingency plan that receives the input of stakeholders (HC-323-i, 2001, Q.60). The CVO and the Anderson inquiry both acknowledged that weekly Friday meetings were set up between MAFF and stakeholder groups and that these were valuable throughout the crisis. However, the inquiries also indicated that wider stakeholder engagement is something that should be considered within pre-crisis preparation and prevention efforts (HC-323-i, 2001-02, Q.60; HC-888, 2002: 143). This issue was raised in the Select Committee on the Environment, Food and Rural Affairs on the subject of communications. Margaret Beckett recognised that stakeholder engagement processes would be trialled as a pre-crisis management preparatory measure for the next outbreak of an animal disease (HC-111, 2002: Q.93). In giving evidence in Parliament Anderson went on to urge that the new department - DEFRA - should have closer contact with its rural customer base and have more contact with the regions. He went on to argue that communications and stakeholder engagement needed to be bolstered in order for MAFF to move away from its 'introverted culture' (HC-1144, 2002: Q.39).

The Anderson inquiry praised the Scottish Executive over how it engaged with stakeholders in 2001. This is confirmed by a senior veterinary officer, who had had a long career in MAFF and was based in the SG at the time of the interview, who argued that:

Scotland has had, historically, a very good engagement and as a small country the government and stakeholders meet each other two or three times per week

and because you see them often, and they are often the same people, you become very familiar with them. (SG official, 2008).

The official also regarded the amount of stakeholder engagement and the nature of the outbreaks in Scotland as explanations as to why Scotland came out positively from the Anderson report. Indeed the total number of cases of FMD was smaller in Scotland and animal movements were generally southbound:

Scotland came out positively from Anderson's report and there were reasons for that. Until the end when the disease was at the borders all of our disease was really in the one place. The second aspect to this is that on our worst day I think we had eleven cases of foot and mouth and on the worst day in Cumbria alone they had 57. It was a different scale. But we did things well. The fact that we had a close relationship with stakeholders even at that time in 2001 is what made it work. There were some good leaders in the industry. (SG official, 2008).

The fact that the SG handled the foot and mouth outbreak more effectively than its English counterparts was confirmed by James Paice, the shadow Minister for DEFRA (2004-present), who noted that 'what came through loud and clear in 2001 was that Scotland dealt with foot and mouth much better than what we did' (Paice interview, 2008). The EP also recognised that the disease control measures in Scotland (especially in Dumfries and Galloway) were more effective than in other areas, 'because lines of communication were shorter and the approach adopted was one of integrated contingency planning (political decisions and logistic control located primarily at regional level, although, in accordance with special agreements within the State, the SVS also performed in Scotland the duties for which they provided)' (European Parliament, 2002: 12). With respect to the UK level, and in fact at any level of government, the process of engaging with stakeholders is not always on a face-to-face basis via meetings. Industry stakeholders (such as farmers on livestock holdings) and other stakeholders (such as animal welfare organisations) can be communicated with through electronic technology. A communications official argued that the official website was 'the most direct source of information on the outbreak for farmers, the public and the media' (DEFRA official G, 2008). However, Keith Simpson made the case that, in his constituency, farmers became more and more frustrated as the 2001 crisis developed because MAFF did not provide enough up-to-date information to the farming community. In an interview he argued that:

MAFF was completely overwhelmed by the crisis to the extent that it was impossible to get through on help lines and you would have civil servants drafted in from other departments. The websites relied on a Q&A but that is only good if your question is being answered. (Simpson interview, 2008)

With respect to the use of communications technology, journalists and members of the public told the Anderson inquiry team that that 'the website was frequently out-of-date and inaccurate' (HC-888, 2002: 144). Farmers in Cumbria told the inquiry that when it was obvious that the website was out-of-date or inaccurate they would call the helpline but the information provided there was no different because the staff also used the information from the website (HC-888, 2002: 144). DEFRA's memorandum to the Anderson inquiry indicated that lessons had to be learned from 2001:

There are many areas where a communication strategy is needed and lessons can be learned from the disease outbreak. Stakeholders, press/media, production of publicity leaflets, the use of the website, the methods of getting the message across both nationally and locally need to be reviewed. At a national level communication seemed effective but at local level there have been difficulties, particularly with farmers wanting information about their situation. Help desks, IT, access to the Ministry would all need to be reviewed under this heading. (DEFRA, 2002: 52)

Internally, there were communication problems between the SVS on the ground, MAFF's regional centres, and the ministry at Whitehall. David Curry, argued that 'I think perhaps one of the most common criticisms levelled during the course of this outbreak ... has been the dislocation in the process of decisions taken in London and implementation locally' (HC-274-i, 2001: Q.8). The CVO admitted that 'communications are essential ... I think one of the lessons that is going to have to be looked at is how we communicate' (HC-323-i, 2001, Q.56). Crucial communication channels should have been tested before 2001 to ensure the integration of communications within and between administrative units (HC-1144, 2002: Q.39) - an element which the chairman of the Select Committee described as 'a mixture between a farce and a nightmare' (HC-323-i, 2001, Q.85). The Anderson inquiry report also noted that the national response was not 'geared up' to the demands of a response that necessitated an around the clock 24-hour and seven days a week operation (HC-888, 2002: 142). It is crucial that in responding to the crisis that communications

allow those on the ground and at the centre to be confident in knowing who is actually in charge of coordinating the response. For the first two months of the 2001 outbreak there were, as noted earlier in the chapter, serious deficiencies in the reliability of information available to those in charge (HC-888, 2002: 103) and, simultaneously, those on the ground did not know 'where the buck stopped' (Curry interview, 2008). David Curry argued that:

The means of communication are vitally important. Communication should be automatic and should spring into action as soon as there is a suspicion of an outbreak and there should not be delays ... What went wrong were the lines of communication from when the disease was suspected and the speed of the response and the volume of the response. The reason that went wrong was idiot things like someone being away on the Friday ... They failed to put in place the really effective structure of control and command so that people could go to the one place to get information. One of the big things was that farmers couldn't find out what was happening. They needed someone who could direct the administrators and the vets in one single manoeuvre ... The thing I remember most about that outbreak as a constituency MP is that nobody knew what they were doing. You didn't know where the buck stopped. (Curry interview, 2008)

Nick Brown, although he admits that there were 'weak links' in the communication systems, indicated that communication systems at Whitehall were not in any fit state in 2001 which was not only a problem for MAFF but for all departments (Brown interview, 2008). MAFF was not accustomed to 'fire fighting' on the ground on an average work day – and this meant that the communication problems that already existed were exacerbated by a crisis that transcended many geographical regions:

Our interface in the communications part of government was not good anyway in terms of communicating what happened on the ground to the centre and there were weak links there. The reality is that on a day to day basis working on the frontline is not the main concern or priority of the department. (Brown interview, 2008)

The NAO report into the outbreak confirms that communications were strained during the epidemic:

Communications and information systems were severely stretched during the epidemic. The Department found it difficult in the crisis conditions to get its key instructions and messages across and to obtain good quality information from the field. (HC-939, 2002: 7)

A senior official, who was leading the response in Cumbria, provides an insight into what it was like on the ground when faced with such communication problems:

I was actually at the sharp-end up in Cumbria, leading the veterinary operations up there, where we had sixty to seventy percent of the total outbreaks and I was conscious at the time that we were not able to communicate back to the centre as much as we would of liked to. (DEFRA official D, 2008)

At an institutional level, the flaw in communications is a solid example of cultural problems that existed within MAFF and with how MAFF related and engaged with other government departments. MAFF was a department that was not one of the ‘big hitters’ (Curry interview, 2008) in contrast to, for example, the Foreign Office or the Treasury. As a department, MAFF was geared towards responding to policy coming from Brussels (as DEFRA is now). The European dimension had far-reaching implications for MAFF’s policy responsibilities and much of that was ‘top-flight’ according to Anderson (HC-1144, 2002: Q.33). This may be the case but the department had neglected the fact that ‘different skills are needed for operational management and different skills, in turn, are needed when operations and project management have to be conducted in crisis mode’ (HC-1144, 2002: Q.33). The government, in its official response to the inquiries into foot and mouth, noted that DEFRA’s aims to improve communications at all levels (RRFMI, 2002: 19). The government made the commitment to continue to change and ‘improve communications throughout DEFRA, both in “peacetime” and to explore and set up new ways of working in any future crisis’ (RRFMI, 2002: 20). The extent to which this is the case will be revisited later in the thesis.

The Role of Scientific Experts

Chapter 1 noted that governments draw upon the advice of external experts in order to inform policy. This is particularly the case when officials and politicians are working under conditions of uncertainty. Experts come to the aid of decision-makers and provide them with judgements and/or information from which officials and politicians can make decisions. Given the scientific nature of the exotic disease policy sector, it is usually

scientific experts with specialisms in epidemiology and veterinary science who are drawn by officials into the policy process.

With respect to the 2001 crisis, the CVO Jim Scudamore, when questioned in the Environment, Food and Rural Affairs Committee in October 2001 about the provision of scientific advice during the epidemic, indicated that that the government 'got its advice in a number of ways'. This included a range of scientists from the FAO in Rome, the World Reference Laboratory in Pirbright, and the FMD science group (HC-323-i, 2001-02, Q.91). There are multiple avenues for the government to access information but the government mainly utilised the FMD Science Group and MAFF officials to inform policy during 2001 (HC-888, 2002: 90-91). Despite the CVO noting in a publication that the group was 'rapidly established' (Scudamore and Harris, 2002: 706), Dr Iain Anderson made the opposite argument in parliamentary evidence provided to the Select Committee on the Environment, Food and Rural Affairs on 23rd July 2002:

I believe it is regrettable that a formalised system of engaging well balanced and well trusted previously communicated scientific advice was not deployed from the very early days. It emerged informally, first of all, and latterly in the way that it emerged 35 days into the crisis and played an important contribution, but a massively controversial one. (HC-1144, 2002: Q.115).

Anderson admitted that the FMD Science Group made some important contributions but reported that it provided information on an *ad hoc* basis and that the government was slow in seeking the advice of scientific experts (HC-888, 2002: 91). This correlates with the Select Committee's report when it noted that:

Critical to examining the progress of the outbreak and recommending strategies for dealing with it was scientific advice from various disciplines. We heard evidence that the Chief Scientific Adviser was only called upon, and then by the Prime Minister, on 22 March, and the modelling teams assembled after that date. (HC-323, 2002: paragraph 34)

The view of the Anderson inquiry report, which Margaret Beckett agreed with in her evidence to Parliament, was that the provision of scientific advice was too fragmentary during the 2001 crisis. Although the Science Group was made up of experts in their field, there was reliance upon scientists with expertise in epidemiological modelling. This

resulted in other FMD experts being unable to engage with the detail of their modelling analyses (HC-888, 2002: 91). In the end the government based its decisions on epidemiological models so, as a result, 'the mode(s) of transmission of the virus did not play any part in the models' (European Parliament, 2002: 11).

The Science Group did expand to include veterinary experts but this was when most of the major decisions, such as the decision to implement a contiguous cull policy, had already been made. Margaret Beckett made the case that 'there was a lack of an engaging and formalised system of scientific advice which was not employed at the beginning of the outbreak' (HC-1144, 2002: Q.114-115). In an interview she stated that a process of 'scientific reflection was important based on the experiences of the 2001 epidemic' (Beckett interview, 2008). Having a scientific evidence-based organisation before an outbreak, which would be akin to a standing body, would therefore be a vital resource (HC-1144, 2002: Q.114-115; Margaret Beckett interview, 2008). This is precisely what Anderson recommended. Anderson's report notes that:

We recommend that DEFRA's Chief Scientist maintain a properly constituted standing committee ready to advise in an emergency on scientific aspects of disease control. The role of this group should involve advising on horizon scanning and emerging risks. (HC-888, 2002: 91)

The lack of a clear scientific advisory structure was picked up by Michael Jack MP in the Environment, Food and Rural Affairs Select Committee and he suggested to the Secretary of State that future animal disease management needed the support of good quality science because 'so much animal disease research in Britain is fragmented, poorly led and needs a complete overhaul' (HC-111, 2002: 58-59). Beckett said that she understood these comments but made the case that 'a thorough overhaul is exactly what it is receiving' and went further to say that 'a permanent scientific advisory group was being set up which will provide a pool of scientific support and advice which is readily available' (HC-111, 2002: Q.10). The changes would, ostensibly, take place under a science advisory group. On 21st November 2002 Sir Brian Bender told the committee that the scientific advisory group would be a standing body and 'that in the event of any crisis a scientific team would be drawn immediately from that group with extra skills added' (HC-111, 2002, Q.22). The Permanent Secretary also emphasised the point that the scientific advisory body 'would

link up as necessary with the civil contingency arrangements at the centre of government' (HC-111, 2002: Q.22).

Intra-Bureaucratic Tensions?

The problems surrounding the absence of a stable system of scientific advice were also compounded by the fact that the organisational structure within MAFF did not emphasise the role of governmental experts. This was because policy officials sat above scientific officials in the organisational hierarchy. Nick Brown elaborates on this point:

The thing I think has been overlooked is that the position of the veterinary profession and the chief vet lie at the heart of the government's response ... The chief vet was only number four in the department's hierarchy with a Permanent Secretary who was new and knew nothing about how to run a department, a deputy who was also new – although not new to risk management. Then there was a policy head of animal health who is above the chief vet and then there is a chief vet. Now FMD is a condition in animals and I stuck very closely with the professional advice of the chief vets ... In a disaster situation, when we are dealing with an outbreak of diseases in animals, we need someone at the top of the hierarchy that knows about diseases in animals. (Brown interview, 2008)

The quote from Nick Brown adds the notion of internal bureaucratic tensions into the mix regarding who should be making the decisions. This is a recurring theme in the interviews conducted with officials who worked both in MAFF and DEFRA. Indeed what Nick Brown touches upon, in his analysis of the MAFF's structure of the 'scientific' versus 'policy' personnel, is the differences and influence of different institutional groupings. Traditionally, decision-making in MAFF was dominated by veterinary officials. Although it is difficult to ascertain at which point this change occurred because changes to internal relationships have evolved over time, an official who joined MAFF in the late 1980s noted that there were tensions between the policy and veterinary groupings when he joined the department:

There used to be tension between the officials in charge of the direction of policy but the vets now have to allow the policy officials to take a greater role ... When I first worked in an animal health area quite a number of years ago there was marked antagonism between policy people and vets. They used to say 'bloody

vets, they just get in the way' and I was determined not to fall into that category. I was very keen to try and treat my veterinary colleagues as colleagues and get to know them. I think only partly, because I have a scientific background, that I was actually quite interested in the veterinary science so I was happy to talk to them and learn a bit about what they do. Although I set out with that intention it was actually quite difficult to maintain (laughter). Not too long after I joined I found myself becoming the person that I didn't want to become. That to me illustrates that there is a slightly different culture in the two groups. (DEFRA official H, 2008)

In the wake of the policy officials taking the lead role there was the feeling by vets that they have been 'left out in the cold' to a degree (DEFRA official H, 2008). The reason behind officials taking the predominant role in the decision-making process is due to the fact that they tend to have contacts with colleagues in other departments which allow them to take a rounded view on policy developments. Veterinary officials do not have as much professional scope to manoeuvre across Whitehall beyond MAFF (now DEFRA), the Food Standards Agency and the SVS (now Animal Health). This is in stark contrast to policy officials who are encouraged to build-up professional experience by working in different civil service departments. This helps to 'introduce them to different aspects of policy and different collateral damage that might result from that policy which under the old veterinary-dominated approach didn't quite do so well' (DEFRA official H, 2008). Then again, DEFRA official H did confirm that the internal relationships changed for other reasons. As identified earlier in this chapter, there has been a reduction in the amount of veterinary resources in government in recent decades. The scaling back of such resources has driven the change in who takes the dominant role in the decision-making process. Additionally, there is a 'new generation' of vets who have joined or have moved up the organisational ranks in the 1990s, and after the millennium, who work comfortably across the professional divide. The official goes on to say that crossing the veterinary and policy divide can be functional in terms of the cross-fertilisation of their work:

You have an unholy mixture to start with, which was vet-dominated, and that didn't quite work so you pull it apart in order to identify the different functions and different cultures. That doesn't quite work either because you have made too much of a separation. So what you need to happen is a bit of intermingling at some level so you don't go back to the old model whereby everything was all squashed together and nobody knew who was doing what but you just have that balance and cross-fertilisation that the two groups can understand why they are

different but they don't feel as if there is a gulf between them. (DEFRA official H, 2008)

This notion of professional cross-fertilisation and the development of functional relationships concur with the view of DEFRA official D who, as a veterinary official, argues that there is now the situation whereby vets are an important source of policy advice to their policy counterparts in the department:

I think that there are one or two individuals who still believe that the vets should be driving the policy and it should be those spearheading changes. That is becoming less and less of a current view and I think that we are getting towards a situation now where the vets are acting as veterinary advisors to policy colleagues. There are times when policy and veterinary officials do not agree but ultimately policy colleagues are the ones responsible for getting Ministerial agreement. This relationship has changed and I think that it has changed in the right direction. At the end of the day we do not have enough resources on the veterinary side so we have to concentrate on the provision of veterinary expert advice. We can let others worry about the communications, the presentations and the political aspects. (DEFRA official D, 2008)

Coupled with the sentiments of DEFRA official D is that there has been a growing realisation within government that veterinary decisions relating to disease control, such as culling and the imposition of restrictions, have varied implications for the operation of industry, the tourism sector and the wider economy. On this basis, the interview data suggests that clear tensions did exist in the past but now both policy and veterinary officials realise that their relationship better serves the decision-making process if a collaborative approach is taken to the formulation of public policy. This realisation has 'settled down tensions and the relationship can be described as much more functional whereby each official learns from each other' (DEFRA official H, 2008). This relationship allows each institutional grouping to legitimise their decisions. Policy officials can articulate their decisions based on the advice of veterinary experts and, at the same time, veterinary officials can say that they have considered policy implications in their judgements:

I think the result of vets advising policy officials is that we are looking at animal disease policy with a much bigger picture, much more in the round, and much more on a risk basis and that is risk in its biggest sense i.e. what is the risk of these animals getting disease and lets stop it, what is the risk that our policies

will have such a bad effect on certain communities that outweighs the work we are doing on animal disease ... I think policy-making has become more consultative, more evidence-based but perhaps more than that it is prepared to take policy development on in a much bigger framework and bigger picture. That relates again to joined-upness - that policy people working in an animal health area will have experience of other policy areas generally. (DEFRA official D, 2008)

The above suggests that personnel, towards the latter years in MAFF, and in the new DEFRA, work more collegially but, ironically, the same cannot be said for the relationship between Whitehall departments during the 2001 crisis.

Inter-Politico-Bureaucratic Coordination: Cultural Silos?

Chapter 1 identified the ways in which organisations can exhibit conflictual behaviours in times of crisis, which may be based on pre-existing tensions. At the same time, the crisis management literature encourages organisations and/or bureaucratic units to coordinate their activities and, generally, studies tend to agree that the greater the coordination the more effective the crisis response. However, there has to be an organisational mindset or culture to accommodate this coordination. The culture of a lack of coordination, partnership working or 'joined-upness' was a significant problem in the early stages of the foot and mouth outbreak. The specific nature of coordination and conflict seemed to be conditioned by the politics surrounding the crisis which meant that individuals, and their own biases and agendas, behaved in a way which did not foster coordination. This point is picked up by Nick Brown who argued that:

I think that there are all sorts of particular and unrelated circumstances that made coordination between levels of government worse. Relationships were not good at a number of different levels, not necessarily on a departmental basis, but between key personalities. There was a lot of politics involved. (Brown interview, 2008)

In terms of the functioning of MAFF as an organisation, the Labour MP, Mark Todd, when questioning Dr Iain Anderson in the Select Committee in the Environment, Food and Rural Affairs on 23 July 2002, also stated that:

I remember making a speech nearly a year ago now in which I said I thought MAFF at that time had an abysmal track record in strategy, appalling communication skills and was deeply introverted. In other words, it was an organisation which did not look outwards either to its stakeholders or to other partners when resolving issues, and displayed very few leadership skills and competences which would help in a crisis. (HC-1144, 2002: Q.33)

The issue of joined-up government and the problems associated with cultural silos were put to Margaret Beckett in the same Committee on 21 November 2002. The Secretary of State noted that cultural silos were not exclusive to MAFF but in fact was a cross-governmental problem. Her Permanent Secretary, Sir Brian Bender, contributed to this debate and argued that a lack of a joined-up culture ‘certainly exists in every department that I have worked in’ and that ‘I would not claim that we have got it licked yet’ (HC-111, 2002: Q.24). As shown in the early stages of the epidemic, MAFF did not like accepting outside help and, instead of abandoning rigid departmental mindsets, and engaging in cross-departmental policy coordination, their activities resembled a ‘silo mentality’. This, according to Page (2005: 141), can be described as when departmental boundaries are not fluid and that problems are ‘defined, processed and handled ... on the basis of the intellectual and physical resources of the particular organisation that is handling them’. This silo mentality was articulated by Anderson as a ‘silo culture’ (HC-1144, 2002: Q.50). Evidence to support this stems from the fact that the CVO and Nick Brown thought that they had everything under control and it ‘had long ploughed its own furrow’ (HC-1144, 2002: Q.39) - at least until the Prime Minister intervened and COBRA started to make the significant crisis management decisions. Anderson argues that the Prime Minister’s intervention was ‘decisive’ and ‘made a massive contribution to the focus and the delivery of joined-up government’ (HC-1144, 2002: Q.48). Even before the Prime Minister intervened he was told on several occasions that MAFF had all the resources that it needed and in the second week of the crisis ‘it became progressively clear it was not like that’ (HC-1144, 2002: Q.13). Nick Brown was continuously providing the Cabinet with assurances that the crisis was under control and that no further resources were required. MAFF was not integrated with the rest of government and was not even integrated within its own departmental lines due to a lack of information exchange and communication with regional offices/local crisis management centres. In cultural terms, therefore, a key point

to emerge from the interviews conducted for this thesis, and Anderson's report, as well as his oral evidence to the Environment, Food and Rural Affairs Select Committee, is that cultural adaptations were required to facilitate a change in the prevailing managerial ethos within the new department. Anderson articulated this by arguing that 'a reappraisal of prevailing attitudes and behaviours would be worthwhile' (HC-1144, 2002: Q.31) and that the creation of DEFRA has an opportunity to engender a new culture (HC-111, 2002: Q.2).

The Foot and Mouth Crisis 2001: A Critical Juncture

The main conclusion to be drawn from this chapter is that the 2001 foot and mouth crisis was a critical juncture for the management of animal disease outbreaks in the UK. In terms of the spread of the disease, the 2001 outbreaks were different from what happened before. In 1967 the spread of foot and mouth disease was characterised in the Northumberland report as a regional rather than nation-wide spread. Moreover, the foot and mouth crisis in 2001 stands out in comparison to the 1996 BSE crisis because different contingency planning arrangements were required for foot and mouth disease. Unlike BSE, foot and mouth disease was not a new disease to hit the UK and it posed no threat to the food chain (except for industry being concerned about the effect of vaccinated meat on consumer confidence). There were, although far from adequate, established policies and crisis management procedures to deal with a foot and mouth outbreak after 1967 but they were not 'lifted off of the shelf' for many years - leading to a substantial loss of organisational memory. Equally important in this context is that the foot and mouth crisis did more than cast a dark shadow over the government's crisis management activities. The post-crisis inquiries, reports, social science narratives, and the interviews conducted by the author, suggest that foot and mouth was not just a critical juncture for the way in which animal diseases are managed but it had implications for the future of farming and rural policy (for example, HC-888, 2002; HC-323, 2002; Curry, 2002; Beckett interview, 2008; Brown interview, 2008; Curry interview, 2008; Paice interview 2008; Yeo interview, 2008; Morley interview, 2008; Simpson interview, 2008). The FMD crisis could be said to be a critical juncture for the wider aspects of rural policy given the creation of the Rural

Payments Agency and the fact that the government sought to engrain the idea of sustainable development within the rural economy in the creation of DEFRA (Beckett interview, 2008).

With respect to the analytical themes of this thesis, the foot and mouth crisis was also a critical juncture for the organisational and policy structures for the management of an animal disease emergency. The pre-crisis planning problems that faced MAFF were acute and prolonged and existed before New Labour took office in 1997. The memories of the 1960s outbreak were not institutionally engrained within MAFF. In this context, Nick Brown was concerned that the finger would be pointed at him and his officials during Anderson's inquiry rather than attention being given to the institutional problems that existed before 1997. In an interview Brown noted that:

I formed the view very early that there was going to be a script for the inquiry which was going to take the line of 'useless Minister, useless Prime Minister, useless military personnel, useless veterinary officials'. I felt, rightly or wrongly, that we were going to be scapegoats for the whole thing'. (Brown interview, 2008)

It is true that the Anderson inquiry was not a longitudinal study *per se* but it did consider the issues surrounding the 1960s outbreak and the lessons that should have been learned from that. Thus, although MAFF had prolonged institutional inertia problems, New Labour cannot be entirely vindicated for the lack of pre-crisis planning because it was the party in power for four years prior to the 2001 outbreak. As established earlier in this chapter, Nick Brown admitted that the plans were not reviewed in the run-up to 2001. Although the plans did meet EU standards, they were narrow in their scope which rendered them useless for the scale of the task facing the government in 2001. The pre-crisis failings led the Anderson report into FMD to characterise MAFF's problems in coping with the crisis as '31 days in which a serious veterinary problem became a national disaster' (HC-888, 2002: 102).

After New Labour was re-elected into government the June 2001, MAFF and the Department for the Environment, Transport and the Regions (DETR) were merged into DEFRA. Nick Brown was removed from his post as Secretary of State at MAFF, or in his

words, 'I got moved sideways and downwards to the Department for Work and Pensions' (Brown interview, 2008). After a Cabinet reshuffle in 2003 Brown was moved to the backbenches and returned under Gordon Brown's premiership to the twin roles as Minister for the North East and Deputy Chief Whip in June 2007. Margaret Beckett became the first Secretary of State at DEFRA in June 2001. Beckett provides some context to the period when, and soon after, she took up the DEFRA post:

From my point of view it was made very clear to me when I was appointed that there was a whole new department set up to integrate but also that there was a concern that the FMD outbreak was not turning down. That was desired ASAP. I was expected to deliver with maximum speed. I remember seeing the recommendations from reports on a day-to-day basis to see what we could use. After I was there for two or three weeks I realised that the situation and reports that I was getting, which was on its way to the Prime Minister, was the same as before, approximately eighty percent of it. I thought 'hang on a minute' this was a ten-page report and eight pages of it repeats what everybody had been reading for a multitude of weeks before. So then you start to worry because the report is on its way to the Prime Minister. I made the clear point that we must not be sending the Prime Minister, or anyone else for that matter, the material that has been read already. *All I, or the Prime Minister, wanted to know is what is changing.* (Beckett interview, 2008, emphasis added)

The political climate suited change and the Prime Minister himself also encouraged reform. In other words, there was the political will for reform and this is supported by interviews with officials and politicians who were involved in, or close to, organisational and policy developments in the months following the June 2001 General Election (for example, Beckett interview, 2008; Yeo interview, 2008; Simpson interview, 2008; Gummer interview, 2008; Paice interview, 2008; Bender interview, 2008; Cabinet Office officials A, B; DEFRA officials A, B, C, D, E, F, G, H, I, J, K, L, M, O, P, Q; SG official, 2008). The commitment to change was bolstered by the Prime Minister's disappointment at the way in which MAFF initially managed the disease and the fact that the media and the public were concerned about the government's ability to manage animal disease outbreaks. It was for these reasons that the Prime Minister commissioned the independent Anderson inquiry so that it could identify the 'Lessons to be Learned' (HC-888, 2002). In fact the government signalled its commitment to policy change in the aftermath of the crisis and largely accepted the recommendations of the post-foot and mouth inquiries, reviews and reports. A case in point was the 'Lesson to be Learned'

report authored by Dr Iain Anderson. In the government's reply to the Inquiry's report it identifies key recommendations from Anderson. The main recommendations that are of significance to contingency planning and crisis management decision-making for animal diseases are the following:

- Be prepared with comprehensive contingency plans, building mutual trust and confidence through training and practice.
- React with speed and certainty to an emergency or escalating crisis by applying well-rehearsed crisis management procedures.
- Explain policies, plans and practices by communicating with all interested parties comprehensively, clearly and consistently in a transparent way.
- Use data and information management systems that conform to recognised good practice in support on intelligence gathering and decision making.
- Have a legislative framework that gives Government the powers needed to respond effectively to the emerging needs of a crisis.
- Base policy decisions on best available science and ensure that the processes for providing scientific advice are widely understood and trusted.

(RRFMI, 2002: 10-11)

The government's response to the Anderson report made it clear that the new Secretary of State in the new department accepted that there were mistakes made in the handling of the crisis, therefore, the government was determined to learn from its response to the epidemic. The government believed that it would be able to accept virtually all the detailed recommendations of Anderson's Lessons Learned report (RRFMI, 2002: 11). In response to 81 specific recommendations the government put forward four general responses: (1) Accept; (2) Accept in principle; (3) Further consideration; and (4) Not accepted in current

form (RRFMI, 2002: 48-71). It can be calculated that the government took heed to most of the recommendations of the inquiry report. 76.5 percent of the recommendations were accepted; 12.3 percent were accepted in principle; 8.6 percent would be considered further; 2.5 percent was not accepted in the form presented¹⁰. It is interesting that the government did not use 'reject' for its reply to certain recommendations. Even when the government did not accept certain aspects of the Anderson's recommendations the government showed a willingness to reform based on the broad parameters of the recommendation through the use of positive language.

The specific crisis management themes pursued in this chapter illuminate the major problems that came to light in the government's crisis management armoury. If all of these components are considered together then this suggests that the 2001 crisis was a critical juncture that had far-reaching political and organisational implications. It was an event that compelled decision-makers to address the crisis management shortcomings that they experienced and draw lessons from them. Politically, the government's competence and, hence electoral sustainability, was likely to be challenged if there was a repeat of the 2001 animal disease crisis (Beckett interview, 2008; Breed interview, 2008; Curry interview, 2008; Gummer interview, 2008; Morley interview, 2008; Paice interview, 2008; Simpson interview, 2008; Yeo interview, 2008). For instance, the former Secretary of State for the Environment (1993-1997), John Gummer, who was involved in managing the BSE crisis argued that:

The government was conditioned by the politics of the situation. They did everything wrong in the 2001 foot and mouth outbreak. I have been involved with BSE and Newcastle Disease in the past and take it from me they did everything wrong. It absolutely traumatised them. The government were never interested in agriculture and it was an agricultural issue that threatened the government's survival. The government was in sheer panic when it received the news of foot and mouth had arrived. Ministers were frenzied. Another really dreadful piece of bad handling of a crisis like that again would do them huge political damage. (Gummer interview, 2008)

¹⁰ The figures for the scientific Royal Society inquiries' 43 recommendations were more modest. 48.8 percent were accepted; 14.0 percent was accepted in part; 18.6 percent was accepted in principle; 16.3 percent would be given further consideration; and 2.3 percent were not accepted.

Organisationally, it is unlikely that officials would want to experience 2001 again because of the negative implications the crisis had for staff morale and the fact that their work is often an exhaustive and thankless task (Brown interview, 2008; Cabinet Office officials A, B; DEFRA officials 2008; SG official, 2008). 2001 can thus be regarded as a 'reference point' for considering change in the animal disease management policy sector. Interestingly, a DEFRA interviewee even used the analogy of World War Two and the development of the welfare state and Keynesian economics to illustrate the point that FMD was a departure from what came before:

I regard the 2001 crisis as, in your words, a critical juncture because, a bit like world war two, it had such far reaching implications for what we do. It has had an impact on how we prepare and manage future outbreaks or, in truth, for our future emergency management activities. (DEFRA official, I, 2008)

A Cabinet Office official supported the view of this DEFRA official by maintaining that animal health and the management of disease outbreaks changed from appearing low to being high on the government's priority list:

I get the impression that pre-2001 animal health was a poor relation, which was understandable because we didn't have a disease outbreak for thirty-four years so on a list of priorities it wasn't going to be a high one. After 2001 that changed. (Cabinet Office official B, 2008)

The remaining chapters of the thesis will consider the nature, and thus the extent, of post-crisis policy and organisational change since the 2001 crisis. The crisis aspects of change will be studied to ascertain whether crises make a difference to bureaucratic change which, as discussed in chapter 2, is not traditionally regarded as being associated with vast, accelerated or reformative change. The 2007 foot and mouth and avian influenza outbreak case studies later in the thesis calibrate the nature of change. This approach seems to concur with an approach preferred by Dr Iain Anderson who, in giving evidence to the Environment, Food and Rural Affairs Select Committee, made the key point that:

[A] crisis is no moment to reflect on changing behavioural needs. The depth of attention needed to change behaviour is only possible ... in peacetime. Peacetime is the moment when these things need to be embedded and under

crisis then these are the qualities that would emerge. (HC-1144, 2002: Q.39, emphasis added)

With this in mind, the next two chapters are concerned with the policy and organisational changes to UK crisis management arrangements in the aftermath of the 2001 crisis.

PART II: Research Findings

The next three chapters present empirical findings regarding the nature of post-crisis policy and organisational change since the 2001 foot and mouth crisis. Chapter 4 presents the empirical findings that concern policy-orientated change and, as noted earlier in the thesis, specific themes from the literature structure the presentation of the research findings. In a similar vein, chapter 5 presents findings that relate to the organisational aspects of change including organisational learning and cultural adaptations. Chapter 6 is more evaluative in the sense that it addresses the 'big picture' about the dynamics of post-crisis change by revisiting some of the literatures and questions posed earlier in the thesis.

Importantly, the subsequent chapters will make frequent reference to the foot and mouth and, to a lesser extent, the avian influenza outbreaks in 2007. In terms of the scope of the research, the analysis of the thesis is ring-fenced up until these incidents. Therefore, before presenting empirical findings in relation to the fallout and post-crisis changes in the aftermath of the 2001 crisis, overviews of the 2007 foot and mouth and avian influenza outbreaks are presented.

Overview of the 2007 Foot and Mouth Outbreaks

Phase One

August and September 2007 saw the first outbreaks of FMD since the 2001 crisis. On 2 August 2007 a farmer in Elstead, Surrey, noticed signs of FMD in cattle and reported this to the Reigate Animal Health Office (DEFRA, 2007: 5). Later that evening a vet from the Animal Health Office visited the farm and the vet was concerned because the animals had symptoms which suggested that FMD was present. As a result of the fact that it was getting dark, the vet decided to return the next morning to carry out tests on the cattle (HC-312, 2008: 8). Samples from the cattle were sent to the nearby testing laboratories of the Institute of Animal Health (IAH) in Pirbright for analysis. On the evening of Friday 3

August the IAH informed DEFRA that the samples had tested positive for FMD (DEFRA official A, 2008). DEFRA's contingency plan, alongside the plans for the devolved administrations in Scotland and Wales, 'sprang into action' (DEFRA official C, 2008). A national movement ban was imposed immediately, which was a 'direct lesson learned from 2001' (DEFRA official F, 2008), and a three kilometre protection and ten kilometre surveillance zone was created around the area of the infected premises.

At the national level, the response was under the control of COBRA which first met on the Friday evening and met regularly after that. The Prime Minister chaired several of the meetings (Cabinet Office official A, 2008). DEFRA official N argued that the Prime Minister's involvement was important as his presence at several of the meetings led everyone to 'do the best possible job' (interview, 2008). Several interviewees made the point that the Prime Minister, Gordon Brown, was sensitive to the context of the situation and was interested in the minutiae of the response and, consequently, was eager to be informed about the finer details of the outbreaks. The outbreaks constituted one of the first important tests of his leadership as he had only been in his position for two months before phase one of the outbreak.

In addition to the role of the Prime Minister, COBRA, as the government's main central crisis management committee, brought together the main departments and agencies involved in responding to the disease (HC-312, 2008: 8). A teleconference with senior stakeholders was held before the COBRA meeting and a UK teleconference (which included participants from the devolved administrations) was held immediately afterwards (DEFRA 2007: 7). In the National Disease Control Centre (NDCC) in Whitehall the disease control effort was managed by the CVO Debby Reynolds (before her retirement). At this point, the CVO started communications with the press and media (HC-312, 2008: 10).

Locally, the disease control operation 'moved towards full mobilisation' and the Local Disease Control Centre (LDCC) team grew (DEFRA, 2007: 8-9). In a similar vein to the changes that took place during the response to the 2001 crisis, the LDCC was headed by a series of Regional Operations Directors (RODs). It became clear as the weekend unfolded

that the Reigate office did not have sufficient facilities for coping with the operation so the LDCC was moved to another nearby DEFRA site in Guildford (HC-312, 2008: 10). The first major disease control measure, in addition to the implemented movement ban, was to cull the infected animals in the farm in Elstead (the first site of infection).

Meanwhile work started at the Pirbright laboratory of the IAH to try and ascertain the strain of the virus. On Saturday 4 August the test results confirmed that it was FMD virus strain O,BFS 1860. This raised suspicions amongst government scientists that it could be Pirbright that was the potential, and the most likely, source of the outbreak because this was the only known location in the UK where this strain had been held (DEFRA, 2007: 11). The government took swift action and commissioned independent reviews by the Health and Safety Executive (HSE) and by Professor Brian Spratt of Imperial College London to 'review arrangements for bio-security in UK facilities handling the FMD virus and to evaluate if a breakdown in these controls could have led to an outbreak' (HC-312, 2008: 10). Merial (which was the vaccine company that stocked the live virus at Pirbright) suspended production because of the large quantities of the virus involved (DEFRA, 2007: 11). On Monday 6 August the disease was discovered on another farm and the cattle were subsequently culled in accordance with the contingency plan.

Furthermore, the European Commission imposed a ban on all exportations of UK animal and meat products from susceptible species (HC-312, 2008: 10). The immediate national ban on the movement of livestock was effective in preventing the wide-scale spread of the virus. However, unlike 2001, the areas of infection existed within a low livestock density area, hence reducing the risk of the disease spreading further (Cabinet Office official B, 2008). By 8 August, DEFRA's vaccine contractor, Genus, was prepared to vaccinate but, after taking epidemiological advice, the Secretary of State confirmed the decision not to vaccinate on 8 August due to the low risk of the disease spreading outside of Surrey (DEFRA, 2007: 24; HC-312, 2008: 11). On the 23 August the EU Standing Committee for Food Chain and Animal Health (SCFCAH) agreed to relax the ban on the trading of animals from outside the surveillance zone and to the zone being lifted after 30 days when the last infected premises was cleansed and tested negative to serological results (HC-312, 2008: 11).

In early September the reports of the HSE and Professor Spratt concluded that the most likely reason for the outbreak was that the virus was accidentally leaked from the underground drainage system at the Pirbright site which had degraded over time (DEFRA, 2007: 11). The reports both deduced that soil surrounding the drainage pipes had been contaminated and the soil was then carried by vehicles to the proximity of the first infected farm on 2 August (HC-312, 2008: 11). One official argued that it was unfortunate that 'it was a surprise to all involved in government because this particular source of an outbreak fell off the radar of any risk-based analysis in the department [DEFRA]' (DEFRA official E, 2008). DEFRA official E also argued, in relation to how Pirbright was regulated, that 'there was thinking that this [the Pirbright drainage systems] ought to be updated and there was a well considered view about how it should be updated. But then it was not given high priority and it took a catastrophe plus then a report and now it is changing so it often feels, from the inside, that these inquiries catalyse and accelerate change' (interview, 2008). On the implementation of the measures recommended by the HSE and Spratt reports to the drainage system, the Secretary of State permitted the resumption of vaccine production on 6 November 2007 (DEFRA, 2007: 12). On 8 September the CVO confirmed that that outbreak had come to an end and that the ban on animal movements could be lifted (HC-312, 2008: 11).

Phase Two

Phase two of the outbreak commenced when a farmer in Egham (six kilometres outside the original surveillance zone) reported a suspected case of FMD. DEFRA officials were in a state of 'painful disbelief' because everyone believed that the outbreak was over (DEFRA official A, 2008). The IAH confirmed that cattle were infected with the disease and thus began culling the animals. New restriction zones were imposed around the area of the latest infection. On 15 and 16 September the fourth and fifth cases were confirmed at neighbouring farms. Three further farms became infected, with the final case being identified on 30 September 2007 (HC-312, 2008: 11). During this time the President of the NFU, Peter Kendall, said that the second phase of the outbreak had brought a real state

of despair amongst his members not only because of the resurgence of the disease itself but because it had arrived at a time when livestock farmers need to transport their animals to markets (BBC, 2007).

In phase one of the outbreaks the devolved administrations were largely supportive of the disease control policies and methods implemented by DEFRA yet this support waned in phase two (HC-312, 2008: 12). National and sub-national relations became tested because Scottish and Welsh farmers were suffering economically as a result of a ban on movements – especially, as established above, because this was a time of year when farmers should have been taking their stocks to market. Several interviewees made the point that the devolved administrations, in particular in Scotland, perceived that national policy was driven by English interests. This political dynamic between administrations was not assisted by the fact that there was a nationalist government in Scotland (DEFRA officials A, C, F, J, 2008). Specific relaxations were sought by the devolved administrations including changes to the working hours of drivers to help collections of animals which ‘took a disproportionate amount of time to agree with London-based government departments’ (HC-312, 2008: 12). There were also major animal welfare concerns which led to the Scottish Government introducing a welfare scheme after it emerged that a quarter of a million lambs were facing starvation on Scotland’s hills due to a lack of grazing. The animals had become stranded after movement restrictions were introduced following the outbreaks.

Throughout October 2007 the restrictions on animal movements were lifted gradually and on 8 October the Secretary of State announced an aid package for farmers amounting to 12.5 million pounds (HC Deb, 8 August 2007, columns 1200-1201W). This was followed by similar action by the Welsh and Scottish administrations despite there being ongoing disputes between the devolved and national authorities because the UK government refused to fund devolved rescue packages (BBC, 2007b). Both the Welsh and Scottish administrations took the view that it was the responsibility of the UK government to compensate farmers for the losses suffered because the disease control policies were implemented in England. EU export restrictions were lifted on 31 December after widespread animal blood testing around the surveillance zone in October and November. The outbreak was formally declared at an end when the OIE reinstated the UK’s FMD-free

status on 22 February 2008 (HC-312, 2008: 12). In total (over phase one and two) 1581 animals were culled to control the disease – the overwhelming majority of which were cattle and pigs (DEFRA, 2007: 13, 18).

Overview of the 2007 Avian Influenza Outbreak

In Britain avian influenza H5N1¹¹ was first detected in a swan in Cellardyke, Scotland in April 2006 and there have been other strains of AI detected periodically in the UK. The present research, however, concerns the major AI H5N1 outbreak in the UK which occurred in a turkey factory in Suffolk, England in February 2007. This is because the February 2007 episode can be analysed in the context of an ‘outbreak’. The Council Directive on Avian Influenza Control (2005/94/EC) outlines that ‘outbreak’ means a ‘holding where avian influenza has been confirmed by the competent authority’ (Article 1, paragraph 28). The incident in Cellardyke, Scotland, cannot be regarded as an outbreak in this context as no holding was affected because the infected swan was detected on a beach (which does not qualify as a holding).

On 1 February 2007 Animal Health vets were called to a farm in Holton, Suffolk because a farmer working on a farm owned by Bernard Matthews (a well known commercial turkey producer) reported the deaths of 2,000 turkeys. On 3 February, government scientists confirmed that the turkeys were infected with the H5N1 strain of AI. The government stated that ‘from the outset it was clear that this outbreak was unique and posed new challenges, differing to other recent outbreaks of disease’ (DEFRA, 2007b: 3). These challenges were new because the disease could have a potential impact on human health – and that the health of government personnel would have to be considered. This led to

¹¹ The AI H5N1 strain is one of fifteen strains of the virus, however, it is the H5N1 strain that policy-makers are paying most attention to since it is the only strain that has proven to infect humans and cause high death rates (Thorson and Ekdahl, 2005: 2). The risk of infection depends upon the particular virus type, and those posed by the so-called Low Pathogenic AI (LPAI) viruses are less than those from Highly Pathogenic AI (HPAI) viruses - the latter having caused a mortality rate in poultry as high as 90 percent, and been responsible for the vast majority of AI cases reported in humans (and in all cases where death has occurred. All known cases of HPAI have so far been caused by two ‘H’ types – H5 and H7.

DEFRA and Animal Health coordinating the response with the Health Protection Agency (HPA). Almost immediately, the government culled (gassed) the birds on the site (amounting to 159,000). In accordance with contingency planning arrangements, DEFRA established a NDCC in London and LDCC on the ground to coordinate disease control activity on the infected premises and in the area surrounding the infection (DEFRA, 2007b: 4). A three kilometre protection zone and ten kilometre surveillance zone were established and a wider restriction zone was imposed as a supplementary measure (DEFRA, 2007b: 4). The Civil Contingencies Secretariat (CCS) of the Cabinet Office was engaged throughout the duration of the outbreak in coordinating the cross-departmental response to ensure that the Department of Health and the HPA were 'locked-in' the response (Cabinet Office official A, DEFRA official K, 2008). The disease was contained effectively with no evidence of a further spread and the control zones were lifted on 12 March 2007.

One week after the identification of the disease supermarkets denied that consumer confidence had been damaged but in October 2008 it was reported that brands owned by Bernard Matthews had fallen in value by 20 million pounds, as a result of the 2007 AI outbreak and the health risks surrounding it (BBC, 2008). In terms of sourcing the outbreak, there was speculation that the disease was imported via turkey meat from Hungary as turkey meat was processed in a factory adjacent to the turkey finishing premises. Although representatives from Bernard Matthews have persistently denied this, there is evidence, although not conclusive, to support the fact that the disease was imported into the country on 13 February 2007. Scientists have maintained that the strains of AI found on the Suffolk farm and in Hungary were 'essentially identical' (BBC, 2007). While uncertainty about the exact source remains, however in crisis management terms, the outbreak of AI H5N1 in Suffolk was a key test for the government's response to a veterinary disease outbreak.

All of the 33 interviews conducted for the thesis confirm that the foot and mouth and avian influenza outbreaks were genuine tests for the government's crisis management arrangements and appropriate episodes from which the extent of change in the post-2001 period can be studied. Both incidents 'were potentially very serious and they called for the

full emergency response' (DEFRA official, E, 2008) and were 'solid acid tests for our crisis management arrangements' (DEFRA official D, 2008) – especially given that 'at the start of any outbreak it is impossible for policy-makers to gauge how widespread and devastating the outbreak will be' (DEFRA official F, 2008). There is agreement in the literature that crises are a departure from normalcy and uncertainty - threats, ambiguity, complexity, urgency, and risk are inherent characteristics of crises. In this context, the 2007 outbreaks of foot and mouth and avian influenza can be viewed in the context of 'crisis'. The reasons for this are that the outbreak caused considerable concern within the government, farming, tourist industry that there would be a return to the experience of the 2001 foot and mouth crisis that swept across Great Britain and incurred costs of over £3 billion and £5 billion to the public and private sectors respectively (HC-939, 2002: 13). Interviews with some of the officials involved in managing the outbreak also conveyed the sense of threat posed by the highly transmissible foot and mouth disease and that there was a shared sense of urgency within government to resolve the outbreak as quickly as possible (DEFRA officials a, b, c, d). The sense of urgency was compounded by vast uncertainties about the actual cause of the outbreak which meant that the authorities were 'in the dark regarding how widespread the outbreaks would ultimately be' (DEFRA official a). With regards to foot and mouth, there was also a great deal of controversy surrounding the leakage of the virus from the Pirbright site and the leakage called into question the risk management practices and the standards of security of governmental laboratories that harbour deadly strains of diseases. With regards to avian influenza, there were uncertainties surrounding how the virus arrived in the UK which led to questions being raised about the extent of security in relation to importation policy within the EU. In terms of uncertainty, controversy, and urgency, therefore, the 2007 incidents are viewed within the context of crisis in this thesis.

Chapter 4

Post-Crisis Policy-Orientated Change 2001-2007

Introduction

This chapter, along with chapter 5, presents empirical findings of the type and extent of change. These chapters use the notions of *fine-tuning*, *policy reform*, and *paradigm shift* to structure the presentation of the interview data and to reach an overall assessment of the extent of change. Chapters 1 and 2 provided detailed consideration of the potential for crises to stimulate change. Conventional wisdom holds that crises should lead to reform in a policy sector because crises break a path of policy linearity and illuminate performance deficits (Boin et al., 2005: 115, 123). Bureaucratic norms and values that existed in the crisis response become challenged. Equally, the traditional literatures on policy and organisational change examined in chapter 2 lean towards a lack of reform – especially when bureaucratic organisations are considered. The bureaucratic norms that underpin the crisis response may not necessarily change in the wake of a crisis, thus the same bureaucratic norms underpin any effort to change what came before.

As noted in chapter 1, Boin et al. (2005: 116) emphasise two main aspects of the tensions relating to reformist versus conservative post-crisis management approaches. There are the ‘puzzling’ and ‘powering’ sides to the crisis aftermath. First, the ‘puzzling’ aspect refers to understanding what went wrong and what needs to be changed. Second, ‘powering’ pertains to the capacity to reform and whether policy-makers instigate substantial change in the wake of a crisis. With regards to the 2001 foot and mouth crisis, the narrative and empirical data presented in chapter 3 shows that the ‘puzzling’ aspect has been largely understood by policy-makers. The interview data, parliamentary investigations by the Select Committee on the Environment, Food and Rural Affairs, and the foot and mouth Inquiries identified what needed to be changed in the government’s preparation and response to an animal disease outbreak - with almost all of the

recommendations being accepted by the government (RRFMI, 2002; Bender interview, 2008; Beckett interview, 2008).

The 'powering' side of post-crisis management is the concern of the remaining chapters of the thesis in terms of the degree and manifestations of change since the 2001 epidemic. What is clear from the foot and mouth case study is that the political climate was conducive to a reformist approach to change – mainly due to the creation of a new department (DEFRA) after the 2001 General Election and because of a public commitment to change by the new Secretary of State and the Prime Minister. The foot and mouth epidemic led to a commitment to a new approach in managing veterinary disease-induced outbreaks because of the demands that it generated from the farming industry and society at large because of the damage it caused to the agriculture and tourism sectors (see chapter 3 for further details). Crises, therefore, as a result of such events, can open up windows for reform and stimulate the search for new approaches which is often a low priority in times of normalcy. Equally, chapters 1 and 2 showed that change should not be taken for granted following a crisis due to factors such as institutional inertia, bureaucratic interests, resource deficits, and the dynamics of culpability avoidance (the so-called 'blame game').

With respect to the current analysis, categorisations of change - *fine-tuning*, *policy reform*, and *paradigm shift* (Boin et al., 2008: 16-17 and 295-297) – allow for the type of change to be identified within each crisis management theme. *Fine-tuning* can be described as the instrumental adaptation of policy and organisational practices *within* pre-existing policy and organisational arrangements. This means that any change will be conditioned by the arrangements in place before and during the crisis. Under this category post-crisis learning is a marginal activity. *Policy reform* takes place when *fine-tuning* is not sufficient. Policy-makers may need to make sure that policy and organisational arrangements are not susceptible to vulnerability by actively and fundamentally, rather than passively and marginally, drawing and applying lessons from the crisis episode. This is a reformist aspect to post-crisis change. Lastly, *paradigm shift* is the very rare occurrence when core underpinning values of a policy sector are subject to vast sweeping change. As Boin et al. (2008: 17) put it, this is when 'entire policies, organisations or even fundamental normative aspects of a policy system become subject to abdication'. In conceptual terms,

therefore, this chapter and the next chapter are concerned with the extent to which change has taken place to policy and organisational structures since the 2001 crisis. On this basis, the main sections of this and the subsequent chapter presents the empirical findings of the policy and organisational post-crisis aspects to change.

This chapter considers the central-level policy-orientated changes to crisis management arrangements in the aftermath of the 2001 foot and mouth epidemic. As a result, the chapter addresses the following research questions detailed in chapters 1 and 2:

- What EU policy and regulatory changes have emerged since the 2001 foot and mouth crisis?
- What policy-orientated changes for managing veterinary disease-induced outbreaks have taken place since 2001?
- Has post-crisis management been minimal/conservative or reformative?
- To what extent are Boin et al's (2008) categorisations of *fine-tuning*, *policy reform*, and *paradigm shift* suitable in explaining the dynamics of post-crisis change in the case of veterinary disease-induced outbreaks?

Chapter 3 identified the key areas where change was needed to the management of animal disease outbreaks in the exotic disease policy sector. The present chapter examines the empirical findings of the extent of change that took place to crisis management policy structures. It is on this basis that the chapter presents specific crisis management policy themes of contingency planning, stakeholder engagement, the role of scientific expertise, information and data management, and the management of communications. Before these themes are analysed in the chapter, the legislative and regulatory aspect of change, which incorporates the EU as a driver for change and the dynamics of Europeanisation into the change process (see chapter 2), is analysed. The chapter concludes by considering the themes of the 'blame game' and the role of inquiries that were identified in chapter 1. In particular the chapter discusses the relevance of the politics of blame and impact of

Anderson inquiry, the main crisis management policy inquiry into the 2001 crisis, on the post-2001 change process.

This chapter, therefore, concentrates predominately on policy-making for foot and mouth outbreaks. It is the case, however, and the interview data confirms this, that the structures in place for preparing for and managing veterinary disease outbreaks are similar. All of the 33 interviewees confirmed that the overarching structures of policy-making for the government's response to a veterinary disease-induced outbreak are very comparable. This is mainly to ensure that stakeholders and government officials know exactly what the contingency plans include – thus avoiding confusion over how to respond to diseases outbreaks. There are, however, differences in approaching an outbreak of a disease if the scientific aspects of the disease call for a different approach to containing its spread. Yet what is clear from the interview data and official government publications is that the policy and organisational structures in place for coping with an animal disease outbreak are largely applicable to other veterinary disease-induced outbreaks. The findings presented in this thesis, therefore, relate to the veterinary disease sector with *primary* focus on FMD. On this basis, the 2007 February avian influenza outbreak in Suffolk will be referred to when relevant in order to illuminate aspects of the main FMD case.

In substantive terms, this chapter also presents findings from official documents and interviews with senior officials within DEFRA (mostly based in what is now known as the Food and Farming Group) and Cabinet Office officials, and politicians who have held or currently hold parliamentary committee, shadow frontbench, and ministerial positions for agricultural/animal health issues. The documentary materials are mainly official DEFRA planning documents and documents published as part of Dr Iain Anderson's UK government-commissioned independent 2007 review of lessons learned since the 2001 foot and mouth epidemic (HC-312, 2008). Beyond Anderson's review, however, DEFRA's official submission to the review and notes from the relevant interviews with officials, politicians, and stakeholders (as part of the review) are presented in this chapter. DEFRA's official submission and published notes on the interviews contain many points which concern policy and organisational changes since 2001, specifically the intervening period of 2002 and 2007. Fascinatingly, several contributors to Anderson's review were interviewed for

this thesis (as can be seen from the list of interviewees detailed in Appendix [insert number]). Unlike this thesis, however, Anderson's review did not endeavour to keep the interview contributions of the officials anonymous. In the instances where an official is referred to by name in the present and subsequent chapter(s) then it will be clear that it is material relating to Anderson's review that is detailed. At all other times the interview contributions of government officials remain unattributed. This brings us to the first research question: what impact has EU legislation had on the post-crisis change process?

DEFRA's Supranational Policy Activities: the EU as a Driver for Change

It was noted in chapter 2 that the majority of DEFRA's policy remit falls within EU policy and regulatory frameworks. Margaret Beckett indicated that 75 percent of the department's activities are EU-driven (interview, 2008). This reaffirms the argument that DEFRA is the most 'Europeanised' of the Whitehall departments (see also Jordan, 2003). This was confirmed by Sir Brian Bender, the former Permanent Secretary of DEFRA, who maintained that 'several Whitehall departments are determined or constrained at an EU level but this is far smaller in comparison to what DEFRA experiences' (interview, 2008). The impact of the EU on the policy work of officials is also highlighted by official D:

Yes I would say that Europeanisation, as you put it, or change taking place within the EU context, as I would put it, is the nub of the environment that structures our work. In our particular area so much is driven by EU legislation. It is part of the way that things are these days and the way that we have our domestic policies and the way we explain them has to be done in the background of what is happening in Europe. Yes there is a very strong European dimension to everything that we do. (DEFRA official D, 2008)

Nick Brown, the former Secretary of State for MAFF, noted that because so much of the department's work took place within an EU framework 'the key function of the department is to be the specialist champion for the country, and industry, in the committees and structures of the European Union' (Brown interview, 2008). Brown went on to argue that he found the department 'really able and capable in managing EU affairs' (Brown interview, 2008). Another former Secretary of State for DEFRA argued that the department had to be effective at influencing EU legislation 'simply out of necessity'

because of the ‘peculiar context that that the department operates in compared to other Whitehall departments’ (Beckett interview, 2008). Beckett went on to state that:

DEFRA needs to work out where the opportunities lie for influence. We are not sluggish in our approach but proactive and the FMD Directive is an example of that. As you probably know there is a lot of informal relationship-building involved but what is clear is that the EU affords us with a tremendous opportunity to influence the agenda of the EU. (Beckett interview, 2008)

Thirty-one interviewees confirmed that it is absolutely crucial to cooperate with the EU on animal diseases to ensure the functioning of the single market. This means that the EU has a role, not just in preparedness planning for animal diseases, but in the nexus between animal disease and food safety because ‘they come out of the same Commission regime’ (Cabinet Office official, A, 2008). Animals and animal products circulate around the EU, therefore, it is important that European plans and legislation are developed with this in mind. Thus, in overall terms, the advantages of working within the EU context are mainly grouped around the search for a common policy vis-à-vis trade because diseases and vaccination strategies can have serious effects on exports and trade within and outwith the EU – warranting the need for diseases to be managed on a ‘higher basis’ (Beckett interview, 2008; Curry interview, 2008; Simpson interview, 2008; Yeo interview, 2008). DEFRA official C elaborates on this point:

There are huge advantages with working with the EU. Essentially what you have got is a trading bloc and that trading bloc provides you, when it comes to animals and animal products, with a system which means that, once you have got the negotiations, which might be protracted and there might be terrible compromises that you have to make, then that is it. There are 27 member states, the free market, huge opportunities, and if you have a disease problem in one state, it means that that one gets isolated and you get rid of it [the disease]. As soon as you have got rid of it and it is agreed then you are back to square one. You don’t have another 26 member states to negotiate with individually. Purely on the trade issue the politics of having a stable Europe is important. (DEFRA official C, 2008)

Although the interviewees highlighted that the facilitation of a common approach to trade in the EU was regarded as the key advantage of working in the EU context, in the animal disease and animal health policy area, there were those who identified downsides. None of the interviewees argued that the UK would be better off if the Commission did not have

competence over this area. Yet 29 interviewees placed emphasis on the slow EU decision-making process which ultimately hinders national policy responses during an outbreak. Keith Simpson argued that 'one feels that when you always have to consult EU legislation or struggle with the Commission when the time is of the essence can be a downside' (interview, 2008). Simpson's view on the EU as an added pressure or hindrance to the crisis management effort was also shared by DEFRA officials. DEFRA official D argued that this is because the department has to consider the fact that the Commission initiates and oversees policy which can be burdensome not least because of the detail that it requires:

The disadvantage, to a degree, is the speed of reaction in terms of not having the ability to make a decision without referring it to Brussels. Another disadvantage, and this has become apparent to me over the years, is the detail of how the Commission is instructing the government about what the government can do and what the government cannot do in terms of, for instance, surveillance zone boundaries for animal diseases like foot and mouth and blue tongue. Someone was taking me through these rules at the Institute for Animal Health a few days ago and I was sitting thinking 'that is so detailed'. That is not going to make a difference to trade and that is all to do with how we manage the disease on the ground locally and that is really minutiae stuff that really should be left to the government to deal with. To have to say that we cannot do that because of EU rules is ridiculous. (DEFRA official D, 2008)

Sir Brian Bender elaborated on the sentiments of DEFRA official D by arguing that although the Commission is an important actor in terms of managing the trading bloc, it is another layer of decision-making that DEFRA officials have to take into account:

The EU is definitely a constraint although I think it is a comfort in that other countries have to obey EU law so they cannot just not do things and ignore the legislation. Comparing the 1967 to the 2001 outbreak, focusing on the EU was an important priority for the team, and the team didn't exist at all in the 1967 outbreak. The EU is a fact of life and it has its upsides and downsides. If you want a single market, which we do, then the EU must provide a framework for that. It is almost like a learning process in knowing how to manage the EU because it is a different level of decision-making. (Bender interview, 2008)

It is also important to note that Scotland has to accommodate EU requirements. The multi-level polity of the EU system means that there are legislative mechanisms in place so that

EU legislation is implemented within the devolved administrations. For example, the Scotland Act 1998 requires that the Scottish Government (SG) takes into account EU requirements:

The Scotland Act compels us to implement EU legislation so, for us, there are two levels of governance – we have the EU and the domestic level. Animal health is so legislated for in Europe but there is an advantage of this in the fact that there is a consistency and a fairness because level playing fields come to mind. On the animal health side a consistency of approach is good and it facilitates trade. (SG official, 2008)

Legislative forces penetrate the domestic and regional levels of governance but the added complication for animal health policy is that the EU is not the ‘highest’ policy driver. The reason for this is that the EU has to comply with the standards and rules emanating from the OIE and the World Trade Organisation (WTO). Thus, in real terms, there are two international policy levels. EU member states are represented by the EU Food and Veterinary Office in discussions with the OIE and WTO for matters relating to imports and exports beyond the EU’s borders. In other words if EU countries negotiate with third countries then the former would have strong bargaining power because the EU is a major market on the world stage. Coupled with this representational role afforded to EU members by the EU institutions, EU countries do not have to replicate the inspections of animal products in the importing country. Although the DEFRA officials who work on the import and export of animal products as part of their EU policy responsibilities argued that the system was not always perfect, because there will always be compromise in the national policy position at some level, the member states can benefit from economies of scale in dealing with their institutional counterparts within and outside of the EU (DEFRA officials E, F and M, 2008).

Despite the constraints of working with the Commission, all of the 33 interviewees for the thesis acknowledged the important role played by the EU as a legislative force and ‘driver’ for change in the aftermath of the foot and mouth crisis. The EU fulfils a role which provides national policy-makers with specific options to consider when deciding on a control strategy for animal disease outbreaks. Importantly, DEFRA official J, who was, and is in 2009, one of DEFRA’s senior representatives to the European Commission on

exotic diseases, argued that there has been an 'acceleration' in the amount of decisions taken at the EU level in the aftermath of the 2001 crisis:

What you have got is an acceleration or an increase in the number of decisions that are taken at the EU to structure crisis management and disease control. However, I do think the underlying policy of containment and eradication is the same as it was. With the expansion of the EU the risks are higher in relation to our health status within it. What you have got is safeguard measures being taken against high risks because there is disease outside the EU or there is disease within the EU. Since 2001 we have had several outbreaks of notifiable diseases which, in the previous decade, we didn't have. Therefore there is an increase the amount of decisions coming through Brussels associated with outbreaks. You have also got the revision of the main legislation at the Directive level in Brussels. (DEFRA official J, 2008)

This quote suggests that the underlying policy of containment and eradication of the disease has not significantly changed since Council Directive 85/511/EEC. At the same time, the *overall* legislative standard and the particular disease control strategies open to policy-makers in controlling foot and mouth outbreaks changed under Council Directive 2003/85/EC.

Dynamics of Europeanisation: Formulation and Implementation and the Council Directive 2003/85/EC on Community Measures for the Control of Food and Mouth Disease

Formulation

With respect to policy-making for foot and mouth outbreaks, Margaret Beckett acknowledged that she was prepared for calls for the EU-driven legislative changes for foot and mouth when she took up the DEFRA portfolio after the 2001 General Election (interview, 2008). It became important for DEFRA to diffuse the lessons of the 2001 outbreak into the primary EU legislation in order to fulfil the UK commitments to incorporate the lessons that were accepted from the 2002 Anderson, European Parliament and Royal Society inquiries into EU policy. The main policy change within the EU legislation was that there should be provisions for emergency and protective vaccination as a key control strategy. This means that vaccinations should be on a par with culling as a

policy option. From the perspective of the European Commission, this change in policy signalled a 'change in the mindsets' which was encouraged by Commission Decisions allowing Britain to vaccinate livestock in 2001 (although the government decided not to do so) (European Commission official A, 2008).

An additional key feature of the new Directive was the rapid implementation of a national ban on susceptible animals. As noted earlier in the present chapter, the latter change on the immediate ban on the movement of animals was a 'direct lesson learned' (DEFRA official F, 2008). DEFRA official F argued that 'in order to contain the size of the outbreak putting in place a national movement ban straight away until you know what kind of spread of infection that you might have is important'. This, as detailed in chapter 3, was a major problem in the response to the 2001 epidemic. The delay in introducing a ban, although there were political reasons as to why it was not implemented immediately, led to an exponential growth in the amount of outbreaks across the country.

A key finding from the interviews is that the lessons of the UK experience of the 2001 crisis were instrumental in feeding into DEFRA's policy position on what should be included in the Directive. The inquiries into the crisis, at both the national and EU levels, recommended the same changes in policy (European Parliament, 2002; HC-888, 2002). This enhanced the prospects that the lessons from the 2001 epidemic in the UK would be incorporated into the formulation of the legislation. For example Cabinet Office official B, who worked on ratifying the Directive during his time in DEFRA, argued that:

I think the Anderson inquiry was a catalyst for change ... from my background of working on the FMD directive a couple of years down the track I think it is right to say that Anderson was a driver – certainly towards the FMD directive which came out in September 2003. I do have memories of people working on it at the time and they were going around the department asking for feedback from people as a way of coming up with a negotiating strategy for the Directive. There is certainly no doubt that Anderson affected that. For example there were things like the question about vaccination especially. That was one very big thing that the Directive changed which is what Anderson had recommended. That was the big change that the Directive introduced. It brought vaccinations to the forefront of controls so it wasn't sort of the last resort, it was a primary measure and there was more enabled measures in there for the treatment of vaccinated meat and all the rest of it so it was part of the armoury rather than a last resort. So I think from my

perspective I have to say that that was one of the major things that struck me as being a very big change since 2001. (interview, 2008)

Moreover, the interviews with DEFRA and European Commission officials confirm that, beyond the recommendations on the post-crisis reviews, the Commission sought the views of those responsible for managing the epidemic in the UK and was 'receptive' to the UK experience. DEFRA official D, in referring to the role of his colleagues in this process argued that:

We feed in lessons learned at the national level to the EU level and the way that we do that is at the stage when the foot and mouth directive was being revised we had people like [DEFRA official J] attending. In fairness I think that the Commission were fairly receptive to us. They saw that the UK had a very serious outbreak of foot and mouth disease. Of course the Netherlands had smaller outbreaks of foot and mouth but we had the contemporary expertise in that and they listened to us. What you couldn't do is to write the Directive for them, although I have to say I do feel that we did do that. We had a huge amount of influence in that and as a consequence we got a very good Directive out of it which does what it says on the tin but also allows for flexibility so that it can accommodate local conditions. I mean local in the EU sense at state level ... The Commission has to be careful not to appear to be led by any one particular member state. It doesn't do their image much good. Having said that I think that our working relationships with the EU are pretty good and, by and large, I think we are getting a good compromise in terms of what we are doing. (DEFRA official D, 2008)

However this does not suggest that other member states did not influence the content of the Directive. European Commission official A made the case that 'there were contributions made by other member states that had direct experience of the disease under the conditions of the single market' (interview, 2008). Indeed DEFRA official B also made the case that 'if we were to write the FMD Directive from scratch we would always write it slightly differently because it is, in the end, a negotiated document' (interview, 2008). The circumstances of the 2001 crisis, and the fact that it was a crisis for the UK, meant that the UK was a key driver in introducing policy changes. European Commission official A, who worked on both the formulation of Commission Decisions in DG SANCO during the 2001 crisis and formulation of the 2003 Directive, was careful to note that the formulation of the Directive was a process of 'collective evaluation of the experience of one of the worst animal disease outbreaks in recent history of the EU'. Yet the official

emphasised the '*profound input* of the UK to the text of the Directive' and that they 'made experience available to all member states' (interview, 2008, emphasis added). This view helps to 'triangulate' the opinions expressed in interviews by DEFRA officials.

From a more conceptual perspective, this process points to a theme identified in chapter 3 in the discussion on Europeanisation. One of the conceptions of Europeanisation in the literature is that Europeanisation is a dynamic change process. This means that Europeanisation is not solely about implementing EU requirements but also about inputting, engaging, and building relationships with the EU institutions, particularly with the Commission as it is the main supranational policy initiator. Thus, change in the EU context is both EU- and member state-induced. With respect to the FMD Directive, the interviewees who have had roles in working on this particular Directive, and with the Commission in the exotic diseases area generally, maintained that there were both 'hard' and 'soft' approaches to DEFRA's engagement with the EU (DEFRA officials A, B, C, D, E, F, H, I, J, K, L, M, O, P, Q; Cabinet Office officials A, B; Bender interview, 2008).

First, the 'hard' approaches refer to formal meetings of DEFRA officials with Commission officials, and with other member state officials drawn from respective agricultural ministries. These meetings are within the committee structure of the EU in the Standing Committee for Food Chain and Animal Health¹² (SCFCAH) and/or in the EU working groups. Second, there are 'softer' approaches which refer to personal telephone calls and corridor conversations between DEFRA and Commission officials which cannot be described as formal meetings. The interview data substantiates these points on the 'hard' and 'soft' aspects of DEFRA's negotiations with the EU. DEFRA official H highlighted

¹² SCFCAH was established in 2002 and it is chaired by a European Commission representative. The mandate of the SCFCAH covers the entire food supply chain and animal welfare and can be regarded as a scientific supranational forum for discussion on the merits and drawbacks of particular courses of action in the veterinary policy domain. There are eight sections: General Food Law; Biological Safety of the Food Chain; Toxological Safety of the Food Chain; Controls and Import Conditions; Genetically modified Food and Feed and Environmental Risk; Animal Health and Animal Welfare; Animal Nutrition; Phytopharmaceuticals. There are also several other current Regulatory Committees: Standing Committee on Plant Health; Standing Committee on Propagating Material and Ornamental Plants; Standing Committee on Fruit Plants; Standing Committee on Agricultural, Horticultural and Forestry Seeds and Plants; Standing Committee on Community Plant Variety Rights; Standing Committee on Zootechnics. In this committee, member state representatives give presentations to the committee to indicate to the Commission (and to the other member states) what action has been taken in managing veterinary disease-induced outbreaks. In addition to diseases such as FMD and SCFCAH also deals with diseases such as Avian Flu, Bluetongue, Classical Swine Fever, African Swine Fever, and Bovine Tuberculosis- any veterinary disease that poses risks to the food chain and animal welfare.

this duality in DEFRA's engagement with the EU and focuses on the benefits of discrete relationship-building:

In terms of influencing the Commission there are the harder and softer approaches. This is by no means unique to this area – it is common in terms of the UK government's approach to European business. Yes there are a number of avenues open to you. If you are doing your job well at working level you will have pretty reliable access to colleagues in the Commission who you can phone up and talk to on a more or less informal basis. Obviously more or less depends on how well the relationship is established and how much you trust each other because at the end of the day you are officials with responsibilities to different organisations. There is a limit to how much you can say something in confidence to an official in the Commission and not have him go off and tell his boss and all sorts of other people because that is his job. So one has to use that sort of informal level cautiously but it is very useful. It is very useful to just pick up the phone and ask. Say the Commission is coming up with a new proposal; we would like them to be the ones contacting us at an early stage. Again that is a measure of how developed the relationship is because we don't like surprises. (DEFRA official H, 2008)

DEFRA official J is also explicit about what constitutes 'soft' influence. In particular, there are private non-recorded discussions that can make a difference to how Commission officials respond to DEFRA's involvement in EU policy-making, even if it is devoid of any kind of democratic scrutiny and control:

The soft ways to influence what happens in Brussels is behind the scenes. It can be conversations in corridors or private discussions. It is not so easy to do that in this country because we have to go on record and say what it is we are trying to do. As long as you make them think and you challenge, nicely of course, and discuss and present them with evidence then they will listen. They are very receptive until there is a political agenda that says 'that is where we are going' it then doesn't matter what anyone says. (DEFRA official J, 2008)

DEFRA official A indicates that the softer approaches to influence are preferred. The reason for this is that there are professional differences between officials at the UK and EU levels. At the UK level, it is more likely that vets operate in an advisory capacity to policy colleagues, with the latter making the ultimate decisions. By contrast, at the EU level, the Commission is made up of vets with learned policy skills (known as technocrats). This means that when DEFRA officials, with a veterinary background,

engage with EU colleagues there is an element of dialogue between veterinary professionals. Thus, when presented with risk-based analyses, the Commission is more open to influence at the scientific level:

My team took the 'soft' influence which is on a more informal basis. The interesting thing about the Commission policy team is that they are a science-based team. They are both vets and policy-makers. That is not the same as here as we have policy-makers taking policy decisions and there may be a hybrid whereby some take policy decisions who have a veterinary background. However the latter is less common. In the EU, right up to a senior level, you have got technocrats, vets who have policy skills, so they are very open to your risk-based arguments. So you have an influence there. We also more formally do risk analysis in relation to threats and my team conducts post-mitigation risk analysis from threats posed from trade and outbreaks that have happened. That is quite interesting because it sets out in a clear way what the threat is given the fact that someone else is actually doing the risk mitigation because it happens at the EU's borders. Even if we wanted to be belligerent we cannot act on our own – we cannot act beyond the EU and take the risk of infection. So that systematic approach to risk assessment is a good influence. I have always seen it as an influence on the Commission because we are setting out quite clearly the rationale for what they are doing on our behalf ... So that is one form of influence. The official way is that the standard rules for trade they are agreed in the structures of the EU so there is the standing committee and those rules are agreed with member states through that committee. (DEFRA official A, 2008)

Another official argued that the Commission is willing to 'concede' to the UK on many animal disease-orientated policy issues because of the UK's long-standing experience of managing disease outbreaks:

I think we have done quite well in influencing the Commission. I think the Commission was willing, and I'm not sure if this is the right word, but to concede to the UK more than we were expecting. I think because the UK does so much with the Commission we are seen as one of the shining lights of Europe. It is almost like the Commission can rely on the UK ... I would say that we are the trailblazers in Europe as it were. That is my perception. (DEFRA official F, 2008)

In a way I think the Commission looked up to the UK because we had the experience. So I think it was us driving it more than the EU frankly ... I was involved in transposing the Directive and the impression I got was that the UK had a very clear set of objectives where they had learned from Anderson and other routes where they had learned lessons from 2001 which informed our

stance on the Directive. I wouldn't describe the Commission as a driver *per se*. I would say that the UK was more of a driver than the Commission. (Cabinet Office official B, 2008)

The sentiments of DEFRA officials A, B, and F indicate a bridging between the soft and hard approaches to influence. This is due to the fact that a substantial part of EU expertise on foot and mouth rests within the UK-based Community Reference Laboratory where risk assessments and diagnostic tests and research are carried out. This is confirmed by European Commission official A who argued that, 'I am in no doubt there was strong UK input, not least because of the specific role of the Pirbright as the FAO World reference Laboratory and OIE regional reference laboratory' (interview, 2008). As a result, there is a bridge between the two aspects of influence because the UK has the experience and inside track with regards to knowledge about exotic diseases (which is the softer facet) but also this could be described as 'hard' because of the issuing of risk assessment documents and analyses - the findings of which are diffused at the EU level in SCFCAH:

I think that we are really successful at the negotiation phase and we are seen as one of the best negotiators in Europe so we seem to be very influential. We have Community Reference Laboratories in the UK and that helps as well. (DEFRA official B, 2008)

We have the reference laboratory. We have very good work on risk assessment that is done here so I think we are regarded with respect by the Commission and European colleagues. When we had the outbreaks last year we needed to be able to give the Commission a great deal of information about the control measures that we put in place, about the tracings on and off infected holdings and potentially infected holdings that we pursued, about the sampling regime, about the risk pathways that we have identified in terms of what we think might be the source of infection. This becomes a large analytical and statistical assessment of the data and we are consistently told by the Commission that we are a leading member state in the excellence of the material that we provide. (DEFRA official F, 2008)

Having worked behind the scenes during the UK's [2005] presidency I know exactly how to influence the Commission and I know how to do it outside of the presidency as well. You might not get your way but you can get your point into the process and once you have done that there is a good chance of getting it though. You can also engage with the European Parliament and you can play one off against the other ... We have also got national reference

laboratories. We have got the expertise in this country and we can probably come up with our own policy. We have got people that specialise in risk assessments. On our website we have reports on the international situation and the risks are on there, for example, what would happen if a, b and c happened. The risk assessments need to be presented to the Commission. The Commission will then agree as to whether the derogation is acceptable then it will go to the standing committee. The risk assessments have to be rigorous. We have got generic risk assessments as well which should stand the test of time. (DEFRA official J, 2008)

Furthermore, DEFRA official H iterates what can be regarded as a somewhat complex relationship between DEFRA and the Commission but, in terms of the legislative changes after the 2001 crisis, the FMD Directive can be described as a change at the EU level:

I'm sure that you are aware that the relationship between us and the Commission is complex. The UK is seen generally as a pretty important player and generally a good egg and we lead the way in openness and honesty and we are often seen as a useful ally to the Commission in actually bringing about change and changing attitudes that are perhaps a bit entrenched. That remains a very important side but I think there was a sense in which the UK had a lot ground to make up. So I guess at the level of the rules themselves there was a great deal of change, European change. This resulted in the foot and mouth directive. (DEFRA official H, 2008)

The interview data with both European Commission and DEFRA officials point to the fact that the UK had a key role in influencing the terms of the 2003 Directive because of the UK experience and the fact that officials were mobilised to diffuse the lessons of their experience at the EU level. This projection or uploading of the national position was, however, assisted by what European Commission A describes as a 'spirit of cooperation' at the EU level which, in the official's long experience of trans-national policy making for animal disease outbreaks, was unprecedented:

Between the member states, the Council, the Commission, and indeed the European Parliament there was a spirit of cooperation that is difficult to top and has not been seen, at least by me, since. I specifically dislike the word "negotiation" as this word does not reflect the spirit of the meetings.

The new Foot and Mouth Directive was formally agreed at the EU level in September 2003.

Implementation

DEFRA's then Permanent Secretary persistently instructed his officials in the run-up to the adoption of the FMD Directive that 'it is important to influence the Commission at the earliest stage possible as this is an important part of civil service skills and experience' (Bender interview, 2008). DEFRA official B emphasised the point that when negotiating the Directive the objective was 'to maximise the benefit of the Directive when it is implemented and minimise its negative impact' (DEFRA official B, 2008). The aforementioned official made the case, in reference to the FMD Directive, that it was important that the legislation had an impact but the negative 'side-effects', in terms of administrative costs when implementing the Directive, should be kept to a minimum. However this objective was left wanting in the case of policy-making for FMD because a common theme to emerge from the interviews regarding the implementation of the FMD Directive was that it resulted in a burdensome and bureaucratic implementation process. Cabinet Office official B substantiates this point:

The big problem that we had with the Directive was that it was far too prescriptive. It was far too detailed and we had real problems in transposing it because that is where the Commission didn't add value when they could have done. They tried to set a straight jacket and we saw with the [2005] avian influenza directive that that was much more flexible ... It was my impression that the Commission didn't always help. (interview, 2008)

From an operational perspective, Cabinet Office official A argued, in referring to the management of the 2007 outbreak, that 'in the end the Directive didn't feel inflexible to COBRA' (interview, 2008). This was supported by the Director of DEFRA's Food and Farming Group (FFG), David Dawson, who argued in his evidence to the Anderson review that 'the Directive provided a firm framework within which some actions were mandatory' (Evidence to Anderson Review, 14 February, 2008). By comparison, the officials argued that the 2005 Directive was seen as being more flexible because it was negotiated during the British Presidency in the EU which placed DEFRA officials in a 'powerful position' (DEFRA official J, 2008, see also Connolly, 2008). DEFRA official K argued that the FMD Directive itself was a point of reference for the future in terms of learning lessons of

how to ensure that there is enough flexibility in the legislative measures governing exotic animal diseases (interview, 2008):

We managed to get a bit more flexibility into some aspects of how the 2005 avian flu Directive was drafted. I came in during the final stages of the drafting of the 2003 Foot and Mouth Directive and I thought that it was over-prescriptive in areas and I think that some of that over-prescription we managed to pull back from in the drafting in the 2005 Directive. I think we learned from the experience of how the FMD Directive turned out. Once you have managed one outbreak and you think that you have sensible requirements and mechanisms that were defined in the Directive, most other contingency plans become similar. Once you work out what mechanisms are going to work you had better keep them the same because it gives people certainty about what to do ... There have been lessons learned from 2003 FMD Directive which meant that we managed to break down the rigidities associated with the 2005 Directive. When we were negotiating the AI Directive the team was very conscious of that but we definitely sought to ensure flexibility in the Directive. (DEFRA official K, 2008)

This was also substantiated by European Commission official A who argued that ‘the 2001 foot and mouth epidemic, and the lessons learned from it shaped our thinking about new animal health policies and some elements of the 2003 Directive have inspired the authors of the Directive for the control of avian influenza’ (interview, 2008) . Yet although the officials cited in this chapter point towards DEFRA’s enthusiastic approach to diffusing the lessons of the 2001 crisis at the EU level, this was not matched by an active approach to the implementation of the Directive. One of the key members of the policy team for the FMD ratification group in DEFRA, who was a senior official in the Cabinet Office in 2008, made the case that ‘it ought to take us about eighteen months to implement the Directive and some things take more or less time and we were quite slow with the FMD Directive and a lot of that was to do with the fact that we wanted to think it through properly’ (Cabinet Office official B, 2008).

A Freedom of Information (FOI) request by the author, under the Freedom of Information Act 2000, on 17 December 2007 sought information on the following: ‘whether there have been any infraction proceedings outstanding or have taken place against the UK in respect of the contents of the 2003 Foot and Mouth Directive’. On the 18 January 2008 a DEFRA official responsible for FOI requests for exotic disease policy replied to the query by

stating that 'there are no infraction proceedings outstanding or have taken place against the UK in respect of the contents of the 2003 Foot and Mouth Directive'. Importantly, what the reply to the FOI request did not include, which the interviews did elucidate, was that the Commission *began to initiate* infraction proceedings against the UK because of the length of time that it was taking DEFRA to implement the Directive. The UK government narrowly avoided being reprimanded by the European Court of Justice (ECJ). This illustrates the amount of time that it took to implement the Directive. The Directive was fully ratified in mid-2006 - approximately one year before the next significant outbreak of FMD in the UK. Cabinet Office official B is quoted at length below because the interview shows just how close the UK came to being penalised by the ECJ. This is ironic given that DEFRA sought to be a first-mover in negotiating the Directive but ended up being a slow-mover in finally implementing the legislation:

There was a lot of political sensitivity surrounding foot and mouth so that was a driver, in the end, to get the Directive ratified and senior management were well aware of that. The other major problem was that the Commission was taking infraction proceedings against us and, unfortunately, that is a painful and slow process of enforcement. We were, however, approaching the European Court of Justice and we had a formal letter warning us and we, annoyingly, had to down tools on the work that we were trying to do to receive this letter. It had to be cleared by the relevant European Cabinet Committee, as all such letters do, and this took a couple of weeks. I realise that you submitted an FOI request asking about the infraction procedure and the answer they gave you was very legalistic. It didn't actually get to the European Court so it wasn't infraction proceedings technically but we were warned and were getting close to that point. We got it sorted in time and the Commission's process is pretty slow anyway but we did have a warning letter. As I say we had to answer the letter which actually diverted us from getting the job done which was frustrating for us ... We sent the Commission the order and with 25 member states at that time the Commission did not have time to go through all of them on the spot. In some areas the Directive wasn't very helpful or very clear. In some cases we had to write to get clarity to the Commission on what they meant about certain bits. In other cases we had to add our own interpretation if there wasn't time to wait for correspondence from the Commission ... In the end we tried to make sure that the legislation was as it should be and as helpful to the farming community as possible whilst serving the spirit of the Directive. (interview, 2008)

Although the Directive, in the end, was a solid legislative framework for managing the 2007 outbreak, there were further reasons as to why the Directive took so long to ratify in

addition to the Department seeking to think it through properly. The lawyers who assisted the policy and veterinary officials to implement the Directive were determined 'to do things in a particular way'. The Cabinet Office official went on to say that the language of the Directive was 'very different from the language of English legislation in the sense that English legislation is much more purposive since it aims to sets out what the general objective sets in stone that 'you will do this, this and this'. [DEFRA official J and Q] went through the Directive step by step with a focus on the question: 'does this do what we want?'" (Cabinet Office official B, 2008). The next stage was to issue the draft out to consultation to stakeholders of which there were approximately 50 responses. The official provides an account of this process:

We went through all of the responses to the consultation. We sifted out the stuff that we couldn't do anything about anyway like the latent criticisms of 2001 which wasn't particularly constructive and we tried to pick out the constructive points where we could do something about it or at least we could tell people why we couldn't do anything about it. Then we had three or four days of doing nothing else but going through with the lawyer and went through his comments. Then he went away and redrafted and redrafted then looked at subsequent redrafts. It was a very iterative and painful process. (Cabinet Office official B, 2008)

The FMD ratification group were under 'a lot of pressure from senior management to get things signed off and implement the Directive' (Cabinet Office official B, 2008). The Director of Exotic Diseases Policy (later the Director of the FFG) was concerned because the Directive had not been ratified two years on from it being adopted at the EU level. Interviews with the officials in the ratification group confirmed that there was a trade-off between getting the Directive in place and getting it perfect. The concerns of the Director were at odds with the legal team because the Director was worried about the fact that infraction proceedings were underway whilst, at the same time, the lawyers took the view that it should be perfect. Thus, the policy team was there 'to bridge the gap between the concerns of the Director and the lawyers' (Cabinet Office official B, 2008). Yet even within the policy team there were resource constraints that slowed down the implementation process. At the early stages between late 2003 and early 2005 there was a team responsible for general FMD policy and the Directive added considerably to their work. This meant that the policy team were, at the early stages, short of resources that could be directed specifically at the Directive.

Cabinet Office official B outlined that by early 2005 the situation regarding resources 'had improved' (interview, 2008). It was at this time that the FMD team had been split into two

component parts. This resulted in there being a FMD policy team and another specific Directive transposition team. At this point Cabinet Office official B, working alongside DEFRA officials J and Q, had a draft of the statutory instruments completed by the lawyers and started to send the drafts to veterinary officials within DEFRA and other lawyers for their comments. This resulted in the implementation process being accelerated but, additionally, the fact that the draft was due to be sent out to scrutiny by stakeholders between 9 June and 1 September 2005 gave the FMD Directive policy team the impetus to compile a draft that could stand up to societal scrutiny¹³ (Cabinet Office official B, 2008). In short, within that implementation process there were two key phases. The first phase was between late 2003 and early 2005 which saw a lack of Directive-specific resources to implement the EU requirements. The second phase was early 2005 and early 2006 in which a policy team was created that was solely responsible for the Directive, and the consultation process ensured that a solid draft could be presented to stakeholders. The requirements of the Directive were not ratified until 23 February 2006 in the form of The Foot-and-Mouth Disease (England) Order 2006 and The Foot-and-Mouth Disease (Control of Vaccination) (England) Regulations 2006 (with similar implementing legislation in place in Scotland, Wales and Northern Ireland).

Europeanisation: 2003 Foot and Mouth Directive and the Assessment of Change

The interviews conducted with European Commission and DEFRA officials show that DEFRA sought to ensure that the lessons of the 2001 crisis were fed into future regulatory requirements for the control of FMD. In particular this was apparent in the way in which emergency vaccination became a primary disease control option as recommended by the inquiries into the 2001 outbreak. Indeed the statutory instruments to accommodate the 2003 Directive, alongside the 2002 Animal Health Act (see chapter 3), provided DEFRA

¹³ Cabinet Office official B confirmed that there were two key points of concern that DEFRA received from stakeholders as a result of the consultation. One was from the milk industry regarding the economic effect of the controls on animal movements. Another was the concern from the pro-vaccination lobby that all of the controls that we were introducing for vaccinated meat, if DEFRA decided to vaccinate livestock, would mean that vaccination would still be seen as a costly alternative and that farmers would still prefer to slaughter because they would be compensated. The official noted that 'it was a case of marrying those two issues but this conundrum was never really solved because we had limited flexibility. We had the directive that we had to transpose. We were able to fiddle around the edges and make sure that what was being enforced was not too burdensome but there were EU mandatory EU requirements that had to be accommodated' (interview, 2008).

with a series of options for the particular strategies that were to be employed in managing animal diseases (FMD in this case). In particular, the CVO and Minister in charge of managing an outbreak, as a result of the legislative change, have to justify why they are not implementing a vaccination strategy if a culling policy is pursued.

In terms of the dynamics of change, it can be seen from this section that the process of negotiating the 2003 Directive was exactly that – a dynamic process. However, this dynamism was not matched by an equal rate of change at both the uploading and downloading (negotiation and implementation) sides of this process. DEFRA was committed to actively seeking to influence the EU policy by employing both ‘hard’ and ‘soft’ approaches in their engagement with the European Commission. Yet, organisational constraints and inertia problems within DEFRA meant that the implementation of the Directive was a long and protracted affair, with infraction proceedings being threatened by the Commission. It was not until approximately two years after the Directive was agreed by the member states that the implementation of the Directive became realisable which was assisted by the looming stakeholder consultation process¹⁴.

Post-crisis EU policy change, which, in legislative terms, is structured by the 2003 FMD Directive, should be described, therefore, as *policy reform*. This is the case because vaccination strategies, once the Directive was finally implemented, became embedded in the contingency planning process as a primary control measure in the event of an outbreak (see also the next section of the present chapter). In addition, the drive behind this policy change was an acceptance by DEFRA, in its negotiations with the European Commission, that the lessons emanating from the main FMD inquiries should be diffused at the EU level. *Fine-tuning* would not have been sustainable in political terms because the use of

¹⁴ The future strategic EU level policy framework that DEFRA officials are concerned with in the long-term is the EU Animal Health and Welfare Strategy 2007-2013 (European Commission, 2006). This strategy is wide-ranging and includes the development of science, the promotion of animal health, cost and responsibility sharing between governments and industry, and a risk-based approach to crisis preparedness for animal disease crises. This, according to a very senior DEFRA official, ‘is really where our influence lies because it offers us the opportunity to set the scene for the baseline, strategic, and fundamental approach that will be taken in the European Union’ (DEFRA official A, 2008). The EU strategy is an ongoing policy programme, therefore, conclusions cannot be drawn regarding DEFRA’s involvement in the strategy, and its impact, but it is a key strategic priority for officials with an EU responsibility in the exotic disease policy sector. This is an important area for future research on the dynamics of UK-EU relations in the animal health policy sector.

vaccination was a major recommendation of the inquiries and adopting a 'quick fix' would have called into question the competence of DEFRA given the damage that mass culling had done for the farming and tourism industries. The fact that the values underpinning disease control policy remained the same (for example, that the disease should be eradicated as quickly and expediently as possible) means that the post-crisis EU policy changes cannot be described as a *paradigm shift*. Thus, the legislative change fits with the *policy reform* categorisation of post-crisis change but did not reflect a deeper paradigmatic change.

All of the remaining sections of the chapter will address the following research questions: What policy-orientated changes for managing veterinary disease-induced outbreaks have taken place since 2001? Has post-crisis management been minimal/conservative or reformative? To what extent are Boin et al's (2008) categorisations of *fine-tuning*, *policy reform*, and *paradigm shift* suitable in explaining the dynamics of post-crisis change in the case of veterinary disease-induced outbreaks? This brings us to the first crisis management theme of pre-crisis planning. The next section considers the policy-orientated changes to contingency planning in the aftermath of the 2001 foot and mouth crisis.

Pre-Crisis Planning: Contingency Planning Processes, Outbreak Control Policy, and Simulations

I think contingency planning arrangements are now much more structured, much more planned, and much more transparent. It has held up to tests. It is much better resourced and as a result of all of that there is clarity of roles and responsibilities and also a degree of competence ... It is important to have the problems. Be experienced – there is no substitute for it. (DEFRA official C, 2008)

Over the past six years, contingency planning for exotic animal diseases has changed dramatically in the United Kingdom. In the wake of the Foot and Mouth Disease outbreak of 2001, it was recognised that robust contingency plans needed to be developed to manage such an outbreak, should it ever occur again, and that these plans needed to be supported by comprehensive operational arrangements providing a capability to respond to outbreaks of any size and scale. (DEFRA, 2007b: 9)

The first quote above by DEFRA official C refers to the 2007 foot and mouth outbreak and the second quote comes from the 'Lessons to be Learned' report into the 2007 avian influenza outbreak (DEFRA, 2007b). Both of the quotes symbolise a key finding of the thesis that contingency planning arrangements have improved markedly since 2001. Even current and former opposition Ministers and spokesmen for agricultural issues maintained that lessons had been learned from the 2001 crisis because of the political problems that would ensue from having a contingency performance gap as MAFF had experienced pre-2001 (Curry interview; Breed interview; Gummer interview; Paice interview; Simpson interview; Yeo interview, 2008). Government Ministers and officials interviewed did not depart from this view and accepted that lessons had to be learned in the contingency planning process. Indeed, this was the reason that the government set up the 2002 Anderson inquiry. The former DEFRA Minister, Elliot Morley, argued that the 'inquiry was very helpful and did influence the revised contingency plans' (interview, 2008).

It was clear to Margaret Beckett, when she took up her post as Secretary of State for DEFRA, that there was a need for an interim contingency plan which would become part of addressing the needs of British farming:

In terms of putting together an interim contingency plan, one of our main concerns was the overriding principle that British farmers are affected by it [FMD] and that the future of British farming needed to be addressed. That fed into a departmental strategy which we, as a department, put together afterwards. Also, this all fed back in two or three years later when the Prime Minister decided to commission a five year strategy, and having done the sustainable food and farming strategy, that helped feed into the Prime Minister's strategy. It was about where we wanted to be, what we want to achieve and how we are going to achieve it in five years time. (Beckett interview, 2008)

This step forward was viewed positively by Anderson in his evidence to the House of Commons Environment Select Committee. He argued that '[what] the government decided to start from was the commitment to setting up an interim contingency plan and government Ministers began to understand the need for a much more heavy-duty contingency plan which deals with a much wider range of potential outbreaks' (HC-1144, 2002: Q.89). According to Anderson the interim report was not sufficient in itself and

should be described as a 'work in progress' (HC-1144, 2002: Q.103). In symbolic terms, the development of a new plan was regarded by Anderson as a positive step forward given that contingency planning was not a priority in MAFF prior to the 2001 outbreak (HC-1144, 2002: Q.92). As emergency planning for animal disease emergencies became part of the government's rural strategy there was, therefore, a reprioritisation in DEFRA to learn from the 2001 epidemic - so much so that Sir Brian Bender described this as a 'cultural shift' for the department (interview, 2008). This theme of cultural adaptations will be analysed in chapter 5 of the thesis.

What the interview data points to is that substantial contingency planning reforms have taken place which signifies a realignment of organisational responsibilities. One of the strong recommendations from Anderson in 2002 was that better contingency was needed but it had to be continuously revised and updated and tested. Anderson also recommended that other possible disease outbreaks such as avian influenza should become part of those contingency planning arrangements. DEFRA, since 2002, has published annually revised plans on the *generic* contingency arrangements for animal diseases which include chapters or volumes on particular diseases such as foot and mouth and avian influenza (for example DEFRA, 2006; 2007c; 2008; 2008b). The development of the contingency plans and emergency preparedness became a key priority for DEFRA after 2001 – so much so that DEFRA built a reputation amongst Whitehall departments for its contingency planning arrangements:

I was very pleased to report to the department that Sir David King [government's chief scientific advisor] had said to other government departments that DEFRA's contingency planning was a model on which the rest of Whitehall could learn and that they should be learning more than they were. That came from someone who was actually quite critical of how things were working out in the early stages of the outbreak. (Beckett interview, 2008)

In this vein the key organisational artefact that symbolises policy change post-2001 is through the publication of the contingency plans. The contingency plan is laid before the Westminster Parliament so that it is available to MPs. There is no real parliamentary scrutiny of the document which, according to Margaret Beckett, is because of the tight parliamentary timetable (interview, 2008). The shadow agriculture Minister James Paice

made the case that 'the House of Commons has its timetable dictated by the government so we have never had scrutiny to the best of my knowledge on the contingency plan' (Paice interview, 2008). Yet a further point, which highlights the lack of a lesson learning function of Parliament, even after a major crisis like foot and mouth, is that the Select Committee on the Environment did not study whether changes had taken place to contingency planning arrangements based on its own report into the crisis (see HC-323, 2002). Despite the former chairman of the Committee arguing that 'my interest as chairman of the Select Committee was to try and draw practical lessons' (Curry interview, 2008), the lessons recommended by the Environment Committee were not subsequently pursued or monitored in order to assess whether the lessons were learned by the government. Nevertheless, in terms of the contingency plan drafted by DEFRA shortly after the 2001 epidemic, DEFRA official E argued that Parliament fulfilled an important role in providing feedback for the initial contingency plan which assisted the lesson learning process:

Laying the plan before Parliament is not a symbolic gesture ... It is laid before Parliament, not with the expectation that the whole chamber will want to have a debate on this contingency plan, but some MPs get quite closely involved and whenever we have an outbreak we have briefings with the MPs in the constituencies or wherever the outbreak is happening. They take a high level of interest and this feeds back into their interest in the contingency plan and how good it is. Tabling it in Parliament means that it is available to anyone else that wants to read it and comment on it and ask us about it. When it is tabled we make a statement to the House and we give people the opportunity to comment on it. (DEFRA official F, 2008)

As noted in chapter 3, there were debates in Parliament during and after the 2001 crisis and the Select Committee did take a significant interest in the lessons of the epidemic alongside the creation of DEFRA. Thus, it is most likely that the interim contingency plan produced by DEFRA after the 2001 and the government's reply to the inquiries (RRFMI, 2002) satisfied MP's concerns because these were 'good pieces of work' (DEFRA official F, 2008).

Given the changes to the EU legislative framework, the contingency planning process required that vaccination should be built into the contingency plans. All of the DEFRA officials interviewed for this thesis maintained that the main priority for change within the contingency plan was to develop a vaccination strategy. The vaccination strategy is represented by a 'decision tree'. The decision tree basically allows officials to follow key steps in deciding whether the threshold for implementing a vaccination policy has been met. DEFRA official K elaborates on this:

The decision tree in the contingency plan was part of the fallout from foot and mouth and it has been further developed since. It tries to take an obvious approach to the issues that will be considered at each of the stages of decision-making based on the experiences of foot and mouth. (DEFRA official K, 2008)

The decision tree is shown in Appendix Two of the thesis. The decision tree is a systematic approach to deciding on the suitability of vaccination as a disease control strategy for controlling FMD on the event of an outbreak. Sir Brian Bender reflected on his time in the department when the vaccination tree was being developed and he noted that:

The decision tree for vaccinations was an important change. We pushed people quite hard on it. It was one area where I was pushing because one of the questions was whether we would vaccinate at the time'. (interview, 2008)

DEFRA official B, who was actively involved in the revision of contingency planning arrangements in the exotic disease policy sector, also argued that:

The decision tree makes hell of a sense because during an outbreak you do not have a lot of time to make public policy you only have time 'to do' things and you have to get on with them. You really don't have two weeks to go out to consultation and work out whether vaccination is appropriate. The purpose of the decision tree was to say 'well if this happens does that make sense and can we all agree?' (DEFRA official B, 2008)

Elliot Morley, as a former Environment Minister, made the case that 'the vaccination strategy is generally accepted' (interview, 2008). The events of 2001 highlighted the point that many in the livestock industry were of the opinion that vaccination would economically devalue their animals, thus making export difficult and damaging consumer confidence in their products. Nevertheless, chapter 3 detailed the point that the OIE changed its rules on exports in 2001 which made it easier for the major stakeholders to change their policy position on the use of vaccinations. Peter Kendall, President of the NFU, argued that the vaccination decision tree represented a clearer policy position than that of 2001. In 2001 his organisation was not committed to vaccination because it had not been convinced that it offered a better way of controlling the disease in the circumstances and the nature of the outbreak. The NFU's view, since the changes to OIE rules and the government's commitment to developing a clear policy on crisis management strategies, is that it would now follow 'epidemiological advice' on whether or not it would be appropriate to vaccinate (Evidence to the Anderson Review, 22 January 2008; see also HC-184, 2005: 22). What is clear, therefore, is that the government enjoyed the fact that there was a *triangulation* of views between DEFRA and key stakeholders over the development of the decision tree – it enhances the conditions for which change can occur. This triangulation can be extended further because Conservative Party policy changed from being hostile to vaccinations in 2001 (Yeo interview; Paice interview, 2008) to viewing vaccinations as an option for disease control:

Our view of vaccinations has changed. In 2001 I was against vaccination because if we had another outbreak, and it would be wrong to draw direct analogies between the two outbreaks because 2007 was from a single source, that was diffuse then I think we are going to have to use vaccines to contain the spread of the disease. I would vaccinate to kill. I don't believe that we should vaccinate to live because that is where trade suffers badly. Preventing the spread in order to buy time instead of killing everything immediately would be the best way to manage a disease crisis. That is what went wrong in 2001. Animals were not being killed as quickly as they should have been killed. If we can vaccinate to alleviate these problems then we should do it. (Paice interview, 2008)

Although the Conservatives do support vaccinations they, as can be seen from the quote above, support a 'vaccinate to kill' policy which is not necessarily a disjuncture from the

policy position of the government because the vaccination strategy leaves the option open for suppressive vaccinations. It is the case, however, that the government prefers a 'vaccinate to live' vaccination strategy (DEFRA, 2004: 3; HC-184, 2005: 22). There is a presumption that vaccination will be used unless it is clear that it would not be appropriate which can be described as a 'step-change' (DEFRA official A, 2008). In referring to this policy change, one DEFRA official went on to say that 'it is more about society's expectations and the politics of it than it is about technical change' (DEFRA official A, 2008). What is revealing from the statement of this senior official is that politics played an overarching role in driving the change process. With similarities to the arguments presented in the symbolic politics literature (see chapter 1), the images of the mass pyres of burning animals in 2001 were damaging for the government (as noted in chapter 3). This willingness of the government to change its policy on primary culling options, bolstered by the EU level change in the formulation and implementation of the Directive, meant that it was easier for the government to change policy because the political mood encouraged a reformist approach to change. This began in the immediate aftermath of the 2001 epidemic with the publication of the interim contingency plan which was the building block on which the 2004 'vaccination protocol' was built. The protocol's main function was to present the progress that had been taken in developing a vaccination strategy. The key areas of progress included commissioning a cost-benefit analysis on disease control strategies, having UK-owned stocks of FMD antigens with additional antigens being available in the EU Vaccine Bank for emergencies, and arranging contracts with an external contractor to implement a vaccine eradication programme under the direction of Animal Health (formerly the State Veterinary Service) (DEFRA, 2004: 4-5).

In 2007 the government decided not to vaccinate livestock due to the nature of the outbreak. This was because it was a smaller outbreak than in 2001 and it was in a low livestock density area. It is ironic that the outbreak was most likely caused by a leak from the pipes at the Pirbright laboratory where Merial Animal Health Limited (a vaccine production company) scientists were working on a vaccination for foot and mouth. Nevertheless,, the Anderson Review stated that 'Genus – the vaccine contractor - was ready to vaccinate as laid out in the ... pre-planned vaccination decision tree' (HC-312,

2008: 11). This is confirmed also by the interviewees as 32 of the politicians and officials regarded the vaccination decision-making process as more transparent and considered than in 2001 FMD. Again, the cost-benefit analysis for the 2007 outbreak resulted in the decision not to vaccinate because it was a 'fairly small contained outbreak and we were solid on our vaccination strategy' (DEFRA official B, 2008). Cabinet Office official B expanded on the government's thinking during the 2007 outbreak in terms of the politics of the response:

We spent a lot of time in 2007 considering the use of vaccination and we were fully prepared, as Anderson sets out, we had all of the plans in place and spent an awful amount of money on it for us not to use it. It was a small outbreak so vaccination was not justified. If it was a bigger outbreak then I am in no doubt that politically we would be using vaccination very quickly and that would bring us to a whole new ball game. My own opinion is that I cannot see Ministers agreeing to a 'vaccinate to kill' policy because we may as well slaughter things if that is the case. They wouldn't be agreeing to vaccination as a way of controlling the disease, they would be agreeing to vaccination a way to reduce culling. (interview, 2008)

This section of the chapter has served to illustrate that the government placed greater emphasis on eradicating culling, if the circumstances allow for it, in the post-2001 period. What is clear from the interviews is that this policy change was driven by political considerations. Even if the government pursued a 'vaccinate to live' policy then it would still demand a vast deployment of veterinary personnel. Indeed, in 2004 DEFRA finalised contractual agreements with 270 contractors to provide a range of disease control services (HC-184, 2005: 29-33). From this standpoint, the cost of an outbreak will remain substantial. As DEFRA official K explained when considering this key change in policy *'it is worth bearing in mind that there was a political commitment to change in 2001 and the events of 2001 was definitely a wake up call'* (interview, 2008, emphasis added).

Operationalising the Contingency Plan: Exercise Hornbeam 2004

The utility of crisis simulations and exercises as learning instruments is particularly relevant to the empirical case studies because the Directive requires that member states exercise their contingency plans twice within a five-year timescale. The exercise can be substituted by a real outbreak under the Directive or for another potential 'major epidemic disease affecting terrestrial animals' (Council Directive 2003/85/EC: Annex XV11, paragraph 11.2.3). The British government applied this derogation to the 2007 avian influenza outbreak. This means that post-2001 there have been the two-day 'Exercise Hornbeam' for foot and mouth outbreaks, which included a series of linked exercises between January and June 2004, and 'Exercise Hawthorne' for avian influenza outbreaks between October 2005 and April 2006 (State Veterinary Service, 2004; 2006).

Nine interviewees, all of whom were DEFRA and Cabinet Office officials, were directly involved in the management and operations for Exercise Hornbeam. The aim of Hornbeam was 'to review and update the Government's current contingency plans for a national outbreak of foot and mouth disease and thereby establish readiness for such an outbreak' (SVS, 2004: 3). As well as acting out scenarios in South West England, Exercise Hornbeam's operations also stretched to London, Cheshire and Lincolnshire in its aim to discover how well the country would cope with another epidemic. The exercise included a series of tabletop exercises before a full-scale exercise. The full-scale national exercise was used to draw lessons from the preceding tabletops and looked at the major phases of an outbreak in terms of suspicion, confirmation, regional spread of the disease, and the reaction times of personnel – including the potential use of emergency vaccinations to control the disease (SVS, 2004: 3; DEFRA officials A, B, C, D, G, F; Cabinet Office officials A and B; Bender interview, 2008). For example, Sir Brian Bender argued that Hornbeam was different from the exercises staged by DEFRA (and MAFF) in previous years because it was not just a locally-concentrated exercise and it included more than animal and veterinary-orientated personnel:

In 2004 we had a very big emergency exercise to test the contingency plan. There always had been emergency exercises but it tended to involve only the [DEFRA] animal health people and the State Veterinary Service. What we

did after foot and mouth was to involve the whole department. In our exercise in 2004 there were several hundred people involved. The scientific advisors were involved in this alongside people who knew about logistics and risk management and communications. Communications is important because external bodies ask when will you vaccinate and in what circumstances? It was a kind of iterative process where a number of people were involved but I was pushing it forward. We also had a structure whereby the management board met, not to second guess, but to exercise a gold command and exercise resourcing issues and this had a battle rhythm that would meet most days when it needed to rather than just pencilling in a future meeting. This was a major step towards changing the culture of contingency planning. (Bender interview, 2008)

The interviewee went further to provide an account of the course of events that took place during the exercise:

We had a number of discussions around that but in the end we had to create scenarios and stages and that was executed when we ran the exercise in 2004 in day seven and eight because it was a relevant consideration because on day one you know what you are going to do now. You don't need to make anything up on day one because you have just got to follow the contingency plan. By day seven and eight when we were getting to the end of the first incubation period you know more about how it is developing as a disease then you have got choices ... It resulted from hard pressure that we must have greater clarity about what we might do in certain circumstances as opposed to a kind of implication that we will know when we see it. (Bender interview, 2008)

It can be seen from DEFRA's own 'lessons learned' report into the exercise that the exercise involved a Minister, senior officials, staff from the Department's headquarters and five Animal Health divisional offices across Britain, Cabinet Office officials, SVS officials as well as other public bodies (including police and local authorities) and stakeholders (such as the RSPCA) – altogether more than 500 people (SVS, 2004: 77-80). A wide range of industry bodies such as the NFU were invited to attend as observers and their observations were sought (HC-184, 2005: 20-21). Although Exercise Hornbeam was heralded as a success by the department and the National Audit Office (NAO), it was clear that further work in the contingency planning process was required. The NAO identified the following main points:

- changes to roles, responsibilities and organisational structures at senior levels;

- the clarity and presentation of the contingency plan and instructions;
- the need to improve readiness by identifying in advance trigger points for policy decisions during an outbreak;
- the need for improvements to communication systems and procedures; and
- the requirement for better information collection, sharing and dissemination.

(HC-184, 2005: 20-21)

DEFRA published a revised contingency plan which incorporated the lessons from the exercise (DEFRA, 2006). Thus, as a learning device the exercise served its purpose. DEFRA official D indicated that the exercise was an effective way to judge the changes that have taken place to contingency planning because it was as demanding as dealing with a relatively small outbreak:

Hornbeam was quite effective as a lesson learning exercise. Inevitably one learns the lessons from those exercises but actually when you have the next outbreak for real it is at those points that a new set of issues come up. It is almost like a bottomless pit in some ways. I think that the real value comes in when you are keeping skills refreshed. You might think that these are just exercises are just exercises and we don't take let seriously. That is not the case. They are actually very stressful because they are carried out like the real thing. Everybody knows what their role is, people have an intense burst of work over a forty eight hour period and provided that you buy into the whole thing, by the time you finish the exercise you are knackered. You sometimes need a few days off to recover from them. They are a very worthwhile thing to do. They do cost a lot of money to put on and it takes several months to plan those things which I believe that if you have a small containable outbreak of disease, although nobody would choose to have that, but if you are fortunate enough to have it, it does act as an effective way to testing and exercising what you are doing. That means that if you do have an outbreak at a later stage then you will be in a much better position to deal with it. (DEFRA official D, 2008)

In referring to the role of exercises DEFRA official F also noted that ‘there is a great deal more effort put into ensuring that we are rehearsed and prepared’ (interview, 2008). The crisis management literature generally accepts that training civil servants for crisis management is absolutely crucial (Carrel, 2000; Drennan and McConnell, 2007). But equally, chapter 1 showed that crisis management simulations and exercises do not reflect the realities of a crisis response. One fundamental reason for this is that exercises are *planned* that take several months to prepare for. In fairness, however, within the exercise staged by DEFRA there was scope for a change in the scenarios that the actors involved had to respond to (Bender interview, 2008). Indeed, a very senior crisis management coordinator for the UK government based in the Cabinet Office argued that:

Contingency planning exercises are very effective. My memory after the July 7 bombings confirms that. We had a pretty similar large-scale contingency planning exercise with a more challenging scenario around three months earlier. It helped just like we were doing another exercise. It was absolutely just like it. I remember at the end of the first night of Hornbeam we were making exercise-related jokes like whether the umpire will throw another problem our way. That is what umpires do at the exercises – they can decide to complicate things and send another incident your way to see how you will cope. The exercises are absolutely fundamental. As long as you don’t go in thinking that you will run your response exactly the same way as the exercise because you have got to adapt. (Cabinet Office official A, 2008)

The last sentence of the quote above has shades of the criticisms of exercises cited in the crisis management literature in that it would be incorrect to suggest that the shifting pressures of the exercise reflect the realities of the uncertainties, threats and urgencies thrown up by a real-life crisis (Boin et al., 2005: 2-4; Drennan and McConnell, 2007: 137). Tellingly, DEFRA official C, as a senior official in the department and who had coordinated responses to blue tongue intermittently throughout 2007 offered his view of the comparison between the real thing and the simulated crisis management experience:

I think exercises help but the extent to which they help I am not really that sure. I think responding to the reality is what counts. Simulations can’t be useless. I have dealt with two incidents since I have got here and the difference between doing it for real when you are in the position that I am and doing it as an exercise is that you realise that ‘this is it and I have got to deal with it’. You have got to make decisions and implement them quickly, robustly, record them, and get to a clear idea on how you reached that decision

as you may have to justify them. It is all recorded so you know that you are under close scrutiny so I don't think there is any other way of doing it. (DEFRA official C, 2008)

Another major difference that DEFRA official C recognised that the politics of crisis management is by no means paralleled in the management of an exercise because the response is taking place in a managed environment and beyond the intense scrutiny of the media, parliament, and wider society. The main role of the exercises is that they assist in identifying performance gaps such as those recognised by the NAO. Indeed despite being a key architect in the Hornbeam operation, DEFRA official B did not avoid addressing this point:

Yes exercises are absolutely essential and very much needed but they are certainly not a substitute for actually 'doing it'. That said, exercises throw up where your gaps are e.g. you thought you knew what your policy was but then when you are pressed during the exercise you realise that you do not know exactly what you would do. They are really good at getting people to perform different roles and having different responsibilities because your role does shift significantly. They are also really good at giving industry, Ministers and policy colleagues a real sense of what it is going to be like and the change of energy that you need ... I do think this is an incremental process so the next time that you do it you get better at it and I think that is you as an individual because you know what you have to do and it is the organisation that learns because you have the right people with the right skills and understand that is a very different kind of work. It is not like a normal peacetime role. (DEFRA official B, 2008)

It was the government's aim to test for a 'national outbreak' but Hornbeam was actually designed towards responding to a 'regional outbreak' (SVS, 2004: 3). This is a major fault line in the government's preparedness planning because the issue of scalability, which was a monumental problem for the government in 2001, was not tackled head on by the government. This further illuminates the inadequacy of the 2004 exercise as a template for a real response to a wide-scale animal outbreak similar to that experienced in 2001. The government's own report stated that it would be 'too ambitious to exercise the complete response to an outbreak of foot and mouth disease because of the complexity that would be involved' (SVS, 2004: 8). Inevitably, this meant that major elements of the official contingency plan were not exercised. The significant elements included no on-farm activities, no additional staff to assist officials, no contingency contracts (negotiated

post-2001) were invoked, the devolved administrations did not fully activate their contingency plans, and the 'Regional Resilience machinery' in the regions and the Local Disease Control Centres (LDCCs) were not activated (SVS, 2004: 8). Moreover, despite the fact that MAFF's pre-2001 contingency plan was heavily criticised in all quarters for being limited in scope, DEFRA's planning arrangements *still* did not include explicit consideration of a worst-case scenario. Nonetheless, the department 'considers that the plan provides for a wide range of scenarios' (HC-184, 2005: 3). In terms of scaling-up the crisis management response, the former CVO noted that the national aspects were scalable because the contingency plan was based on the 2001 outbreak and the National Disease Control Centre at Whitehall is designed to cope with multiple clusters of disease (Evidence to the Anderson Review, 22 January 2008).

In short, the exercises are an important mechanism to ensure that the institutional memory of the department is not lost - a key problem associated with MAFF's response to the 2001 epidemic. If anything, they allow personnel to keep 'fresh' in terms of the steps to take in the contingency planning and crisis response. On this point, in his evidence to the Anderson review, the Head of Human Resources in DEFRA, Bob Holdsworth, said that 'contingency exercises and actual outbreaks had a key part to play both in showing what people needed to do and identifying gaps' (Evidence to Anderson Review, 16 January 2008). DEFRA officials G and K substantiate this argument:

The exercises are mandatory every few years but there has to be one for foot and mouth within four years. In 2001 we had the change in personnel and change of department and we didn't have another outbreak of anything for several years so you need those exercises to keep you fresh. You can go for a long time without an outbreak and people move on so it is about knowledge transfer and that is why the contingency plan is very good to have. We have a great deal of outbreaks in the past two years that it is almost part and parcel of what we do. Again the point is that the simulations are incredibly useful especially if there has been a dip in the amount of disease outbreaks that we have to deal with. At peacetime we are constantly training and doing lessons learned exercises. If we are not having an outbreak then we are practicing for an outbreak. This is constant. Today we had two new press officers come into the department so we had a training session today that has taken them through everything. It can be quite scary because of the whole infrastructure that is there such as the bird table meetings. Outbreaks are always on our mind ... You have to know what the protocol is. (DEFRA official, G, 2008)

Exercises are not a substitute for doing it properly but they are extensive and do test your preparedness capabilities. Hornbeam taught us some significant lessons. Either about how certain bits were not working very well. It is important that exercises take place regularly. They keep you fresh. (DEFRA official K, 2008)

The interview data and the NAO report elucidate, therefore, that lessons have been learned from 2001 in terms of widening the scope of stakeholder involved in the exercise. This was a major criticism made by the 2002 NAO report into the 2001 foot and mouth epidemic (HC-939, 2002: 40-41). Widening participation is a lesson learned which was promised by the government following the NAO's recommendation (RRFMI, 2002: 19). Indeed the SVS's own report post-exercise report of Hornbeam concluded that 'it should be recognised that Great Britain now has a better state of preparedness than was the case in 2001. In many respects Exercise Hornbeam confirmed this' (SVS, 2004: 7).

Contingency Planning: Assessment of Change

The findings of this thesis, as a result of empirical investigation of the contingency planning process, with particular emphasis on disease control strategies and the exercises, show that the government has been able to respond to a veterinary-induced crisis much more expediently than in 2001. Within two to three years DEFRA had reconfigured its crisis management response and all of the 32 interviews conducted in the UK confirmed that the 2001 crisis was *the* stimulus for change. The FMD Directive provided a structure from which change could take place to pre-crisis planning. The vaccination policy and the fact that DEFRA had to regularly execute the contingency plans in the form of crisis management exercises is a significant shift from the pre-2001 crisis management arrangements. On the whole, post-crisis changes to contingency planning arrangements can be characterised as *policy reform* rather than *fine-tuning* or *paradigm shift*. The interview data points to the fact that the 2007 outbreaks are solid indicators of the amount of policy-orientated change that has taken place in this area since 2001 (see also HC-312, 2008). The fact that the plans are updated annually and tested signifies a major commitment on behalf of DEFRA to depart from past practices and to make sure that institutional memories of the 2001 crisis are not forgotten. Although the plans do not

make explicit reference to, and the exercises are not designed for, the ‘worst-case scenario’, which was a key criticism of the Anderson and European Parliament inquiries, the arrangements now in place for managing an outbreak are designed to cope with a widespread outbreak (this is revisited in chapter 5).

The next section of the chapter considers the policy-orientated changes to the way in which DEFRA has utilised scientific advice for veterinary diseases in the aftermath of the 2001 foot and mouth crisis.

Scientific Advisory Policy Structures Post-2001

Twelve interviewees had roles within, or relationships with, DEFRA’s post-2001 scientific policy structures. Chapter 3 documented the shortfalls in the role of science in the crisis management response to the 2001 epidemic. The use of science by policy-makers in 2001 was *ad hoc* and there were shortcomings surrounding the FMD science group with regards to its membership and the fact that epidemiological modellers were in the majority – this meant that other FMD specialists found it difficult to relate to their specialisms. The parliamentary evidence and interview data confirm that it was accepted by Margaret Beckett and Sir Brian Bender that a standing advisory committee should be founded which would be an ongoing source of advice (HC-111, 2002, Q.22; Beckett and Bender interviews, 2008). Chapter 3 also showed that the government’s commitment, as a result of the 2001 epidemic, to base its ‘policy decisions on best available science and ensure that the processes for providing scientific advice are widely understood and trusted’ (RRFMI, 2002: 10-11). If one fast-forwards to 2007, DEFRA claimed in its official submission to the Anderson Review that:

‘[s]cience forms the backbone of DEFRA’s evidence-based strategy to eradicate any exotic animal disease outbreak. Building upon the lessons learnt from the 2001 outbreak we have ensured that the latest scientific and veterinary developments form an integral part of our disease response. (DEFRA, 2007: 18)

Margaret Beckett singled-out the way that DEFRA used science as one of the major implications of the 2001 crisis (interview, 2008). Changes to the policy structure of the use of science have had both an intra and inter-departmental spheres. DEFRA recruited its own Chief Scientific Adviser (CSA), Sir Howard Dalton¹⁵ in March 2002 who would liaise with the government's CSA, Sir David King¹⁶ in order to generate a network of scientific officers across Whitehall. Beckett elaborates on this point:

One of the big implications of foot and mouth 2001 was the way in which DEFRA used science compared to the way that MAFF used science. The fact that David King was brought in from completely outside of the department to do modelling and things of that kind and my impression is that this caused a certain amount of resentment. Afterwards David recommended strongly that the department should have a CSA. David King was the Chief Scientist but there should be someone at a much higher and senior level to take control of the science and to liaise with other scientists across Whitehall. That is one thing that David King developed but I am not in any doubt that that had a continued influence on policy-making. (Beckett interview, 2008)

The recruitment of departmental scientists was not only a change of personnel in Whitehall but the beginnings of wider structural changes to the role of science in the decision-making process. According to Sir David King, in his reflection of the time that Sir Howard entered the department in 2002, Sir Howard did not enter an easy atmosphere. Sir David recalled that 'it was a very inward-looking department that didn't make use of scientific resources outside' (Times Higher Education online, 2008). In referring to Sir Howard's early experience in the recently formed department, Sir David went on record to say that 'in his first year he was rather disillusioned and I had to persuade him to stay on' (Times Higher Education online, 2008). This disillusionment was largely down to the fact the department had to become accustomed to working with an external high-profile scientist and, simultaneously, Sir Howard had to get used to how the Whitehall system operated (Beckett interview, 2008). Sir Howard was persuaded to stay in the department and he established what became known as the Scientific Advisory Council (SAC).

¹⁵ Shortly before the passing of Sir Howard in January 2008 Professor Robert Watson was recruited to the post of CSA to in September 2007.

¹⁶ Professor John Beddington succeeded Sir David King as the government's CSA and Head of the Government Office for Science from 1 January 2008.

From the Science Advisory Group to the Scientific Advisory Council

In the aftermath of the 2001 foot and mouth crisis the predecessor to the SAC, the Science Advisory Group (SAG), was created on 22 October 2002. This was an interim group pending the establishment of the SAC as a response to the recommendations of the 2002 Anderson report and the Phillips report into BSE. Both reports called for a change to the way that DEFRA used science including that there should be greater engagement with the scientific community in the policy-making process which would serve to provide robust and external challenges to the use of information.

Ministers announced the establishment of the Science Advisory Council (SAC), an independent non-departmental public body (NDPB) on 3 February 2004 to provide the department with expert and independent advice on science policy and strategy. The drive behind creating the SAC was not only the BSE and FMD inquiries but a departmental-wide change to the long-term use of evidence gathering and innovation known as DEFRA's Science and Innovation Strategy 2003-2006 (DEFRA, 2003). The SAC guides DEFRA's scientific priorities and work across the complete range of the department's policy activities including horizon-scanning as well as dealing with immediate risks (DEFRA, 2008). The SAC communicates its advice to the government's CSA then transmits its advice to the CSA to Ministers. There is usually a specific number of members on the SAC who sit on the Council in the long-term but particular experts are co-opted into the Council depending upon the issue that is relevant at a given time. There are experts who advise the SAC, and ultimately DEFRA, on risks that may have implications for the policy remit of the department (DEFRA official O, 2008). Under normal circumstances, the SAC is comprised of 15 independent members (appointed through open competition). Members are selected for their breadth of scientific knowledge across the range of topics covered in DEFRA's remit (including the social sciences). The SAC also has a non-scientist lay member and an independent Secretary. The SAC subgroups, which operate under the SAC structure, carry out focused studies or they are created as a response to emergencies. Table 4.1 shows the different subgroups of the SAC. For example, the SAC's Epidemic Diseases sub-group (SAC-ED) was reconvened following the outbreak of FMD in Surrey in August 2007. The SAC also carried out much work into scrutinising the contingency planning efforts of DEFRA at several intervals since the SAC-ED was set up

in 2004. Between May 2004 and November 2007 SAC-ED published fifteen papers on FMD ranging from a review of DEFRA's contingency plan to analysing the scientific issues surrounding the 2007 outbreak (SAC, 2004; 2007).

Table 4.1: SAC Subgroups 2004-Present

SAC SUB-GROUP	DESCRIPTION
<p>Epidemic Diseases (SEC-ED)</p> <ul style="list-style-type: none"> • Foot and Mouth Disease • Blue Tongue • Avian Influenza 	<p>Established to provide advice on epidemic disease issues. The sub-group has focused its work on DEFRA's Foot and Mouth Disease and Avian Influenza contingency plans and is now working on Bluetongue.</p>
<p>Capability Review (SAC-C)</p>	<p>Established to provide advice and feedback to a DEFRA project assessing DEFRA's long-term strategic knowledge capability needs. The project considers the key knowledge requirements for DEFRA both now and into the future and will guide strategic science investments.</p>
<p>Social Science (SAC-SOC)</p>	<p>Established to consider the capacity and uptake of social research in DEFRA. The sub-group is currently focusing on DEFRA's ability to effectively contribute non-economic social research out-put to its evidence base and its subsequent uptake into policy development.</p>
<p>Science, Evidence, and Innovation Strategy (SAC-S)</p>	<p>Established to consider the development and content of DEFRA's Evidence and Innovation Strategy.</p>
<p>Literature Review Relating to Bovine Tuberculosis (SAC-TB)</p>	<p>Established to consider the literature review of research on bovine TB and the comments from the peer review thereof, and provide an overview assessment for the Chief Scientific Adviser on the quality of the available scientific evidence.</p>
<p>Governance (SAC-G)</p>	<p>Established to consider governance issues relating to science advice in DEFRA. Issues include DEFRA's quality assurance and peer review programme, DEFRA's long-term science advice needs on bovine tuberculosis, and an end-to-end review of DEFRA science into policy.</p>
<p>Risk (SAC-R)</p>	<p>Established to consider how , DEFRA uses science in the handling of risk, with particular emphasis focussed on considering , DEFRA's ability to compare external risks and their impacts, and in particular to undertake comparisons between risks in different policy areas across the Department's remit.</p>

Source: <http://www.DEFRA.gov.uk/science/how/sac/advisory05.htm> (accessed 26 September 2008).

With regards to the scrutiny functions of the SAC, DEFRA official F made the point that the external perspective provided by the SAC 'adds value' and that the SAC has a

freehand to analyse DEFRA's activities because 'they ask when they want to discuss us rather than the other way around' (interview, 2008). In addition, when DEFRA scientists are engaging with the Cabinet Office during a disease outbreak, their contributions are 'moderated by the SAC' (Cabinet Office official A, 2008). Cabinet Office official A argued that:

We bring in scientists, very deliberately, around the COBRA table the chief scientist who can provide a peer review for what science DEFRA provides us with. It almost legitimises what is happening scientifically and the decisions that we make. So there is a double bank of peer review. One at a lower level, especially in terms of preparedness planning of course, with DEFRA and the Scientific Advisory Council, and the second which is through the Chief Scientist. (Cabinet Office official A, 2008)

The process of moderation means that DEFRA can validate science in the decision-making process. Fundamentally, the word *validation* is the core to the existence of the SAC. The SAC is not there to generate evidence as such but validates the evidence that already exists and identifies gaps if there is no evidence-base. DEFRA official D made this point:

The SAC has not helped to generate evidence. As such I think what it has helped to do is to validate some of the evidence that we have already. It is not an unreasonable question that you are asking because I think that when we started out I think there was a feeling that when the SAC started out that they were there to come up and help provide the evidence. That was not their view and I think that they felt that they were not best placed to do that. What they are good at doing is saying 'OK that is your policy but what is the evidence-base for it?' They will then look at it then give us their view and whether there is any major gaps that need addressed. They don't, however, produce any evidence themselves. In strict terms and I suppose in its broadest connotation you could say that they contribute to the evidence-base in terms of the fact that they are validating other stuff that is there and by doing that it adds to the process. (DEFRA official D, 2008)

DEFRA official K stated that when there is a gap in the evidence-base of the DEFRA research and development programmes, the Commission, and other member states will seek to fill these gaps (interview, 2008). For exotic animal diseases specifically, there is cooperation between the national experts and the expertise in the EU Reference Laboratories. The interview data also confirms that although the disease response is scientifically based, there is a need for a reliance on judgement(s). It may also be the case that the uncertainty is not there and, therefore, the advice of the SAC is not required.

DEFRA official F and Cabinet Office official A, as a result of their own experiences, outline these two different scenarios:

Yes the disease response is scientifically based but there is always a lot of uncertainty. In any emergency, for example the July 7th London bombings, the information that you have in the first couple of hours is the best information available to you but a lot of it turns out to be inaccurate or completely wrong and that is normal. Even later on you are acting on incomplete evidence. On BSE even now we do not know whether BSE was started by a sporadic occurrence in a cow or whether it is a mutation of a sheep disease. We simply do not know. There is always that level of uncertainty there and how you respond to that uncertainty is a matter of judgment so it is crucial that you have the science and you base your decisions as best as possible on the evidence that is available to you. Yet that does not give you the answer. Ultimately you have to do a risk assessment and you have to be guided by that in making a judgment. (DEFRA official, F, 2008)

Sometimes you say to the scientists 'go away', but a bit more diplomatically of course, or it could be that the science is genuinely unequivocal ... So you have to make a risk policy, a risk judgment on the basis of some kind of precautionary principle. We say 'how much do we have to spend to mitigate that risk?' (Cabinet Office official A, 2008)

The development of the vaccination decision tree called for science to be positioned at the centre of this control strategy simply because of the scientific nature of the policy. Twelve interviewees made the case that this was a major lesson learned because science permeates most policy decisions in the disease control and veterinary policy domain (see also HC-312, 2008: 13). This is not just the case for the development of a vaccination strategy but also for rapid diagnostic testing, risk modeling, and epidemiology.

Twelve officials acknowledged that the scientific aspects to policy have to be managed alongside other policy spheres. In other words, although evidence-based policy-making is the policy backbone of DEFRA's activities, there is a need for a pluralistic approach to policy-making in order for it to be rational and justifiable. DEFRA official O elaborates on this sentiment:

There are the facts of the science and there is the science that has identified uncertainty. There is the science of risk assessment and then there are economic arguments and political and social arguments that all come into

policy so that the Minister and the advisors to the Minister do not jump to take the cognisance of the science. I mean sometimes the science is certain and sometimes it is uncertain science, science can provide risk assessment, and there is evidence in the social science and there are economic elements so all of these must feed-in in addition to the political and social issues. The political judgement of Ministers also come into making a policy decision. So it is not just down to scientists but where the science is certain the Ministers would take account of that in coming to a decision because they know that the policy must be rational. (DEFRA official O, 2008)

DEFRA official D, in his capacity as the science coordinator for animal health and welfare in DEFRA, indicated that the same could be said for evidence-based learning *in itself*. Indeed evidence-based policy, based on learning from the evidence gathered, needs to be triangulated. DEFRA official D confirmed that his team relies on a 'collegial way of doing things rather than relying on specific individuals' (interview, 2008). This triangulation of evidence argument, as a way to inform the policy change process, was picked up on by DEFRA official H and he maintains that this means that 'evidence-based' is a 'cumbersome term' which has become part of common parlance in recent years:

In terms of evidence-based policy changes the word 'evidence-based' has always struck me as a slightly cumbersome term. To be honest I am not sure of any other kind in relation to having a base of evidence in practical terms. Again I think it is that emphasis in the same way as consultation in that it was always there to a greater or less degree. What I think has been usefully introduced is a much more overt acceptance that it is a vital part of the process in that you must not forget it. We now think much more about having to include it. Both apply to the consultations and the evidence base. Perhaps if you go back to the days of the Indian civil service where our job was to simply go out there and tell people what to do without the implications of how effective they were was a long time ago. In my recent history of being a civil servant our job was always to use evidence to create policies so I don't think it is a new concept but it has accelerated. (DEFRA official H, 2008)

It was also identified by DEFRA officials A, B, F and O that it is crucial to avoid worrying about any individual having too much expertise, since knowledge is something that must be embedded within the organisation or policy team within the organisation. Chapters 2 and 3 noted that organisational memory and knowledge is a key part of making sure that the decision-making process can move from point A to point B based on a collective institutional knowledge. DEFRA official D put it in more crude terms by

saying that 'we all need to make sure that we transfer knowledge overtime in case the one or two people with the expertise gets run over by a bus or something like that' (interview, 2008). DEFRA official D elaborates on this point and argues that it should always be a priority within the department that an institutional memory is built up to avoid knowledge leaving the department when personnel leave:

I am as an individual a source of advice but I work as part of the team when there is an outbreak. The important thing is making sure that you do have enough people who have sufficient knowledge regarding the task at hand. I think in foot and mouth we do have the knowledge, some of the other disease perhaps less so. In ten years, if we don't have another outbreak of foot and mouth, does that mean that some of that expertise might have moved on and disappeared with individuals? You are right about the fact that we need to keep this under review. (DEFRA official D, 2008)

On this basis, therefore, veterinary officials, who have scientific knowledge and expertise themselves, can be a source of knowledge and advice but that is within the context of other scientific advisory structures such as the SAC. Since the 2001 epidemic the creation of the SAC avoided one particular scientific grouping, such as epidemiological modellers, having more influence over other sources of evidence, which was a key problem during the 2001 crisis:

In terms of evidence-based learning the evidence comes from a number of sources. I think there is a temptation for people to think that evidence-based policy as being research and development. In my role ... I am in charge of the research budget which is about thirty five million pounds. I have a team that assists in that. One of our roles is to work with policy colleagues in deciding what the key science questions are that need to be answered to be able to give you that evidence for the policy. We spend quite a bit of time on that. There is evidence that comes from that source but there is evidence that comes from elsewhere as well. Sometimes it is to do with the experience that people have got overseas. Sometimes it is our own field experience in this country in dealing with diseases. It all adds up to a kind of patchwork of how can we do things. (DEFRA official D, 2008)

On this basis this 'patchwork' or pluralistic approach to evidence-based policy-making is not necessarily scientific-based policy-making but policy-making based on policy-orientated *and* scientific considerations. This approach has developed not just in response to the 2001 crisis but as part of a government-wide approach to policy-making (e.g.

following the government's 1999 *Modernising Government* White Paper). This pluralistic approach to gathering evidence means that the SAC can make recommendations to DEFRA but they might not always be accepted:

The SAC put forward reports with recommendations in. They did one on avian influenza in early 2006 where they looked at a lot of the control issues arising out of avian influenza and made a number of recommendations to us. In their report we did not accept all of the recommendations. Some of the recommendations were good pure science but were not actually practical to do it. It wouldn't work. So you get cases like that when we do not accept the recommendation and we tell them why we are not accepting the recommendation. But it is not like a disagreement as such. They put forward their recommendations and do not say that 'you must do this' they say our advice is to look at this and we get back to them and say it is or is most appropriate for the following reasons. (DEFRA official F, 2008)

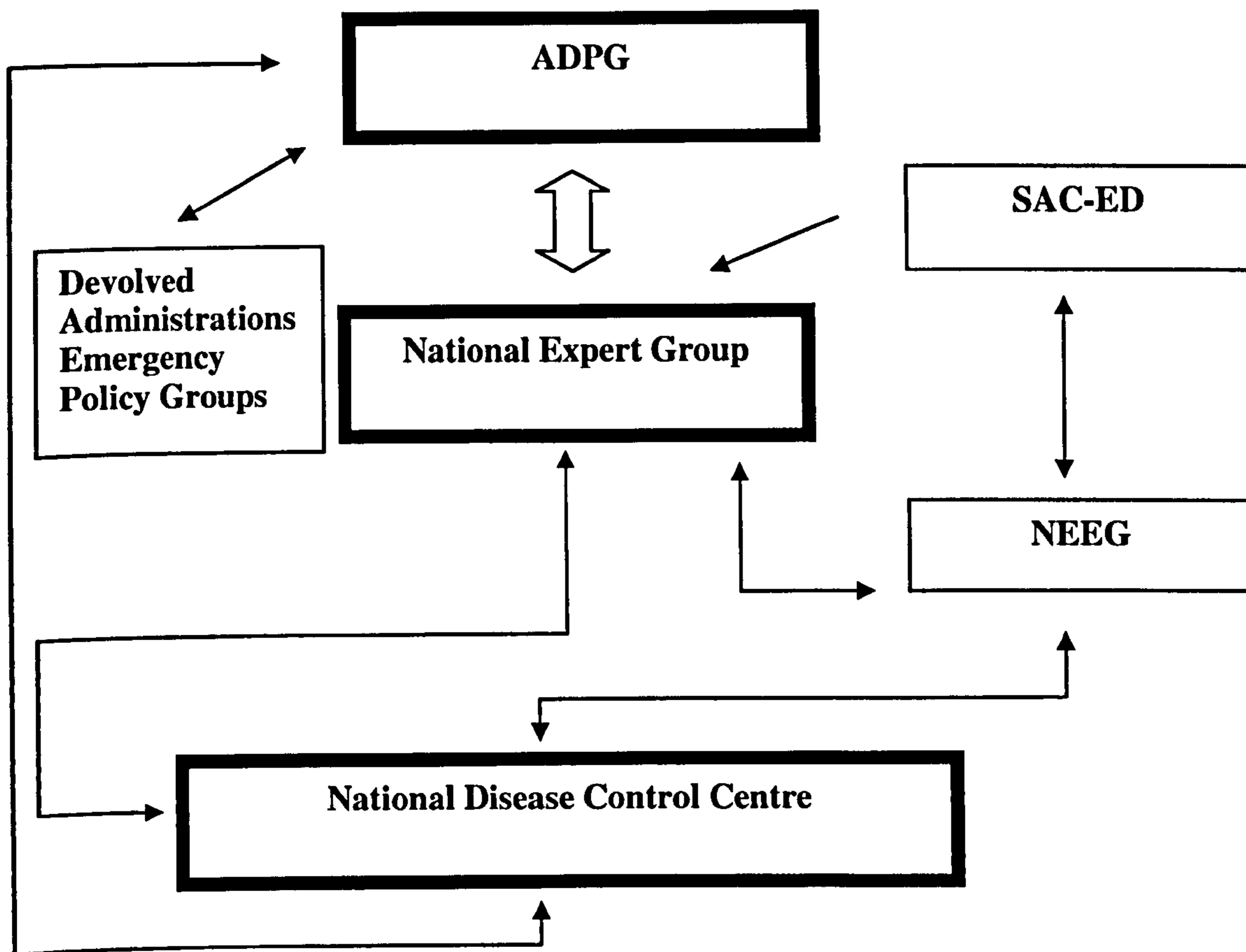
Overall, the interview data confirms that the establishment of the SAC was a significant change in the use of science in the decision-making process. The interview data confirms, as does DEFRA's own submission to the Anderson Review, that the creation of the SAC (and the SAG that preceded it) was a response to the recommendation of the 2002 Anderson inquiry that DEFRA should maintain a properly constituted standing committee ready to advise in an emergency on scientific aspects of disease control including advising on horizon scanning and emerging risks (DEFRA, 2007: 34). Although the SAC is the main change to the role of scientific advice and scientific experts in the contingency planning process, a further key finding of the thesis is that there has been the development of networks of expertise that include the SAC.

Wider Networks of Expertise

There are other groups of experts that link up with the SAC and DEFRA in the contingency planning process and during an outbreak of an animal disease. These networks of expert groups did not exist in 2001 but in 2008 'special expert committees exist which take the best scientific brains in the country to look at disease-orientated problems' (DEFRA official O, 2008). First, there is a legal obligation under Article 17 of the 2003 Foot and Mouth Directive for the UK to establish a National FMD Expert Group

(EG). The role, membership and function of the EG set out in the Directive was specific, however, the role and membership also ‘needs to be set out in the context of the UK command and control structures set out in the FMD contingency plan’ (DEFRA, 2005: 1). The EG includes representatives from the laboratory concerned, vets, modellers and epidemiologists (DEFRA, 2007: 20). Furthermore, the EG is permanently operational and provides factual advice and recommendations on disease and its control to the Animal Disease Policy Group (DEFRA, 2005). Second, the National Emergency Epidemiology Group (NEEG) (comprised mainly of experts from DEFRA, Animal Health, the Veterinary Laboratories Agency), analyse patterns of disease, assesses risk factors and advises on control measures including surveillance and vaccination (DEFRA, 2007: 20). Third, the aforementioned Animal Disease Policy Group (ADPG) (comprised of officials from across Government) is chaired by the CVO or Director of DEFRA’s FFG. The main function of the ADPG is to take advice from the EG (and others including the NEEG plus other parts of DEFRA and Animal Health) and provide disease control policy advice and strategy recommendations to DEFRA Ministers (DEFRA 2007: 20). Thus, when the FMD Directive makes reference, as it frequently does, to the fact that the EG must advise the member state ‘competent authorities’ this refers, in the case of the UK, to the ADPG. When there is an outbreak, the respective devolved expert groups become locked-in to the advisory process and the Whitehall-based National Disease Control Centre is the main forum by which information is channelled alongside the ADPG which, as noted above, is made up of government officials. Figure 4.1 presents a schematic which shows the relationships between the aforementioned groupings during an outbreak.

Figure 4.1: Schematic of Key Groups During an Outbreak



Source: DEFRA (2005: 2)

Figure 4.1 sets out the networks of expertise that have developed since 2001 which is an illustration of the conclusion of the Anderson Review that ‘far better integration of scientific advice and capabilities ... was a big lesson learned from 2001’ (HC-312, 2008: 6). Yet James Paice, the shadow Minister for DEFRA in 2008, highlighted a key criticism of DEFRA’s approach to creating this scientific network. Although Paice suggested that the changes to scientific advice and decision-making in the wake of the 2001 crisis was a positive development, he argued that this should not be at the expense of agricultural advisory committees which ensure that the policy network branches out to farmers:

Having an advisory council is fine if you have got time to take all of that advice and go through all of those processes. Inevitably if they are advising government then there will be an issue of timeliness and also it is scientific. The science is important but you also need to have an understanding about how farmers think about local difficulties about handling livestock and the difficulties of moving livestock about the countryside. I am talking about the day to day things that people do all of the time. It is about understanding the psyche of farmers. If you spend all of your life in London then you don't know these things. Even the slightest thing could be a 'shock horror moment' because you have just never thought about it. I am not sure if the Scientific Advisory Council is going to achieve that. Under MAFF there were agricultural advisory committees but the government got rid of them in 1997. That was groups of farmers from different regions who were the eyes and ears of MAFF on the ground. They could ring up the Minister there and then and say if there was a problem in their area that needs to be sorted. It was a way to cut through bureaucracy. That illustrates that closeness between farmers and policy-makers which doesn't exist now. (Paice interview, 2008)

The point made by James Paice about the role of agricultural advisory committees is a fair one but the government sought to make sure that this issue would be addressed as a result of enhanced stakeholder engagement with farming representative bodies (see next main section of the chapter). Even so, Paice's view is not shared by his former shadow ministerial colleagues. Indeed John Gummer, Tim Yeo, and Keith Simpson all argued that lessons had been learned since 2001 in terms of the ways that DEFRA utilises science – albeit a change, they argue, driven by political considerations rather than a concerted effort to draw lessons in any institutional sense.

The Role of Scientific Expertise: Assessment of Change

Both the interviews and the Anderson review show that DEFRA's use of science policy structures has changed significantly. For example, the Anderson review makes explicit reference to the fact that the 'government positioned science at the centre of its control strategies during the 2007 foot and mouth outbreaks – a major lesson learned from 2001' (HC-312, 2008: 19). Both the 2007 outbreaks of foot and mouth and avian influenza showed that scientific advice had become integrated into contingency and crisis management process. Anderson's review did recommend, however, that DEFRA increases the level of technical and scientific expertise on a day-to-day basis and that

there should be greater transparency in publishing scientific advice, however, the review stated that scientific advice supported policy decisions throughout the outbreak - a significant example being the methodologies and considerations surrounding the decision not to vaccinate (HC-312, 2008: 19). Thus, not only did the interviewees regard the use of science and scientific policy structures as being a major area of change since 2001 but the independent Anderson review largely came to the same conclusion. Margaret Beckett emphasised persistently in her interview that the use of science has changed radically since 2001 which, in terms of the characterisation of post-crisis change, can be regarded as *policy reform*. This is assisted by the fact that the DEFRA recruited its own scientific advisor and that policy structures emerged incrementally between 2001 and 2007 – namely the SAC and the wider networks of expertise that fed into the policy process. This bolstered DEFRA’s horizon-scanning capabilities. Evidence can now be held up to scrutiny and validated more effectively in contrast to the experience of 2001 when there was no clear scientific advisory structure in place. Before 2001 the role of science in the policy process was *ad hoc* without any kind of standing body in place to advise DEFRA (HC-888, 2002).

The next section of the chapter presents findings concerning the extent to which the government has enhanced stakeholder engagement in the post-2001 period.

Stakeholder Engagement

When you were asking the question on stakeholder engagement, and how this has changed, the word that was going through my mind was ‘acceleration’. The process of stakeholder engagement has changed in a big way. In terms of the domestic disease response, those decisions are definitely made in partnership but ultimately the pace in which those decisions are made, unless you have already got them in your contingency plans, decisions will have to be taken and they are. Ultimately not all stakeholders will be happy anyway but there has definitely been a step-change since 2001 and I can see that across the department and between departments. (DEFRA official A, 2008)

Interviews with officials and politicians such as Nick Brown, Margaret Beckett and Elliot Morley detailed the fact that after 2001 there had to be greater stakeholder engagement.

This commitment was enshrined in the government's response to the foot and mouth inquiries which, as noted in chapter 3, stated that the government will 'explain policies, plans and practices by communicating with all interested parties comprehensively, clearly and consistently in a transparent way' (RRFMI, 2002: 10-11). The interview and documentary material presented in chapter 3 showed that stakeholder organisations, such as the Scottish branch of the NFU, worked closely with the Scottish Executive during the outbreak. This was not the same for their English counterparts. MAFF was criticised for handling the outbreak and pre-crisis preparations (or lack of) in a non-transparent manner. The Anderson inquiry recommended that the government build closer relationships with stakeholders in order to facilitate information exchange. This would benefit both the government and stakeholders in that the government could build a better picture of how the livestock industry operated and, additionally, stakeholders would have their say within the corridors of power. DEFRA official D documents this two-way government-stakeholder relationship:

I would say that with the majority of stakeholder groups that we do deal with we have a very good practical relationship. It doesn't mean that we agree all of the time but it does allow them to inform us about whether they have particular ideas in mind. Equally, we have to explain our thinking to them so they can understand where we are coming from even if they continue to not necessarily agree with us. (interview, 2008)

The key research findings that concern stakeholder engagement processes in the period 2002-2007 show that there has been an acceleration in the amount of engagement between government and industry. Two interviewees, who admitted to not being on the inside policy track in DEFRA because they hold, or have held, shadow ministerial positions, indicated that it was their 'instinct' from speaking to the public, constituents, and lobbying organisations that the government has learned lessons and is engaging with stakeholders to a much greater degree (Paice interview; Yeo interview, 2008). For instance the shadow Minister for DEFRA said that 'yes I think that there has been an increase in the amount of stakeholder engagement since 2001. Have I seen it? No I haven't because I am not in the inside track. But I am aware of it' (Paice interview, 2008). Yet 29 interviewees, who are on the 'inside track', stated that it was evident to them that the government was listening and taking more of a participatory approach to

policy-making in the veterinary disease policy sector. DEFRA official H, for example, made the case that stakeholder engagement had been subject to acceleration since DEFRA was created after the 2001 foot and mouth crisis. DEFRA officials H and A also show that stakeholder engagement processes is so engrained in the disease policy domain that the government is fulfilling more of a 'intelligent facilitator' as opposed to a paternalistic role:

Stakeholder engagement has always been a necessary and inevitable part of making policy but it is true to say that there was quite early on in the new DEFRA a greater emphasis on stakeholders. It was out in the open and it was something that senior officials talked about more as if it was a necessary thing to do. Now, obviously, it is eat and drink to us and is very much enshrined in the statements of what the policy process looks like. We have become a little bit bound in presenting our processes to ourselves in diagrams and to see a diagram that does not have stakeholder engagement in it would be unthinkable. The work might have been a bit of a novelty in the past but it certainly was not a new concept. I think it is right to say that it has accelerated and I think that 'acceleration' is the right word. Each year the emphasis gets a little bit greater and what one might suggest is that that means that government is withdrawing a little bit of the civil service. We are withdrawing a little bit from the policy process in order to allow other people the space to contribute to it. We see ourselves much more now as fulfilling more of a conciliatory role rather than, and this is going back to history but this history has left a legacy, seeing ourselves as a the intellectual drivers whose job it is to the run the country and everyone else's job is to pay their taxes. That was an image that applied to the civil service for quite a long time. It does leave a legacy but I think that we have very much moved into an intelligent facilitator role. (DEFRA official H, 2008)

I think there has been an acceleration or greater amount of stakeholder engagement in England for definite ... There is a recognition that if industry suffers in economic terms when there is an animal disease crisis then they need to be involved in the decision-making process. As such, DEFRA, and ourselves, have engaged closely with a wide selection of stakeholders in order to say to them 'what do you want to do?' We say to stakeholders that our role in government now is to provide you with information, we will provide you with all the legislation that you need, we will facilitate things like procure vaccines, we will fund research, we will do all of these things but actually you have to think about what is best for you as an industry ... The principle is that the shift should be that the government moves away from telling the industry what to do to a much more partnership approach. (DEFRA official A, 2008)

Although the process of stakeholder engagement has accelerated since 2001, *this has not been at a constant*. The political fallout from the 2001 crisis meant that the government was shocked into taking immediate and drastic action to open up communication channels with stakeholders. A significant example of this was the consultation process after the negotiation of the 2003 Foot and Mouth Directive. After the consultation process was over, however, and the Directive was officially ratified, the government had to concern itself with developing a vaccination strategy, as required by the Directive. This led to the scaling back of stakeholder engagement, and there is evidence to support this is in the interview notes of the Anderson Review. Peter Kendall of the NFU maintained that ‘in peacetime there was regular contact with Ministers and officials at all levels’ but he went on to qualify this by noting that the post-2001 acceleration has not been at a constant ‘if the deliberations over vaccination strategies are considered’ (Evidence to the Anderson Review, 22 January 2008). In the same meeting of the Anderson review team Kendall made clear that the NFU ‘found it harder to engage at the strategic level’. From this standpoint, therefore, the DEFRA has made a concerted effort to engage with stakeholders but when it came to the development of the vaccination strategy, and higher level discussions that relate to the future of agriculture, and the implications that disease control strategies would have for these, the 2001 crisis did not drive change all the way up the DEFRA organisational hierarchy. The most likely reason for the decrease in stakeholder engagement during the development of the vaccination strategy was that it was a policy issue on which it was difficult to reach a consensus. Debby Reynolds, the former CVO, argued that reconciling the views of different stakeholders, regarding whether not to vaccinate, had not been an easy task:

[Vaccination] was an issue on which it was inherently difficult to gain consensus. The trigger in 2007 would have been if culling had overwhelmed available resources. This would have also required a cost benefit analysis of the potential savings from vaccination of shortening the disease outbreak Stakeholders needed to be engaged in order to work towards consensus on vaccination. Information should be provided more widely so it would be clearer when vaccination would be right and when it would be wrong. (Evidence to the Anderson Review, 22 January 2008)

The interviewees support the claim by the former CVO that reaching a consensus is difficult. DEFRA official B maintained that it is always difficult in reaching agreement

across stakeholder 'camps' but, at the same time, differences between groupings should not be overstated because both the government and stakeholders want decisions to be based on the best available evidence:

It is not easy but it is our job to try and rationalise or take onboard the views of perhaps competing camps. That really is our profession and I think that sometimes organisations take what looks like opposing positions but actually when you get down to it and you talk about, not at a theoretical or conceptual level, and say 'here is a situation and what do we do now'. You would be surprised how much consensus there is because stakeholders groups like anyone else will want to do something that is based on the evidence and based on the science and is best possible. (DEFRA official B, 2008)

Another senior official recognised the difficulties in rationalising competing viewpoints and made the case that it is an inevitable part of a deliberative process like stakeholder engagement:

Although we are facilitators it is always difficult to bridge the gap across the different views and interests of stakeholders. That has always been a very difficult and important role of government. It comes back to why you make policy. You don't just wake up one morning and say 'I'm going to have a policy on lemmings today'. It is usually because some action group has been lobbying you – they say 'we are not happy about the lemmings and you have got to do something about it'. Before you know it another action group and says 'leave the lemmings alone'. Perhaps in the past we tended rather more to sit in an aloof position and say 'now now children, we are the government and we will decide'. The issues are no less difficult now and the solutions are no less hard to find but what we tend to do is to get everyone together and have a shouting match. We will try to listen much more carefully to what people are saying rather than say in a sort of judgemental fashion 'this is what our policy is going to be'. (DEFRA official H, 2008)

Not all of the interviewees agreed with the notion that stakeholders engage with DEFRA in Whitehall in a kind of participatory forum that openly results in conflict and tensions. In fact, DEFRA official E used the example of the House of Commons to illustrate what the stakeholder meetings were *not* analogous with. Instead, according to DEFRA official E, much of the mutterings from stakeholders, when there is conflict, takes place outside open meeting sessions through telephone calls and emails:

The use of stakeholders is, on the whole, a good thing. There is a lot more openness and transparency. There is a wide community of interests... Yes there can be conflicting views there. Unfortunately what you don't see is a House of Commons-like debate. Instead you see people making mutterings in public and occasionally they may say something slightly pointed. But then after the meeting you get a deluge of emails and phone calls from people saying what they really think and what they weren't prepared to say in an open session. (DEFRA official E, 2008)

More importantly, the official notes that greater stakeholder engagement does not necessarily mean greater representation. As a result of the fact that the combination of stakeholders in the exotic policy sector are industry associations and the veterinary profession, the former are more politically aware than the latter – meaning that they are more likely to secure effective inputs into the policy process:

There is the concern about the balance of representation. If you have got the well-organised and professional industry that has well-funded trade bodies with the right people at the head of them they will come and put their case very well which, on the whole, I think is a good thing. They are a good source of challenge to government and once you get working with these guys they can be fantastically effective. We have a tremendous partnership with the meat industry on reopening the FMD exports, with joint visits to places in the Far East, joint funding or, in fact, industry funding. That is good but there is a risk that they may dominate the proceedings. Then you have got people like the veterinary profession who should have a lot of effective inputs to animal disease debates and they are not politically streetwise, they don't represent themselves very well, and that bothers me. (DEFRA official E, 2008)

Cabinet Office official B touched on this issue of representation in the stakeholder meetings and highlights the limitations to a representative form of decision-making by stating that some groups are invited for 'presentational reasons' rather than because DEFRA derive worth out of their attendance (interview, 2008). With regards to deliberations over vaccinations as a disease control strategy, the access of some groups is restricted or they are 'flushed out' because vaccination is an emotive subject:

It is very difficult to rationalise the competing views at stakeholder meetings. How do we do it? Well a lot of it is to do with flushing out people because stakeholders take very different views. There are very strong and emotional views about vaccination. Back in 2001 people were directly affected. We try to get people to talk about what their concerns are, come close to each other a bit by seeing things from other people's points of view and try to leave the

emotion behind. That is easier for some people than others I have to say.
(Cabinet Office official B, 2008)

DEFRA official L also argued that there are differences of opinion in the stakeholder meetings yet officials make it clear to stakeholders on what terms they are involved in the decision-making process:

Within those stakeholder groups there are differences of opinion about where we should go and I think that we have been pretty successful in bringing people onboard and allow the decisions to be made based on the evidence we have got even when individuals have got concerns we are very clear on the basis of which we make decisions. (interview, 2008)

One of the common themes that emerged from the interviews was that the stakeholder meetings was something that the government had to be seen to be doing. It legitimates the final decision that is made if the government can claim that they have taken a participatory approach to decision-making. Thus, there are symbolic politics undertones to the change process in the respect that DEFRA can exude an image to society that they are engaged in triangulating the views of stakeholders even if their opinions are not taken onboard. At the same time, the rationale behind greater stakeholder engagement is to improve the quality of the government's decision-making through consultation with stakeholders as they can provide a 'street-level' account of the conditions in the industry. This, however, does not address the issue of representation. Indeed DEFRA official D made the point that 'the big worry is that you only have one stakeholder group with solid representatives and that is not always a helpful process'. Similarly, Sir Brian Bender argues that the farming community (the NFU) had the 'loudest voice' although he is unsure if this means the 'strongest voice':

It can be quite painful and there are ways of doing it for better or for worse but stakeholder engagement is not an option, you have to do it. You have to involve stakeholders in the way that you make policy and if you are dealing with a crisis like the sort of 2001 then you have to have a way of engaging with stakeholders ... The farming industry was the most effective stakeholder and the loudest voice. Whether that means that they should be the strongest voice I am not sure. Again this is something that Iain Anderson talks about when he says it is about getting the balance right. For those whose lives are effected, which includes the whole of the rural economy and not just the farming industry, the government needs to make sure that they have got a

balance in all of this and it is easy to say that but not all that easy to do.
(interview, 2008)

It is perhaps a solid indicator of the predominant role played by the NFU in the stakeholder engagement process in that DEFRA official D, when discussing how DEFRA relates to stakeholders, argued that 'one of the biggest challenges is identifying who the stakeholders are sometimes'. The official went on to say that 'you might think identifying stakeholders is pretty obvious but it is not actually. People say 'if you talk to the NFU then that is fine ... but they don't represent everybody' (interview, 2008). Although this is the case, it is also the case that DEFRA officials were aware that the probability of reconciling the views of stakeholders has a direct relationship with the number of stakeholders invited to attend meetings. This means that the department established a 'core group' of stakeholders.

The Establishment of a 'Core Group' of Stakeholders

Since 2001 we have implemented structures around stakeholder engagement to share the issues with them. So it is not policy in isolation. We are open about evidence and about the implications of different decisions. Yes there are particular changes that we have put in place. There is certainly continuous lesson learning now and a culture of openness and engagement with stakeholders. It is always difficult to rationalise the competing views that you might get from stakeholders. It is always a balance. The mechanism that we have is a core group of stakeholders. These stakeholders try and make sense of all of the pieces of evidence. (DEFRA official L, 2008)

DEFRA established a 'core group' of stakeholders drawn from the farming industry in the decision-making process in the post-2001 period (Evidence to the Anderson Review, 14 February 2008). The main purpose of their association with DEFRA is 'to inform the Department's understanding of the industry and advise on the management of the outbreak' (Evidence to the Anderson Review, 4 February, 2008). Stakeholders would assist DEFRA by providing their expertise based on their experience and provide supportive quotes for press notices on new policy decisions as a way of legitimating policy decisions. Although it was the case that a select group of stakeholders had access to the corridors of power at Whitehall, the members of the core group cannot be said to be

'decision-makers'. They assisted the decision-making processes but officials were minded of the doctrine of individual ministerial responsibility which is that Ministers are answerable to Parliament for the decisions made in their departments. The overall objective of drawing stakeholders into the decision-making process is, therefore, to share information. Importantly, this relationship developed over time, and as trust amongst the members of the group members increased, the role of group members matured with it. This is a functional relationship of information exchange as the government and industry have shared interests, ranging from political to economic interests, to resolving disease outbreaks. The main issue to arise from the interviews regarding the core group is that officials found that it is an important but difficult task to ensure that other stakeholders were familiar with the work of the core group. However, accusations still remained that the core group was some kind of 'elite club' and that it only carried out its work behind closed doors. The core group has been called 'core' because it is small enough for the decision-making process to operate smoothly. In other words, if the group was widened, and went beyond the small number of usually five or six representatives, then reaching a consensus would be much more unlikely. The organisations represented in the core group included the British Veterinary Association, the National Beef Association, National Pig Association, British Meat Processors Association, and Livestock Auctioneers. The core group had clear institutional affiliations, DEFRA was happy to invite the core group to advise them based on their 'own personal experiences' (DEFRA official K, J, 2008).

One major problem in terms of the stakeholder group was that the function and role of the core group was not always clear to its members (Evidence to the Anderson Review, 4 February 2008). DEFRA had regarded them as 'advocates' who were engaged in the active support of the department's response to outbreaks. DEFRA believed that they were not there to promote their own organisations' concerns. Although it would be too strong to suggest that there was an element of ambiguity about what the core group's role actually was, 'the core group believed that having more formal terms of reference would be an advantage in future' (Evidence to the Anderson Review, 4 February 2008).

According to DEFRA officials, the core group is predominantly there to advise on policy and to provide DEFRA with information regarding the economic conditions within

industry and the associated impact of controls and regulation. The core group of stakeholders are also there to report back to their affiliated associations on policy developments. The greater access afforded to stakeholder groups between 2001 and 2007 signalled a step-change in the government's approach to stakeholder engagement. This was a step-change given that stakeholder groups were concerned about their lack of access to decision-makers in MAFF during the 2001 foot and mouth epidemic. From the perspective of stakeholder interests, the fact that there has been a change means that it is unlikely that the groups would miss the opportunity to influence the terms and trajectories of the policy debate *because of their new found access*. As DEFRA official H argued, 'it is not everyday that stakeholders get to work so closely and get such access to our London offices' – meaning that there is a duality of role-orientations. On the one hand stakeholders are sources of information for DEFRA but, at the same time, stakeholders are information seekers who lobby the government in the interests of their industry organisations. In terms of the dissemination of information between DEFRA and stakeholders, a key aim of the deliberations in the stakeholder meetings was for DEFRA to ensure that information is communicated to the wider (non-core) stakeholder groups and ultimately their members during an outbreak. There is, therefore, a dynamic of information exchange between the groupings in that the core group act as primary policy advisors to DEFRA and, accordingly, that information is drawn from the core group and then diffused to the wider stakeholders - which include other organisations such as the Royal Society for the Protection from Cruelty to Animals (RSPCA). The information received by both the core and the stakeholder groups is then passed down to their members to keep them informed about the developments in the government's planning arrangements or response(s) to an outbreak. Furthermore, all of the wider group members would have participated in at least one stakeholder meeting where both the wider stakeholders *and* core group members attend. This means that this gives the wider groups the chance to diffuse their views and, as secondary policy advisors, advise DEFRA officials. Indeed, ostensibly, although the main function of the core group was to advise government rather than communicate and diffuse information to the organisations that they are representing, deliberating with other organisations is an inevitable by-product of government-stakeholder relations.

One of the key findings of this thesis is that although there has been an acceleration in the amount of stakeholder engagement as a result of the 2001 foot and mouth crisis, this does not mean that the rate of policy change has accelerated with it. Twenty five interviewees confirmed that stakeholder engagement reflected a pluralistic approach to policy-making but in overall terms government-stakeholder deliberations slow down policy change despite the fact that change has been driven by a crisis. DEFRA official H echoes these sentiments by maintaining that officials are minded not to drive the policy change processes too quickly because policy failure is much more likely without consultation:

I think having a pluralistic approach to policy-making, like stakeholder engagement, does make it feel like the processes of policy change are slowed down. That is a very good point that you make. I think it is what many of us in the department feel is a culture change that we have to see ourselves as very much engaged in a process which we can drive but if we try to drive too fast then it may fail. Whereas I think in the past it was a case of 'well it is our job to make a decision and the sooner we make the decision the better that it is for everybody'. But I think that is a good point. (DEFRA official H, 2008)

DEFRA official D, in referring to vaccination policy, agreed that the process of stakeholder engagement slows down the process of changing policy but separated this out into a consideration of the short- and long-term change. From this standpoint, the process of short-term deliberation means that, by the essence of conciliation, time has to be invested in getting stakeholders to understand DEFRA's objectives and approach to tackling a policy problem. Once this process is completed the fact that agreement has been secured regarding the future policy actions makes policy much more likely, credible, and expedient at the point in which the policy is implemented:

In the long-term stakeholder engagement doesn't slow it down although in the short-term it sometimes feels like it. I'm not trying to be clever but sometimes in the short-term you have to participate in discussions and it might take a long time for people to understand what you are talking about and to reflect and think about it ... We ignore good practical advice at our peril because if you end up with something that isn't achievable or implementable then it loses credibility and you don't get what you want. Getting to that stage means that you do have to identify your stakeholders very quickly in order to get the best value out of them. It is worth doing that because it saves time in the longer term if they are onside, they understand things etc etc so you have got to invest in it. To be quite honest in our technical industry, such as the livestock industry, I think we do genuinely benefit from getting the views in from

stakeholders about whether something is feasible or not in terms of what is practical or desirable etc etc. I know a lot of us are vets and have an agricultural background but this does not mean that we know everything about everything all of the time.

Stakeholder Engagement: Assessment of Change

The changes to the dynamics of communication between DEFRA and its stakeholders have changed since the 2001 outbreak. Twenty five interviewees used the words 'cultural shift' or 'cultural change' or 'step-change' in their reference to DEFRA's post-2001 stakeholder engagement because stakeholders are now involved in to the policy and decision-making process to a greater degree. In characterising this post-crisis change there seems to be a dynamic at play which bridges *fine-tuning* and *policy reform*. In other words, the stakeholder engagement process accelerated and changed significantly with the creation of a core group of stakeholders since 2001. This signifies the *policy reform* type of change. At the same time, the process of stakeholder engagement was sporadic between 2001 and 2007. This signifies the *fine-tuning* type of change in that DEFRA learned from the 2001 crisis by using stakeholders to provide them with greater information about how the industry operated but this process is not at a constant. On this basis, stakeholders can be regarded as a key source of information to DEFRA. At the same time, the 'insider status' afforded to the core group of stakeholders meant that the representatives from industry fulfil lobbying roles in the sense that access to the corridors of power presents itself as an opportunity to reinforce stakeholder interests. Put simply, the acceleration in stakeholder engagement has resulted in a situation whereby DEFRA and stakeholders need each other. Yet what is also clear from the interviews and documentary materials is that this was also an instrumental but modest adaptation because stakeholder engagement tends to be for short- to medium-term rather in the strategic or long-term areas of decision-making. Again, it is also the case that the process of stakeholder engagement was not at a constant. The deliberations over a vaccination policy are a key example. Part of the reason for this disjuncture in dialogue with stakeholders is because DEFRA has shifted, in the same way as other Whitehall departments, to a way of working that is much more project-based. Thus, officials are regarding their work as time-limited which should produce outcome(s). In practice, there is a danger that taking such a project management

style to policy-making means that time limits are likely to minimise the degree of stakeholder engagement – thus hindering the deliberative process. It would be incorrect to maintain that the core stakeholder group have become a standing group but, again, there has been an ‘acceleration’ in DEFRA-stakeholder engagement post-2001.

The next section of the chapter presents empirical findings of the extent to which information and data management have changed in the aftermath of the 2001 crisis.

Information and Data Management

The research findings confirm that the increase in the amount of engagement with stakeholders is not, however, paralleled by a substantial increase in the government’s knowledge of the way in which the livestock industry operates. Peter Kendall of the NFU argued that DEFRA ‘displayed a basic knowledge of the livestock industry but there was a lack of detailed understanding’ (Evidence to the Anderson inquiry, 22 January 2008). The reason for this is that DEFRA has not learned a key lesson from 2001. After the inquiries into the foot and mouth epidemic were published, the government stated that it would ‘use data and information management systems that conform to recognised good practice in support on intelligence gathering and decision making’ (RRFMI, 2002: 10-11). In order to achieve this, robust data and reliable data systems are essential. In addition, the data needs to be accurate, complete and up-to-date (HC-312, 2008: 66).

In terms of the use of day-to-day information management systems in DEFRA, it is the officials who could provide insights into whether the 2001 crisis was a force strong enough to change the problems of information management that MAFF experienced. Nineteen officials who worked in the veterinary disease policy sector stated that this was an area that has not been subject to significant reform. For example, DEFRA official D made the case that most of the lessons identified by the inquiries into the 2001 crisis had been dealt with but noted, quite candidly, that data and information management systems were an exception:

I think everything that was said in the inquiry reports has been dealt with. There is one possible exception and that is that our data handling is still not quite right. If there is one disappointment it is that. I have to be fair to the people in the organisation because data handling is an extremely difficult thing and there are good and genuine reasons why it has not been able to nail that one down yet. I am confident that it will not be too long before we do but we are not quite there yet. (interview, 2008)

DEFRA official E argued that DEFRA had picked up MAFF's performance deficit in this area and that 'we are still trying to get over the legacy of enduring IT problems' (DEFRA official, E, 2008). Anderson's review of the lessons learned from 2001 also came to the conclusion that although DEFRA accepted that information and data management systems had to be developed in order to gain a greater understanding of the livestock industry, there had been a lack of reform in this area (HC-312, 2008: 66-76). In fact, the 'enduring IT problems', as iterated by DEFRA official E, is such a problem that 'DEFRA remains in a vulnerable position in the event of a disease outbreak' (HC-312, 2008: 18). This vulnerability is not only associated with the fact that the disease can spread, like it did in 2001 because of inadequate systems of tracing livestock and data generation about animal movements, but also calls into question DEFRA's decision-making competence. DEFRA official D agreed with this position by admitting that it is crucial to get information right, especially in times of uncertainty when there is an 'incessant demand for information' (DEFRA official D, 2008). The official went further to argue that:

There is a constant and incessant demand for information and you have got to have it right. If you say something one day and something a little different the next day, even if it is relatively minor, then that is picked up and you're seen as 'bungling' or that you don't know what you are talking about. It is crucial to get it right. (DEFRA official D, 2008)

The former CVO, Debby Reynolds, in her evidence to the Anderson Review argued, quite revealingly, that the information technology systems 'were not suitable for even a small outbreak. There is no arrangement on data which affected the livestock register and no system to identify contiguous farm locations or populations' (Evidence to the Anderson Review, 22 January 2008). The Head of the CCS, Bruce Mann, argued in his evidence to the review team that DEFRA had to 'learn lessons on data capture and processing' (Evidence to the Anderson Review, 17 January 2008). Even stakeholders viewed data and

information management as an area of post-crisis change that was left wanting. The core stakeholder group argued that the UK was behind the rest of Europe in setting up a real-time database for livestock (Evidence to the Anderson Review, 4 February 2008). Tellingly, this is why the government has been so keen to keep the core group as close to the policy-making process as possible because they, as practitioners rather than regulators, plug the gaps in DEFRA's corporate knowledge. Importantly, the members of the core group all came to the conclusion that in the period between 2001 and 2007 the government had not done enough groundwork on the ways in which the livestock industry worked (Evidence to the Anderson Review, 4 February 2008). The lack of change in the post-2001 period to data and information management systems was not only accepted by DEFRA officials themselves but, as can be seen from the analysis earlier in the present chapter, the core group argued that there had been a lack of reform. In addition, the Shadow Minister for Agriculture, James Paice, argued that information management was the main area where DEFRA had failed to draw lessons from 2001. In referring to the 2007 outbreak of FMD he argued that 'as far as we can tell the data management systems are the big issue to watch if a wide-scale outbreak happens in the future. Thank god it has not been tested to the extremes since because I believe it would have failed' (Paice interview, 2008). The Secretary of State for DEFRA in 2008, Hilary Benn, admitted that DEFRA could have done better in terms of the quality of the data gathered relating to on farm animals and their location during the 2007 outbreak of FMD (Evidence to the Anderson Review, 23 January 2008).

Why has there been a lack of change to data and information management? The interviews highlighted that the main reason was budgetary constraints coupled with a lack of responsibility being transferred to industry and endemic system inadequacies. The next three subsections consider each of these in turn.

Budgetary Constraints

Change needs resource and at the time of a government spending cycle when things are getting tighter that is not easy. DEFRA is definitely feeling the pinch (SG official, 2008)

The reason, identified in the interviews and documentary materials, as to why there has been a lack of reform of DEFRA's information management systems is that the department, within the FFG in particular, has faced prolonged underinvestment. There is evidence to suggest that the claim that budgetary cuts have had an impact on DEFRA's activities has some justification. In particular, DEFRA, over a period of several years since the government's first Comprehensive Spending Review¹⁷ (CSR) in the year 2000 has gone through a process of adjusting to a lower long-term budget. This, according to DEFRA official E, 'made it difficult to balance all Ministers' new priorities with a decreasing budget' (interview, 2008). Andy Lebrecht, the (then) Director General of the FFG highlighted these budgetary tensions in his evidence to the Anderson Review when he noted that, as part of the CSR settlement, the department had been asked to make five percent cash administrative cost reductions per year (Evidence to the Anderson Review, 17 December, 2008). Moreover, there had been 20 percent further cuts in the animal health area of the FFG. This was supported by Debby Reynolds who made the case that, in terms of budgetary priorities, funding for animal health was overtaken by other threats that the department was responsible for managing (Evidence to the Anderson Review, 22 January 2008). For example, Andrew Burchell, the Head of DEFRA's Service Transformation Group, outlined that for the year 2008/09 the CSR settlement had resulted in a 1.7 percent growth in funding in real terms, yet this extra funding had been directed towards flood protection and for an environmental transformation fund (Evidence to the Anderson Review, 22 January 2008). Sir Brian Bender's successor as DEFRA Permanent Secretary, Helen Ghosh, said that, despite the impact of the 2001 crisis, 'climate change and energy had been given more priority at the expense of the animal health and welfare budget and staffing resource' (Evidence to the Anderson Review, 22 January 2008). DEFRA's departmental spending from 2002-03 to 2006-07 (with estimated and projected spending for 2007-2011) is shown in Table 4.2 below.

¹⁷ The Comprehensive Spending Review is a reassessment of the government's spending priorities. It is the government's main tool for deciding how much money will be invested in public services. It is a long term plan for government spending which is published every two to three years.

Table 4.2: Total Departmental Spending*

£'000

	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
						(Estimated)	(Projected)	(Projected)	(Projected)
Animal Health and Welfare	341,064	228,697	213,156	255,785	244,328	276,480	242,514	227,544	214,904
Environmental Protection	894,300	992,153	1,277,964	1,472,822	1,544,423	1,598,670	1,803,217	1,930,018	2,140,253
Sustainable Farming Food and Fisheries	178,639	213,249	212,630	199,208	188,551	192,277	205,547	206,459	201,885
Natural Resources and Rural Affairs	630,396	582,149	545,369	590,115	646,260	582,349	584,667	593,425	603,265
Departmental Operations	331,786	305,336	335,461	342,406	351,249	402,040	304,049	305,229	292,155
Rural Payments Agency	185,319	475,801	451,584	489,037	583,620	365,036	314,246	266,096	228,809
Other Executive Agencies	47,876	67,386	70,355	112,778	135,329	163,034	152,286	146,145	138,847
Local Area Agreements	—	—	—	95,203	104,387	109,998	—	—	—
Area Based Grant	—	—	—	—	—	—	3,000	5,500	5,500
Department Unallocated Provision	—	—	—	—	—	—	50,000	50,000	50,000
Forestry Commission	100,663	77,482	69,056	79,619	62,954	86,666	69,148	67,650	65,648
Total departmental spending† of which	2,710,043	2,942,253	3,175,575	3,637,073	3,861,101	3,766,540	3,728,674	3,798,066	3,941,066
Total DEL	2,515,543	2,868,091	3,103,231	3,512,719	3,866,466	3,781,416	3,745,525	3,814,917	3,960,917
Total AVE	194,500	74,162	72,344	124,354	-5,365	-14,876	-16,851	-16,851	-19,851

Source: DEFRA (2008c: 193)

*Total departmental spending is the sum of DEFRA's resource budget and capital budget less depreciation. The period 2002-03 to 2006-07 is highlighted in bold in order to highlight actual rather than estimated and projected costs.

What the table indicates is that the Animal Health and Welfare section of DEFRA has had to work with a lower budget after 2002. The immediate aftermath of the 2001 crisis saw the largest expenditure on animal health and welfare this decade at £341,064,000 which, despite slight fluctuation over the intervening period between 2002 and 2007, reduced to £244,328,000 in 2007. This is a 27.7 percent or £96,736,000 reduction - confirming the argument that DEFRA's FFG has faced budgetary pressures. This contrasts with the expenditure on environmental protection (which includes flood protection and climate change) which rose by 170 percent (£650,123,000). If the figures presented in Table 4.2 are broken down further in DEFRA's resource budget then it is clear from DEFRA's annual report that the budget allocation for disease prevention reduced from £95,157,000 to £56,923,000 between 2002-03 and 2006-07 - a reduction of 40.2 percent (DEFRA, 2008c: 196). At a time when lessons should have been learned and resourced in the crisis aftermath, budgetary resource constraints meant that resources required for information management systems have been left wanting.

From a different standpoint, the current (as of 2008) and former opposition Ministers interviewed maintained that the Labour government's lack of expenditure in the animal

health and disease control area led to agriculture becoming 'marginalised' for political reasons. These reasons, it is said, are that the electoral heartlands of Labour MPs tend to be in urban rather than rural areas and, equally, there is a low population (electorate) density in rural areas (Breed interview; Curry interview; Gummer interview; Paice interview; Simpson interview, Yeo interview, 2008). As a case in point, Colin Breed MP argued that the fact that there was a Ministry for *Agriculture* which was converted to the Department for the *Environment, Food and Rural Affairs* whereby the word 'agriculture' does not feature reflected a change in the government's thinking towards being more concerned with the environment. Breed argued that 'rural affairs is just an add-on to an already marginalised agriculture policy area' (Breed interview, 2008).

It is clear that the 2001 crisis opened a window of opportunity to change data management and information systems but budgetary constraints meant that the impact of change was limited (Bender interview; Curry interview; Paice interview; DEFRA officials A, C, E, F, J G, P, O, SG official, Cabinet Office official B, 2008). As stated in chapter 3, DEFRA accepted the recommendations that information and data management systems were not fit for purpose and needed to change. In particular, there has been a commitment since 2001 to introduce new systems such as a new livestock register. While the department started to seek new solutions to the problem, any serious exploration of reform was abandoned in 2004 because the chosen strategy would not meet requirements (HC-312, 2008: 67). At this point DEFRA decided to start again and work on a new system. In early 2006 DEFRA discovered that this would cost £12 million and would not satisfy data needs, either in terms of 'timeliness' or 'comprehensiveness' (DEFRA officials A and D). However, there are systems in place for identifying livestock. Between 2001 and 2008 four key data systems were developed. The *Vetnet* system is overseen by Animal Health (formerly the SVS) as the main delivery agency. The system exists because there is an EU requirement to have a system that can identify livestock which include cattle, sheep, and pigs (HC-312, 2008: 68). This system is a registration database which stores the names and addresses of livestock keepers and their holdings (and the type and number of species). Although this is a component part of DEFRA's data and information systems, it has been plagued with data problems and these are compounded by the fact that 'there is no incentive to encourage accurate livestock registration' and 'there is no legal

requirement to de-register in the event of livestock deaths' (HC-312, 2008: 68). Hence, data held in the *Vetnet* system is often out of date and, therefore, inaccurate. The Disease Control System remains the key management information tool used for veterinary disease-induced outbreaks. This is the same data system that was set up during the 2001 epidemic (see chapter 3). The next section shows, however, that the Disease Control System is also ineffective and inaccurate.

Endemic System Inadequacies

The key problem with the Disease Control System (DCS) is that it has not been subject to change since the 2001 crisis. The reason for this is that it is only used *in the event of an outbreak* (DEFRA official F, 2008). However, it is not synthesised with the systems used by Animal Health personnel (DEFRA official D, 2008). This leads to a risk that staff are unfamiliar with how the system operates.

Furthermore, officials confirmed that there were capacity problems with the DCS. Indeed, as noted earlier in the chapter, the former CVO Debby Reynolds maintained that the DCS would be tested to its limits even in the event of a small outbreak. The shortfalls of the information management systems within DEFRA were exacerbated by the interconnectedness of information systems at DEFRA. Faults in one system spill over into another system – thus highlighting the issues surrounding networked systems and critical infrastructures identified in chapter 1. For example, DEFRA uses a system called the RADAR which brings together key surveillance information collected in other systems about animal diseases (HC-312, 2008: 67). Epidemiologists are able to produce risk-based projections which seek to gauge the premises most at risk of infection from the spread of a veterinary disease. This system was used for the 2007 foot and mouth outbreak. However, RADAR, because it brings together data from other systems, used data from *Vetnet* which, as established earlier in the present chapter, does not hold reliable data - meaning that the RADAR system suffers from the same data discrepancies (HC-312, 2008: 67). The accumulation of data errors means that officials are informed by poor data systems and this calls into question the reliability and validity of the crisis management effort. From this

standpoint, the central-level effort to eradicate the disease will inevitably be hampered by the fact that DEFRA, alongside Animal Health, will need to gather data frantically when there is an outbreak because officials are conscious of the fact that their systems are not up to the crisis management challenge. DEFRA official D commented that 'it is disappointing that this is a big area that has not changed because it is such a key and crucial aspect to our ability to manage the spread of the disease' (interview, 2008).

The most likely future policy development in this area, as recommended by the 2008 Anderson Review, will be the use of Geographical Information Systems (GIS). DEFRA official E argued that 'if you can track parcels around the globe by using some sort of web system then you can do it with cattle - web-based movement recording is definitely the way forward' (DEFRA official E, 2008). This GIS system allows users to 'search and analyse spatial information, and generate and edit maps' which can be a valuable tool in planning and responding to an animal disease emergency (HC-312, 2008: 70). More fundamentally, DEFRA has begun working on a Business Reform Programme (BRP) with the aim of replacing existing information and data management systems. The BRP covers the entire policy domain of animal health. The system is designed to be flexible and it will replace the DCS. The BRP is designed to fulfil several requirements including storing customer contact details along with data on the location of livestock. It is also designed to provide a list of all possible locations of livestock and the incorporation of a work management system for scheduling visits to livestock premises (HC-312, 2008: 72). DEFRA official C maintained that information management systems 'are in the process of changing towards becoming very much more focused on business reform and systems are being overhauled from top to bottom' (interview, 2008). This should lead to an improvement in the department's risk assessment capabilities because it has been an ongoing concern of the SAC that risk assessments have been limited by the data and information available (HC-312, 2008: 59).

Deficiencies in Industry Responsibilities

In addition to budgetary pressures and endemic system inadequacies, another explanation for such system inadequacies is that data-generation concerning livestock and their movements require that the farming industry cooperates with the government's efforts. Nineteen officials maintained that DEFRA had not transferred enough responsibility to the industry to take ownership over their data and there is neither a widespread knowledge nor acceptance of responsibilities at the industry side. DEFRA's main objective, which forms part of the department's Responsibility and Cost Sharing Initiative which went out to consultation in November 2007 and is still ongoing, is to convince the industry that data capture is not something that is a burden imposed on them by government. The overriding objective of sharing animal health and welfare responsibilities between industry and government is to reduce the overall risk and cost of outbreaks to the taxpayer. DEFRA believes that both the industry and the government would benefit from this because, through the sharing of responsibilities, industry will be able to take greater responsibility for its own decisions and will have greater ownership of the risks. Simultaneously, DEFRA believes that this would benefit the government because responsibility sharing will provide opportunities for improved regulation and a reduction in the budgetary allocation for disease outbreaks. This intention is to involve the industry more in the decision-making process. Generally, there are some sections of the industry that understand and sympathise with the DEFRA's aims whilst there are others, such as the British Poultry Council (Gummer interview; DEFRA officials A and D), that argue that certain sectors could not afford to share the cost with government. Yet according to the interviewees, both the European Commission and the Conservative Party have been receptive to the idea. In terms of information and data management, therefore, DEFRA's aim is to make the industry realise that cost and responsibility sharing would be of benefit to them and their livestock in the event of an outbreak. This is because if they kept the data up-to-date then the government would be able to build a better picture of the livestock industry. DEFRA official E argued that it is difficult to generate data without the cooperation of industry because 'you are dealing with a moving target, livestock agriculture is dynamic because certain parts of it lives and breathes in the movement of animals, and trading movements' (DEFRA official E, 2008).

The preceding analysis shows that there has been a distinct lack of change to information and data management in the post-2001 period. This finding has been triangulated in the primary documents and interview data by government officials and both government and opposition politicians. The major reasons for this lack of change include a combination of budgetary constraints, a lack of industry responsibility, and endemic problems within DEFRA's data management systems. As highlighted in chapter 3, the Anderson inquiry recommended that the government change its information and data management systems for future veterinary outbreaks, and provide greater investment. By 2008, this has not been met despite the government's commitment after the publication of Anderson's inquiry to use data and information management systems to support decision-making. In fact DEFRA continued to use the Disease Control System (DCS) which was set up by the government within a fortnight at the beginning of the 2001 crisis. In fairness to the DEFRA officials, there was a desire in the department to leap through the opportunity window opened up by the 2001 crisis but their freedom to introduce change in this area was constrained, in the main, by the financial squeeze of the Treasury. In the end it is resources that are required for radical overhaul of DEFRA's information and data management systems. In this context, and in terms of the characterisation of post-crisis change, the 'most fitting' category would be *fine-tuning* but, more accurately, minimal or conservative change are more suitable adjectives to describe the nature of change to information and data management. DEFRA's Management Board has recognised that the new BRP system was a departmental priority (HC-312, 2008: 73) and this has been confirmed in the interviews. In short, in the 2001-2007 period (the boundaries of this thesis) DEFRA's information and data management systems hardly changed at all.

The next section of the chapter presents empirical findings of the extent to which the communication functions of DEFRA have changed in the aftermath of the 2001 crisis.

The Management of Communications

It is a truism that you can never communicate enough ... Communications and the way that this is managed is also a very important area of change. This was influenced by Anderson and much work has been focused towards tightening up communications which was evident in the 2007 avian flu and foot and mouth outbreaks. (DEFRA official A, 2008)

Chapter 3 documented a major lesson that had to be learned from 2001 and that was the way in which communications are structured during an outbreak. The section on stakeholder engagement earlier in the present chapter concerned the way in which government communicates with stakeholder groups, however, the way in which DEFRA communicates via information and communication technologies externally and to veterinary and policy staff on the ground during an outbreak was in much need of reform.

Twenty eight interviewees for this thesis argued that the way that DEFRA communicates has changed since 2001. Of those 28 interviewees 22 of them were officials based in DEFRA, the Cabinet Office, and the SG who had experienced the changes in communications in terms of either being in positions of responsibility for aspects of communications at a senior managerial level or they had been on the ground trying to facilitate communications during an outbreak. However, two officials - DEFRA officials N and G - are the key individuals responsible for communications within DEFRA's FFG (the main section of the department for animal disease management).

In the period between 2002 and 2007 DEFRA's communication structures were reformed. This largely revolved around the appointment of strategic communications advisors. The role of the advisors was to 'fulfil more of a coordinating function which seeks to make sure that everyone is doing what they are supposed to do' (DEFRA official G, 2008). Specifically, the strategic communications personnel were in charge of ensuring that DEFRA's information help lines were operational and to make sure that the website remained updated. DEFRA official N elaborates on the role of the communications team within the FFG:

I am a strategic communications advisor for the food and farming group which is part of the organisation in which animal disease control resides. During normal business I provide the key link between our part of the department and the communications directorate to help in creating an integrated communications network. It is an intense issue-specific form of communications linked to animal disease and management. My job is to link the dots on different forms of communication. You have got the press office doing media handling, we have got our internal communications people, and we have got marketing and so on. The strategic communications function sits in the middle of that and makes sure that everyone involved in communications talks to each other. It is fully integrated. So, for instance, if we are in an animal disease emergency the press office will try to feed the media but it is my responsibility to make sure that our communications within DEFRA are geared up so when the press notice goes out we are ready to text farmers or send voicemails to farmers or make sure that the website is ready. It means that all those affected directly by the disease know what is going on. That is the communication functions in a nutshell. (interview, 2008)

The overall message that emerged from the interviews was that communications were much more structured and integrated than in 2001. Beyond the way in which strategic communications advisors operate themselves, DEFRA official N argued that the communications system works as a 'package' because the 2001 crisis stimulated a culture of lesson learning and a crucial aspect to this process was that everyone knew what was expected of them within the organisation:

In structural terms people know what they are doing, people are clear about their roles, you don't have to make up a schedule because it is 'just there' ... Yes we contribute to lesson learning processes and this gives us clarity on our roles and responsibilities. It seems to be a big part of what we do now! We have our own comms-focused lessons learned after foot and mouth, and there would also have been one for the Bernard Matthews outbreak of avian influenza, and then we feed into other reviews. It is part and parcel of what we do. (interview, 2008)

In addition, communication personnel within DEFRA now have their own contingency plan:

The contingency plan ensures that, when there is a disease outbreak, you don't sit back and go 'who should do what?' It is all planned out and everyone knows their roles and responsibilities. It is all about process and procedure but there is still judgment within that regarding how we will handle the media

but it is all about the process. It frees you up to think a little bit more about where you have to make a judgment. (DEFRA official N, 2008)

The main thing that has changed since 2001 is that we now have our own contingency plan. The minute that we get an indication, via amber alert when we are told when there is an investigation, and it looks like it is an animal disease, we have a machine that goes into action. We have training sessions, and we had one today actually, where everyone is trained-up on it and people just drop everything. We have battle rhythms. We keep the chief vet informed about the communications and we go into bird table meetings. (DEFRA official G, 2008)

Official G notes that staff within the department are aware of what their roles and responsibilities are in the event of an outbreak and they become part of a 'battle-rhythm'. The military analogies do not end there. Bird table meetings are a strategy that has been adopted by the military since 2001 when dealing with animal disease emergency (Beckett interview, 2008; Bender interview, 2008). The bird tables are used as a communications forum for officials, Ministers, and stakeholders to keep abreast of the crisis management effort. Even the Prime Minister has been known to attend these large meetings:

At the beginning of an outbreak it is such an exciting thing and everyone knows where the table is. Everyone can listen in and you have got Ministers, very senior people in the department. It is very scary the first time that you do it. Added to that is the fact that everyone has their own place and if you stand in the wrong place then you will get moved. So it is quite regimented. (DEFRA official G, 2008)

The first one is very daunting. My first was foot and mouth last year and at the bird tables there is just this sea of people. It is like a theatre. In fact Gordon Brown came to last year's foot and mouth bird table. (DEFRA official N, 2008)

Operating jointly with the bird tables is the core stakeholder group meetings and, as established earlier in this chapter, communications feed through meetings with the core stakeholder group:

During an outbreak, particularly in relation to exit strategies, stakeholders will want to know what is going on. Stakeholders will ask questions and will have concerns such as 'come on, we need to get these animals slaughtered or 'the disease is getting to a critical point'. This informs our public communications

in that we might send out messages that say that we are relaxing or scaling-up. (DEFRA official G, 2008)

Moreover, the development of lesson learning exercises and annually updated contingency planning documents have left a paper trail whereby staff are more aware of their responsibilities in the event of an outbreak. More specifically, the communication functions within the FFG means that strategic communications advisors serve to integrate public communications, bird table, and stakeholder meetings. This signifies a substantial policy and organisational shift within the department. Indeed, Anderson's review stated, in referring to the 2007 FMD outbreak, that, 'the contingency plan for communications was rapidly rolled out' (HC-312, 2008: 48). The utility of the contingency plans in allowing such a 'rolling out' process to happen was highlighted by DEFRA official N when she acknowledged that their Director of Communications was only appointed to his post five weeks before the FMD outbreak. Official N stated that 'he said to me on the first weekend of the outbreak that the contingency plan was like the bible. He literally followed the contingency plan all of the way through. He didn't have to say "you do this, this, and this" because we were all already doing it' (DEFRA official N, 2008).

Although there have been changes to the communications in terms of the internal allocation of responsibilities, the next two sections on information communication technologies and public communications presents more detailed empirical findings of the extent of change to communications since 2001 with reference to the 2007 AI and FMD outbreaks.

Information and Communication Technologies

I think things have changed. From DEFRA's point of view we have made great efforts to try and make sure that as much information as we possibly can is made available to a wider audience again if you look at the DEFRA website and how it has developed over the years it is much more detailed. There is much more now of a climate of open debate and discussion and it is much easier to find out exactly what has been going on. (DEFRA official P, 2008)

The DEFRA website is the main communication medium used by the public, farmers, and wider stakeholders. DEFRA's website statistics for August 2007 demonstrate the importance of the website. The main news story on DEFRA's homepage was read 30,000 times over the first weekend and the declaration maps of the protection zones and other disease management documents were downloaded some 50,000 times (DEFRA, 2007: 42). Unlike the situation in 2001, there was also integration between the website and the DEFRA helpline which received 34,000 calls on FMD from the beginning of the 2007 outbreak on the 4 August (HC-312, 2008: 42). However, DEFRA's web-based information is only useful if everyone has access to the internet. A survey conducted by the NFU in 2007 found that 40 percent of farmers do not have access to the internet (HC-312, 2008: 47). James Paice, not just in his capacity as a shadow Minister but also as a constituency MP, argued that 'although the government has made the effort in communicating with farmers during the 2007 FMD outbreak, the government has not achieved its goals' (interview, 2008). Paice goes on to argue that, when speaking to the farming community in his constituency, they were out of touch with the government's effort to control the disease partly because farmers do not have the IT skills required to navigate the internet and also so-called 'hobby farmers' will not take as much an interest in the outbreak as it is not their main way to make a living:

Farmers from that neck of the woods were complaining all of the way through [the outbreak] that a lot of the things were not being communicated. There were issues about whether footpaths should be closed or not closed and about the locations of the outbreaks. Farmers want to know how far away they are from an outbreak and communications should be such that farmers have that information. In the first few days there was a serious lack of communication and the government kept on about technology and the use of the internet. A lot of farmers don't have the internet or haven't got the skills to fully access it. They might be able to work an email but not delving through DEFRA's website. I remember saying to Ministers, and I know others did, that you should not presume that they are all IT literate and they shouldn't rely on the assumption that everybody is that interested. It was particularly an issue with foot and mouth last August that there are lots and lots of small hobby farmers for whom farming is not their living. They might be celebrities or they might be people that have other jobs and have a few acres and use cattle to keep the grass down. (interview, 2008)

The officials argued that this is a major barrier in the communication process because farmers often held the view that the government should offer a personalised service:

Farmers are rather traditionalist. They do have an expectation that someone will knock at their door. This is the frustrating thing in the sense that they want that individual service whereas we do rely on the media to get messages out because it is the quickest form and they don't recognise that as communicating. They don't view that as us communicating with them ... The farmers don't always do what we want them to do partly because the system is complex and also that they are traditional creatures of habit and do not always see the reasons for doing things. (DEFRA official G, 2008)

You just have to try and take the frustrations of farmers on the chin because the important thing at the early stages of this is that they know what is happening and that the message is out. They don't view that as us doing our job because they don't have a personal letter or personal phone call. (DEFRA official N, 2008)

One of the ways in which DEFRA has attempted to plug the gaps in the communications effort is to use voicemails which is essentially a pre-recording that is put through to the telephone landlines on farm holdings or personal mobile phones. It was pointed out by DEFRA official N that this was not faultless because the message was not always received by farmers as they may have not checked their messages or they might not have an answer phone system (interview, 2008). A system, such as voicemails, relies on farmers providing their contact details for DEFRA's database and, as established earlier in the present chapter, the department's record on data capture is far from adequate. Nevertheless, when avian influenza was spreading across Europe in the months leading up to the AI outbreak in Suffolk in February 2007, DEFRA started to work on the use of text messaging in addition to voicemails. This allows officials to target farmers in specifically affected geographical areas:

When we had the bird flu on the radar we started working on the idea of registering farmers in order to send them text messages if we suspect an outbreak of an animal disease. We held phone numbers on our database. We tested it out on the first few bird flu cases and the response was phenomenal. It actually got positive write-ups in the *Farmers Weekly* magazine. It was one of the signs that they were confident in us and that they now had the view that they now know what they are doing because we were texting farmers. Some farmers have got their numbers logged on our database as landlines so we did our best. The Animal Health agency used those numbers so that a message could be sent to landlines and mobile numbers. One of the areas that we are

trying to wrap up is to get as many mobile numbers as we can because then the farmers will tend to keep the numbers with them and are less likely to miss the landline message. We did develop an email facility but we found that that was not quite as successful because there were often errors in the email address and not everyone checks their emails regularly. With the mobiles you can do it by geographical location. If farmers are in a zone then you can text them and say that they are in a zone. It is amazing because we can link up so quickly to all of these people. There is a messaging strategy built in as well which provides updates on instructions like when you can release wild birds so there are always exit strategies built in. (DEFRA official G, 2008)

There is evidence of attempts by DEFRA to implement changes to the communication of information between the government and the public (farmers in particular) and this can be seen through a triangulation between the use of voicemails, text messages, and the use of internet resources. Much of the work, in the end, requires the cooperation of farmers which, as noted above, is not always possible either because they are not technologically literate or do not have access to ICT resources or they take the more traditionalist view that they should either receive a personal call or letter (which, of course would be out of date before it arrived). Yet, Peter Kendall of the NFU maintained that the consistency and constancy of the communications between stakeholders and the wider farming community needed to improve. In terms of using technology, Kendall did accept that the industry had a role to play in this system in terms of assisting DEFRA in collecting the mobile phone details of farmers:

The NFU had used text messaging to keep its staff and members informed on the management of the outbreak. In learning its own lessons, the NFU would be collecting its member's mobile addresses as part of its membership process. (Evidence to the Anderson Review, 22 January 2008)

A further recommendation made by Kendall was that DEFRA could use the Single Payment Scheme¹⁸ (SPS) to collect mobile phone details. This was also raised in an interview with the shadow Minister for DEFRA who indicated that both the ear-tagging system for sheep and the SPS for cattle should allow DEFRA to build a better picture of the livestock industry which would assist in bringing about policy-orientated changes to information management and communication capabilities. James Paice argued that:

¹⁸ The SPS is the principal agricultural subsidy scheme in the EU. It is administered by the Rural Payments Agency (an executive agency of DEFRA). This payment system emerged as a result of the measures announced as part of the reform of the Common Agricultural Policy in June 2003.

I really don't think that the government has yet cracked the communications issue. Yes text messages have a role to play, emails have a role to play, the web has a role to play as well as the telephone. There is an issue that is linked to that and that is the government's lack of knowledge about what farms and stock exists. There may have been an excuse for that ten years ago but we now have the single farm payment and as far as cattle are concerned there is no excuse in not knowing every farmer that keeps cattle. For sheep they should know who keeps sheep because of the ear tags. So there is really no excuse now. (Paice interview, 2008)

There have, therefore, been significant changes to communication dynamics since 2001 which have been bolstered by an increase in acceptance of ICT technologies in the communication process at governmental level. This has not been matched by a commitment by the farming community. Nevertheless, the NFU *has* accepted that ICT is important in ensuring that communication processes operate effectively for the future. This will be particularly acute when dealing with newer diseases such as blue tongue when farmers need to be communicated with in order for them to understand the impact of disease control measures such as DEFRA's policies on restrictions and licensing.

Public Communications

The interview data confirms that communications with the media has changed since 2001. Twenty two interviewees made the case that media handling was not as severe a problem as that of communication with stakeholder groups. Yet, it is important to note that communications has changed on a government-wide basis. For example, it is the role of the Cabinet Office CCS to agree a public communications strategy and to oversee its implementation (Cabinet Office official A, 2008). As will be seen in chapter 5, the Cabinet Office has placed heavy demands on DEFRA to provide information to the mass media, and hence the public. On an individual basis, CVOs and Ministers, who are the veterinary and political leads in a response, will have to spend a great deal of time sitting on panels in press conferences. As time is of the essence during an outbreak, this kind of activity takes place in a highly pressurised environment:

The pace of work is incredible and what people do is really something. That is the real test actually. It is full on in terms of the meetings that you go to and the decisions that are made. You get so much done in such a short period of time. There are so many spheres to the work in the sense that you have got farmers screaming at you, you need to consider the animal welfare implications of what you do, Ministers are having to deal with the media. (DEFRA official G, 2008)

Although this is the case the interviews suggests that the media are increasingly sensitive to the routinised nature of outbreaks. In April 2006 there was the discovery of a dead swan which was found to be infected with avian influenza H5N1 on a beach in Cellardyke in Scotland. A very senior official from the Scottish Executive (as it was known then) was in charge of the response to the incident and, as can be seen from the quote below, this generated a media frenzy. The demands posed by 24-hour news also mean that there is a constant demand for information. This was not helped by the fact that there have been concerns by scientists and, in fact, by the government (at the UK and EU levels) that H5N1 could mutate into a pandemic flu for humans, which is long overdue if the cycle of pandemics is considered. By the time of the 2007 outbreak of avian influenza in Suffolk and the FMD outbreak in Surrey, the media seemed to be taking a calmer approach to veterinary disease outbreaks. A SG official provides an account of this:

The other thing that you referred to was communications with the media which is interesting because that is something that has changed out of all recognition since 2001. In 2001 I was down in Dumfries and Galloway and we had a press conference everyday at 11 am and journalists came in and we told them what we were doing. By the time the dead swan that was infected with avian influenza came along in April 2006 there were one hundred and twenty journalists wanting a story. It was an absolute feeding frenzy. They were not just happy having a press conference - they were constantly demanding press conferences. There has, therefore, been a revolution in the way that communications operate in the event of an outbreak. 24-hour news has changed things out of all recognition. They have to have something new every hour or they will make it up. It is very difficult as news develops apace now, at a pace that it never did before. The media's coverage of the avian outbreak in Suffolk in 2007 was generally positive. With avian influenza the Cellardyke swan was the first case of H5N1 in Britain right in the middle of our simulation into an avian influenza outbreak and there was a feeding frenzy - there is no other word for it ... I think the media calmed down after Cellardyke and looked at its own response ... By the time we got to the first case of high path in poultry the media kind of thought that it was 'old hat' and it became routinised somewhat. I think the media are beginning to understand

that the risk of an outbreak of avian influenza and foot and mouth are always there ... but it is sporadic and we are going to have outbreaks now and again. (interview, 2008)

This official also pointed out that both DEFRA and SG have a close relationship with the specialist agricultural journalists (known as ag hacks) which is not like the popular press:

The other thing I should say about the media is that there are two kinds. There is the 'ag hacks' who you have an ongoing relationship with and they understand what is going on. They are not going to sensationalise things because they need a relationship with us so we can have a rational discussion with them. Then you get the popular press who are after a story and they don't understand the structures and issues that we are dealing with. You have got to manage both and that is quite challenging. You get questions like what is a mute swan and then someone says 'one that doesn't speak very much'. I had a question from *the Sun* asking whether the birds on page three die of avian influenza (laughter). So it is actually quite a range of questions. Then you give interviews for people at places like SAGA radio and I didn't even know that SAGA radio existed. That is quite a challenge. (SG official, 2008)

In terms of how DEFRA judges the success and failure of how they manage an outbreak, the media plays a significant role in helping them reach a conclusion regarding the efficacy of the governmental response. With regards to avian influenza, DEFRA 'won plaudits' for the way that it handled the February 2007 outbreak (BBC, 2007c). The livestock editor of *Farmers Weekly* Jonathan Long noted that 'that particular outbreak was handled and put to bed very quickly' and 'DEFRA vets moved quickly; they put in place existing contingency plans and it all worked - simple as that' (BBC, 2007c). Indeed the official departmental 'lessons to be learned' report into the Suffolk outbreaks in February of that year seem to concur broadly with this and, predictably, made some (mainly operational) recommendations for improvement. The tone, however, of the joint report by DEFRA (written in conjunction with Animal Health) was largely positive (DEFRA, 2007b). DEFRA official G noted that the key point here is that the biggest test for the media and the public is how government actually managed a disease outbreak. In fact DEFRA's official 'lessons to be learned' report into the management of the avian influenza outbreak noted that the department's experience of managing disease outbreaks and the amount of changes to contingency planning since 2001 led to 'the perception within DEFRA /Animal Health and externally that the overall disease control operation was a success ... This view

was reflected both in media coverage throughout the outbreak and by stakeholders and operational partners who were also actively involved' (DEFRA, 2007b: 9). Unlike the situation in 2001, therefore, there appeared to be an increased level of confidence in the government's contingency planning and ability to respond to an outbreak of disease. Thus, DEFRA officials argued that the response of farmers and the media is a crucial criterion for judging the success and failure of the government's communications strategy:

The media interest tends to be an indicator of how confident they are in the government's ability to handle an animal disease. The worst thing was that, in the case of foot and mouth, the disease leaked from one of the labs. Even so, the test for the media and the public was whether we could handle it. To be fair it was a much smaller outbreak but, then again, so was 2001 before it got out of control. The 2007 outbreak could have been on that scale but we found it very quickly and contained it. If we can get a clear, strong, robust, and defensible message out then that does make a big difference ... People are receptive to strong and clear messages and that these things can happen sometimes. (DEFRA official G, 2008)

There are certain criteria or issues that we work with to gauge the success or failure of our actions in light of our roles when there is an outbreak. The media's reaction is one criterion. This includes how the outbreak is documented and in terms of the extent to which DEFRA is criticised by them. The second for me is whether farmers are doing what we asked them to do. You can have the policy and the legislation but when communications is crucial is whether they are doing what we expect them to do ... With something like avian flu and foot and mouth farmers do generally do what we ask them to do. It is in their interests to cooperate. (DEFRA official N, 2008)

Even the Anderson review concluded that the 2007 FMD outbreak attracted a far lower media profile than in 2001 (HC-312, 2008: 45), indicating that this was an acid test of public confidence of whether the government had learned lessons from the 2001 epidemic. On the whole, the fact that the NFU was also complementary of the fact that the government did all that it could to communicate the message that there would be an immediate ban on the movement of animals showed that the government was proactive in trying to eradicate the spread of disease. The confidence of the NFU generally won over the confidence of other stakeholders and the media. As established earlier in the present chapter, there were still problems in communication such as those surrounding the use of ICT. For FMD in particular, most of the communication problems were logistical in nature

such as clarifying the roles and relationship between the Government News Network (GNN) and the local police and increasing the use of local radio (DEFRA official G and N, 2008, see also HC-312, 2008: 44-51). Nevertheless, the major changes to the ways in which communications are managed can be regarded as a key policy development which, to DEFRA's credit, has worked effectively. Even former and current opposition Ministers confirmed that the government (officials and Ministers) had been in frequent contact with them during the 2007 outbreaks. This, however, also happened during the 2001 crisis (Yeo interview, 2008). James Paice offered his experience on the 2007 FMD outbreak:

With foot and mouth we were telephoned immediately. That was the Friday night when the outbreak happened. Saturday lunchtime Hilary Benn the Secretary of State had a conference call with myself and the liberal spokesman and we went with the deputy chief vet at the time. We probably had three quarters of an hour on the phone about it. So it was quite open and I was able to phone Hilary Benn or Lord Rooker at any time during that outbreak so I suppose I was in the loop. They never asked us for advice but they were happy to inform us whenever we wanted the information or if we had questions or suggestions or proposals then they would be happy to listen. I am not saying that they took the advice but they listened. (Paice interview, 2008)

A former Minister for agriculture, who is the MP for Suffolk Coastal (the constituency of the 2007 avian influenza outbreak), also argued that DEFRA's response reflected lessons that had been learned from 2001 and that he had been in close contact with DEFRA Ministers:

Yes I do think that lessons have been learned. I have been complementary to the Ministry and I am not always. But I always thought that the management of avian flu was very well done ... Their management was extremely smooth. They set the whole thing up very quickly and they got their people to their sites very rapidly ... I was very impressed with it. The Ministry came in and did the job well ... The Minister was very good at keeping me in touch. He rang on a regular basis and he was anxious that we should know exactly what happened and that is what I congratulated them for because I thought that they did handle it extraordinarily well. The Ministers and indeed the civil servants had to make sure that they got it right. The previous disease emergency was such a disaster. In terms of avian flu Ben Bradshaw is not a Minister that I know well or particularly like but he did behave extremely well in that. Part of that was down to his personal ability but also it was very much that they were quite frightened about what would happen if they got it wrong. I was the worst MP to be facing in the constituency if they got it wrong because I have done the job ... They knew perfectly well that if they did get it wrong then

they couldn't wriggle their way out of it because they would find themselves pilloried. The alternative side of that was that if they got it right then they knew that it would be said and I went to some trouble to say how good they were because I knew very well that if I hadn't then they would say that they were being unfairly treated. I do think that they did well but I do think that it was to do with intense Ministerial concern because of the history of FMD and that lessons should have been learned from 2001. (Gummer interview, 2008)

Communications: Assessment of Change

The interviews and documents analysed for this thesis confirm that the communication functions of DEFRA had changed significantly between 2001 and 2007 which, in terms of the characterisation of post-crisis change, should be described as *policy reform*. There had been the structural redesign of communications within the FFG with the recruitment of strategic communications advisors to facilitate internal communications within the department. In fact the communications officials of the FFG have ownership over communications in DEFRA's official contingency plan. The department has also experimented with the use of technologies in order to communicate with farmers in the event of an outbreak. Although this has not been implemented as well as officials would have liked, the Anderson Review noted that the events of 2007 showed how much progress had been made and that technologies were, in general terms, used efficiently (HC-312, 2008: 44). Externally, with the development of 24-hour news, the government has had to accommodate this within its organisational functions. The Cabinet Office has played a significant role in making sure that communications are developed at the governmental level. Even shadow politicians made the case that the government had kept them in the loop regarding the FMD and AI outbreaks. However, this had also been the case in 2001. Tim Yeo confirmed that the Minister for MAFF, Nick Brown, kept in regular contact with him and this was also the view shared by the shadow Minister for DEFRA, James Paice, who maintained that he was also in communication with the government. Indeed the statement by John Gummer showed that this was the case for MPs of constituencies that were directly affected by outbreaks. With respect to the policy activities of DEFRA, therefore, the 2001 crisis certainly prompted change to DEFRA's communication policies and practices.

Concluding Comments: Anderson Inquiry and the Political Climate as Key Drivers for Reform

This chapter has served to present the findings of the extent of policy-orientated changes to crisis management arrangements since 2001. The chapter has been guided by specific themes which have been derived from the crisis management literatures and the detailed analysis of the foot and mouth case study provided in chapter 4. Extensive empirical research – interviews with 32 key actors involved in the policy domain and an analysis of key documents including internal departmental reports, contingency plans, and the independent reports - indicate that post-crisis change can be characterised as *variable* within the veterinary disease policy domain. There is variability in the policy-orientated changes which swing between *fine-tuning* and *policy reform*. The chapter has shown that even within particular themes there can be variability. The analysis concerning stakeholder engagement illustrates a combination of both *fine-tuning* and *policy reform*. Most of the themes, however, can be characterised as *policy reform* and this applies to EU legislative changes, contingency planning, communications functions, and scientific policy structures. However, information and data management is an outlier because it is an area that has not been subject to instrumental nor fundamental reform in the period between 2001 and 2007. Yet this chapter departs from the analyses of crisis management studies that emphasise the conservative post-crisis tendencies of policy-makers who try to reassert the *status quo* rather than making commitments to, and follow through with, the reform of past policy practices following a crisis. According to the interview data, in all the cases that fitted the *policy reform* category, the political context of the 2001 crisis was a significant driver to change and, as a result, it took the 2001 crisis to stimulate change. As Cabinet Office official B argued, ‘if the foot and mouth crisis didn’t happen in 2001 then there would not have been as much resource thrown at lesson learning and development’ (interview, 2008).

Chapter 1 reviewed the most appropriate literatures concerning post-crisis inquiries and their utility to drive change and encourage lesson learning. There is always the danger that crisis management outcomes are seen as the end result of competing individual, institutional, and bureaucratic interests and preferences (Parker and Dekker, 2008: 265). Edelman argued, for example, that ‘sceptical search for truth is bound before long to

collide with established norms and authority' (1977: 103). This does not apply to the analysis of this thesis. All of the interviewees, apart from Lembit Opik MP, noted that the Anderson inquiry was both a major and positive driver for change and learning. The former DEFRA Secretary of State said that when she spoke to Dr Iain Anderson about his latest review that he made the case that 'DEFRA had definitely improved since 2001 but that continuous resilience awareness must be a priority' and in terms of reforming crisis management arrangements, that '[DEFRA's] contingency plans acted as a template for other departments to work from and I believe DEFRA remains quite respected in that way' (Beckett interview, 2008). The shadow Minister for MAFF during the 2001 crisis argued that 'I think Anderson was a positive driver for change. I think the evidence from the foot and mouth outbreak in 2007 showed that the lessons have been learned. I was very encouraged' (Yeo interview, 2008). In 2008 the shadow Minister for DEFRA argued that 'I think that the Anderson inquiry in 2002 was a very useful catalyst for change. It was a fairly brief inquiry but it did identify particular lessons that should be learned' (Paice interview, 2008). The former Liberal Democrat shadow spokesman for agriculture came to a similar conclusion when he said that 'overall I think Anderson was a driver for change ... I think most people thought that the inquiry report was pretty reasonable and that it flagged up all of the main concerns. I think it was a driver, yes' (Breed interview, 2008). The former Permanent Secretary for MAFF and DEFRA, Sir Brian Bender, also maintained that Anderson's report of the 2007 outbreak gave DEFRA 'a very positive mark' and that 'the way the government handled the 2007 outbreaks was testament to the extent of changes'. Interestingly, while illustrating the importance of the inquiry as a driver for change, Sir Brian went on to say that 'I had a conversation with Iain Anderson about three months after he produced his latest report and he said "how can I be assured that my report will not sit and rot on a shelf?" To which my answer was "well it certainly will not be left on the shelf by people at the top of the organisation who were involved in the 2001 outbreak' (interview, 2008).

These views were shared by the officials interviewed. For example, DEFRA official D made the point that the reports of the Royal Society and the NAO (Royal Society, 2002; HC-939, 2002) were important drivers but, for crisis management arrangements, the Anderson inquiry was most significant as it was the main inquiry that was most focused on

crisis management policy-making. The senior official said that 'if you have an independent report, like Anderson, then yes it definitely is a catalyst for change. I think that it has got a lot of weight because it provides a very strong steer in the sense that things need to change and change in a major way' (DEFRA official D, 2008). DEFRA official L also noted that 'the Anderson inquiry is a reference point when developing the plans' (interview, 2008). In addition, Cabinet Office official A argued that 'yes, policy structures and institutional arrangements have changed beyond recognition. The 2002 Anderson report led to the recommendation that there should be procedures that are ready to go [when there is an emergency] and the changes made reflect this' (Cabinet Office official A, 2008). Even stakeholders from industry (usually those most critical of the government's efforts in relation to outbreak management) made the case, and this is confirmed by Peter Kendall of the NFU, that the government had learned lessons, considered disease control policy options, and communicated with them to a much greater extent than in 2001 (Evidence to the Anderson Review, 22 January 2008).

What is more, chapter 2 noted the argument of Argyris and Schon (1978: 24) that most reports of crisis commissions and investigative bodies contain vast numbers of recommendations, rule adjustments, and strategies - such as improved communication channels and routines. The authors allude to the fact that in order for cultural changes to occur individuals in the organisation must feel capable of challenging the *status quo*. Interviews with key actors in the veterinary and animal health policy domain confirm that the 2001 crisis was a catalyst for change. The combination of the fact that the political climate was conducive to change and the fact that, as a result of Prime Minister Blair taking a reformist approach to change, the government commissioned the independent Anderson inquiry meant that reform became realisable. The combination of these factors minimised the potential for the so-called post-crisis 'blame game'.

The 2001 foot and mouth crisis was one of the biggest non-terrorist crises that the New Labour government had to manage and it had far-reaching implications for society beyond the agricultural sector and change was being called for in political and industrial quarters. This chapter has shown that such calls for change were largely, but not wholly, taken seriously and implemented by the government.

The next chapter presents the specific findings that concern 'organisational' aspects of post-crisis change.

Chapter 5

Post-Crisis Organisational Change 2001-2007

Introduction

Chapter 2 emphasised the point that both organisations/institutions and policies are subject to intertwined change processes. To quote Jones and Baumgartner (2002: 297) again, '[p]olicy-making institutions evolve under the pressure of policy dynamics'. The chapter seeks to assess the nature of organisational change - *fine-tuning*, *policy reform*, and *paradigm shift*. In addition, it examines the specific dimensions of cultural change and organisational learning – part of which is attitudinal change towards lesson learning. Chapter 2 identified the fact that bureaucratic organisations are traditionally bad learners. Macleod (2002: 58) argues that bureaucratic structures and procedures promote negative rather than positive feedback and that it is relatively easy for policy-makers to exploit existing structures and procedures. Judge (2005: 21) also argued that, for governmental organisations, change is dependent upon particular political, economic and social forces. Such forces are considered to be 'crises' in this context. In terms of post-crisis management, organisational learning concerns the extent to which policy-makers have remedied errors in the functioning of an organisation by drawing lessons from past events (such as a crisis) and readjusting past practices in light of these lessons. In this context, the cultural or 'software' aspects to organisational change are considered alongside the 'hardware' aspects which relate to the structural aspects of organisational learning and change. First, the chapter considers whether the fact that DEFRA had been the result of the reform of MAFF assisted in developing a fresh culture in light of the 2001 crisis. Second, the *manifestations* of organisational change are considered by investigating whether a culture of organisational lesson learning has developed alongside changes to inter and intra-politico-bureaucratic coordination. The chapter goes further to analyse multi-level policy dynamics - given the arrival of a different political administration in Scotland in May 2007 - before providing a summary of the research findings of the

chapter. In short, the chapter provides an empirical account of the politico-bureaucratic coordination aspect of crisis management identified in chapter 1 and the organisational learning and cultural change themes identified in chapter 2. In particular, the chapter addresses the following research questions:

- What has been the nature and extent of central-level organisational change since the 2001 foot and mouth crisis?
- Has post-crisis change been minimal/conservative or reformative?
- To what extent are Boin et al's (2008) categorisations of *fine-tuning*, *policy reform*, and *paradigm shift* suitable in explaining the dynamics of post-crisis change in the case of veterinary disease-induced outbreaks?

Organisational Change: A New Culture for a New Department?

Chapter 3 highlighted the cultural problems that existed within MAFF before and during the 2001 crisis, especially a 'silo culture' that was evident in the department. Both Nick Brown and Margaret Beckett, in their respective interviews for this thesis, made the case that there were cultural issues that the department had to address. They also argued that the fact that DEFRA was a new department in 2001 provided the opportunity to depart from past practices (Brown interview; Beckett interview, 2008).

Thirty one interviewees for this thesis made the case that there had been a significant cultural change within DEFRA. For example, the former Secretary of State for DEFRA argued that:

There has definitely been a cultural shift in the department. The foot and mouth crisis made people look more to the long-term and also were eager to create a new culture for our new department. (Beckett interview 2008)

David Curry (who headed the Select Committee investigation into the 2001 crisis), argued that DEFRA officials realised that the department could not suffer again like it had in 2001 and that there was a concerted organisational effort to bring about change:

I think that there has been a cultural shift. What we should remember is that MAFF had double shocks – BSE then foot and mouth disease. These were two catastrophic events ... How does a department come out of that? It says 'boys we can't let this happen again and it is death for us all if this happens again'. (Curry interview, 2008)

The problems associated with institutional inertia in MAFF would be expected to have been relaxed with the creation DEFRA because the organisational change was an opportunity for a fresh start. The fact that the name of the organisation changed communicated an idea about the purpose of the organisation and the policy responsibilities that the department would take onboard. In relation to changes to crisis preparedness, DEFRA official I indicated that 'the actual culture of DEFRA, as a relatively new department with an emerging, culture is an important overarching aspect to the contingency planning process' (interview, 2008).

Paradoxically, the interview data suggests that the argument that cultural changes in the department were somewhat easier to bring about because DEFRA was a new department should not be overstated nor presumed. In terms of the shift from MAFF to DEFRA, Nick Brown maintained that 'DEFRA still had to deal with issues that came under MAFF's remit and also it now has different challenges to tackle like saving the planet' (Brown interview, 2008). Indeed DEFRA assumed wider policy responsibilities than MAFF which included climate change and the wider environment. In referring to what is now known as the Food and Farming Group (FFG) in DEFRA, Brown went on to say that there are certain aspects of MAFF that remain the 'ghost of MAFF'. Interestingly, DEFRA official I used the same turn of phrase when he said that 'if you were being cruel you could say that the current food and farming group is the ghost of MAFF' (interview, 2008). The reality is that the responsibilities of MAFF are relevant for DEFRA because there will always be a section of the department that is responsible for animal diseases and the FFG falls under that category. The key change for FFG personnel is that they need to consider the wider implications of policy decisions which includes personnel being conscious of the challenge

of attempting to explain the environmental aspects of animal health-type policies (DEFRA official I, 2008). Again, the creation of DEFRA and the role that the new department played in changing the culture of the organisational sphere of crisis policy-making should not be exaggerated. DEFRA official H elaborates on this by making the case that transforming MAFF to DEFRA was a swift and 'harsh' political decision which did not allow for a gradual adaptation:

Whether the cultural changes are necessarily down to the instantaneous creation of DEFRA I'm not so sure. As most of us saw it, it was something that occurred over the weekend. On the Friday night we were MAFF and wondering who we were going to get as our next Minister then on the Monday morning we worked for DEFRA. There were people out changing the signs on a Sunday afternoon. It was a very harsh, almost overnight, transition and that is very often the case within the machinery of government. Once the decision has been made to change the department, and these are often made very quickly, you are not hanging around for very long. (interview, 2008)

Despite the fact that the shift from MAFF to DEFRA should not be overstated as a driver for change, it is the case, however, that it has, nonetheless, been a driver. As DEFRA official H argued, the shift should not be described using powerful language like 'paradigm shifts' but it changed who MAFF personnel had to work with and there was the symbolic use of language throughout the department which described long-term changes:

The shift from MAFF to DEFRA has had an impact in a change of culture at some level. I don't think I would use theoretical language like 'paradigms' in describing that. It suits politicians and Permanent Secretaries to use language that is a bit more exciting than the reality. I think there was a genuine attempt on the part of Ministers and senior officials to produce something new when DEFRA was formed. It was new. Compared to the old MAFF life, and I was living it, there was a newness about things because we had new colleagues that were doing stuff that we didn't really know anything about – these 'environment' people. You could not avoid seeing and feeling that something was different and you could not avoid hearing the rhetoric and encouraging words like a 'new vision' and 'new future'. In reality I think that those sorts of changes actually are a bit slower. Looking back from where we are now in April 2008 in DEFRA to the period around the formation of DEFRA then, yes, it would be right to say that things are very different. (interview, 2008)

DEFRA official E reflects on the change from MAFF to DEFRA and, as with DEFRA official H, argued that the shift to DEFRA had an effect on a change of culture within the

department. In particular, it changed the ministerial heads of the department and the change of attitudes in relation to how the department should operate:

I think the setting up of the new department has had an effect. Maybe it is not instantaneous and maybe not utterly revolutionary because it in the end is still a government department but new leaders, new names, and I'm afraid it does come down to the people at the top, a change of direction, and change of attitude. It gives managers the reason to shape things up a bit and reconsider what you are doing and how you are doing it is, within reason, a good thing. It has been beneficial. DEFRA, now, it a completely different organisation from what MAFF was seven years ago. (DEFRA official, E, 2008)

The political head of the department, specifically Margaret Beckett, was appointed by the Prime Minister to be the political 'agent of change'. This was necessary as MAFF had suffered intense criticism, calls for reform from all quarters, and intense media scrutiny. Colin Breed MP, a former agriculture spokesman for the Liberal Democrats, went so far as to say that 'DEFRA was brought in as much as anything else to expunge the name of MAFF which got such a bad name' (interview, 2008). Keith Simpson, who was a shadow Minister to Beckett in the aftermath of her appointment, argued that Beckett was someone that Blair could rely on to avoid being 'caught out' again:

Yes I think it is clear that there has been a change of culture. After the Prime Minister appointed Margaret Beckett to DEFRA she was determined not to get caught out. She is a wily old Whitehall warrior. Some personnel were shuffled out of the way and new people were brought in and I think that there was a desire within Whitehall to see change. (interview, 2008)

This change in personnel at the top of the organisation included Margaret Beckett herself and the appointment of a departmental scientific officer. While Sir Brian Bender remained in his post as Permanent Secretary, in Margaret Beckett's view, 'within a year or so our policy-making structures were in a very different place and that applied to the whole department' (Beckett interview, 2008). A senior DEFRA official who joined the department after it was reformed from MAFF, although showing respect for the efforts of MAFF in 2001, stated that MAFF was essentially a different department to DEFRA which made him feel 'liberated' because of its dissociation with the previous department (DEFRA official F, 2008). DEFRA is, therefore, a different but not distinct department from its predecessor. In fact several senior officials in the FFG of DEFRA occupied senior

positions within MAFF. The fact that the organisation's remit changed post-2001 to incorporate environmental policy added a new dimension to the department and would be expected therefore to have had an impact on the culture of the organisation. The next section of the chapter, therefore, considers the extent to which change manifested itself in DEFRA in the aftermath of the 2001 crisis.

Manifestations of Organisational Change

A Culture of Organisational Lesson Learning

All of the DEFRA, SG, and Cabinet Office officials interviewed for this thesis maintained that learning lessons has become an enduring feature of the culture of policy-making for animal diseases. For example:

There was a cultural shift when DEFRA was set up after foot and mouth internally, as a fresh organisation, and externally, in terms of the push towards ensuring resilience between the key levels of governance. What I mean when I say resilience is to make sure that COBRA and DEFRA are working in tandem together but also with local authorities in the event of an outbreak. There was the clear desire by myself, and the Secretary of State, to ensure that the processes were much more fluid than before. You will have your own views after speaking to other people in the department and I realise you have spoken to the Secretary of State in charge after foot and mouth. I would say that yes that has been a cultural change (Bender interview, 2008)

DEFRA official K concurred with these sentiments:

A number of the arrangements for dealing with animal diseases since 2001 have changed. We have tried to ensure that the contingency plans are up to scratch based on our experiences of foot and mouth. That has been a big change in the disease management campaign. This also relates to a new way of doing things in the department which is probably best described as a culture of lesson learning. It would be right to use the 2001 crisis as a reference point because *so* much has changed since that crisis. (DEFRA official K, original emphasis)

This argument that there has been a cultural shift in the department towards learning lessons came up time and again in the interviews (Beckett interview; Bender interview; Morley interview; SG official; Cabinet Office officials A, B; DEFRA officials, A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q). In an organisational sense, the words 'lesson learning' has become used in everyday parlance between personnel at all levels in the organisation. Senior officials ranged from arguing that it has got to the stage whereby there is a feeling that they are sometimes encouraged by Ministers to 'change for the sake of change and this ties up our resources' (DEFRA official D, 2008). One very senior official indicated that organisational tasks should always incorporate lesson learning and improvement but the lesson learning should be 'pre-cooked' in order to avoid having to learn lessons from the future outbreaks:

In terms of continuous learning from outbreaks and ongoing improvement, this should always be something that we strive to do but good policy-makers should pre-cook it entirely to the extent that it is possible to pre-cook it. We are going down that route. 2001 helped significantly in that sense. Our contingency planning is pre-cooked policy and that helps mitigate the risk. This means that you minimise the need to learn as you go along to the greatest extent possible and you minimise the need to make those decisions on the spot insofar as you can. (DEFRA official, A, 2008)

DEFRA official F, as a senior official responsible for overseeing lesson learning programmes in the FFG and the Senior Research Officer (SRO) for the exotic diseases policy area, argued that there has been an ethos of continuous learning and change. The department has reached the stage that there is not a requirement for external reports to evaluate departmental performance given the fact that internal research and crisis management exercises are sufficient mechanisms for stimulating policy and organisational realignment. Moreover, and this is also something that was iterated by DEFRA official A, different people within the department (e.g. officials with a climate change portfolio) feed-in their horizon-scanning activities into the policy process with a view to minimising the lessons that need to be learned:

Yes I would say that there is a continuous process of learning and development after each outbreak, and I would say more than that. First, every time we have an outbreak we ourselves do a lessons learned study whether Iain Anderson or anybody else wants to do one it is up to them because we do

our own exercise which includes asking people outside the department what they thought worked well and not well in the response. Plus I am the SRO for a programme which is the exotic diseases policy programme and the purpose of that programme is to constantly review whether the resources that we are devoting to our exotic disease prevention and response are in the right places. So, if we are frequently discovering that we are not very good at licensing movements then we will have a project to improve on that. If we are discovering that blue tongue is very close to this country or avian influenza we will set up a project which says are we ready for that. We have colleagues from the climate change part of the department as well who look at the longer time horizons. There is a lot of activity there which is designed to ensure that we learn lessons from the outbreak that has just occurred and how we can apply those lessons to future outbreaks for what we might need in place for next time. (DEFRA official, F, 2008)

Notionally, the interview data points towards a cross-fertilisation in drawing lessons from emergency situations in different policy areas. DEFRA official G substantiates this point:

I think there have been cultural changes, certainly. DEFRA was born out of foot and mouth and MAFF was disbanded. They were creating this new department because of all the bad publicity that MAFF received. There is a culture of lesson learning because we have had these floods as well and because of climate change we are going to have more and more emergency situations and we continually go around and share our lessons about how we deal with disease outbreaks and how you deal with communications for floods. We continually talk to each other. (interview, 2008)

A senior SG official (who worked for MAFF for and DEFRA for 25 years) and DEFRA official N also argued that DEFRA is in a somewhat unique position in that it has to plan for a multitude of emergencies, signalling a change to the government's attitude to lesson learning from crises :

I worked in one or two other departments and both were concerned with education. What stands out in DEFRA is the fact that you don't have the same sorts of emergencies. Evaluation was always built into project management in other departments. The last thing that you would do after a project in any other department was to evaluate performance. The emphasis was less on learning lessons but more on evaluation. Other departments that I worked in didn't deal with diseases or emergencies like that in the same way as DEFRA. It is the first place that I have come across whereby lesson learning is so embedded and becomes automatic thing that we do ... I don't know of any other department that has to do many contingency plans. (DEFRA official N, 2008)

In terms of the culture of lesson learning ... there have been a lot of reports and lessons to learn. I think there is a changing culture but that is not just animal health it is government-wide. If you look at any crisis that happens anywhere and the first thing we have to do is 'learn the lessons' and how you are going to apply them in the future. It is essentially a change in government attitude. (SG official, 2008)

This, as can be seen in chapter 3, is in stark contrast to experiences of MAFF which ultimately experienced chronic institutional memory losses in its response to the 2001 crisis. This is not to say that preparedness for particular diseases, such as foot and mouth, always remain high on the organisational priority list. Indeed, chapter 5 highlighted the budgetary constraints experienced in the animal health policy area under the CSR. The main reason for this, as noted above, is that policy-makers need to take a risk-based approach to potential problems due to the plethora of potential disease-induced emergencies that need to be managed. Cabinet Office official A and DEFRA official D emphasise the shift towards institutional memory retention and its relationship with a risk-based approach to preparing for crisis:

There is a continuous process of constant lesson learning in DEFRA. I don't think there was before 2001. People had obviously been through a lot after foot and mouth. Those that were there in 2001 had really been through the mill with it ... Those experiences really did filter into the organisational memory of the department ... The problem is always competing priorities. There are so many diseases. We always try to stand back and take a balanced view. You can never do everything. You can never be completely prepared and keep on preparing forever. We were trying to keep everything up to a certain level in preparedness and we recognised that FMD might not be the next disease that we might get. We had to take a risk-based approach. So diseases from 2005 onwards all started to flood towards bird flu. We ended up getting an FMD outbreak but there had clearly been a lot of work done on FMD immediately after 2001 and we had to scale-down a bit by 2004. (Cabinet Office official B, 2008)

There has been quite a lot of corporate memory around. For example, to take avian flu as an example, we declare a wild bird surveillance area and the next time around we knew that that was not necessary so we can draw lessons from the preceding outbreak. There is that type of tacit corporate memory that works well. I think that if you have a long period of time between outbreaks and you have a change of personnel then that can have an impact so you have to find a way of being able to capture it if you can ... The culture in DEFRA

now is very different from that which existed in 2001 when there was MAFF. There is no doubt that the culture has definitely changed and I think that it has changed for the better. There is a much different way of working now which is very much a 'can do' way of doing things. People just get on and do the job and I think that that is a very positive approach to take. It would be misleading to say that we have really completely nailed down horizon scanning. We still have to deal with a lot of uncertainty. We did put a lot of time and effort into trying to assess the risk of animal diseases ... We still live with the fact that I could go back upstairs later on this afternoon and get a phone call to say that there has been another disease outbreak ... The other thing that we have invested a lot in, not just in terms of money but time and expertise as well, into risk assessment. We try to identify the risks internationally and how the disease could arrive with us and what are the husbandry systems that add to the risk because people move sheep around all over the place ... That is a developing art with us. (DEFRA official D, 2008)

In summary, the post-2001 change to the culture of crisis management is more to do with the experience of the foot and mouth crisis than the question about whether the crisis can be separated from the wider processes of change which could have happened anyway as a result of the development of a new department. As noted in chapter 3, the creation of DEFRA *itself* was due to the inadequacies and the poor performance of its predecessor. DEFRA's experience in 2001 was a reference point for other departments on the dynamics of, and the considerations that should be part of, governmental crisis management preparedness. Thus, the importance of 'crisis' to stimulate change should not be downplayed.

The interviews revealed that there have been organisational changes to facilitate the cultural adaptations considered earlier in the chapter. For example, the theme of the clear allocation of responsibilities in the department was picked up by several interviewees who regarded the cultural changes as manifesting itself in personnel knowing their responsibilities before, and in the event of, an animal disease outbreak. Chapter 4 showed that the contingency planning arrangements, such as the use of crisis management exercises, had ensured that departmental responsibilities were demarcated and clear in order to facilitate coordination between officials with different portfolios. Hence, when a lesson learning report is commissioned it is clear who is responsible and what aspect(s) of

those responsibilities have to be developed. It also means that it is much easier to judge the individual performance of personnel. DEFRA official F supports this argument:

I do feel that my success and failure can be fairly easily judged. It is pretty obvious what I am responsible for and I will be held to account for it in the sense that if Ministers are pissed off and the media coverage is dire and the disease is getting out of hand then I know where my responsibility is in that ... I am responsible for a set of control measures, someone else is responsible for getting the animal off of the farm, and someone else is responsible for burning them. It is, therefore, much easier to see who is responsible for what. In a positive sense there is much greater clarity about what you need to do and it is a very strong incentive to make sure that you have the systems in place to do it. (interview, 2008)

As noted in chapter 4, the 2001 crisis created a climate where organisational actors were expected to have a clearer understanding of what their roles and responsibilities were and what other people were responsible for. This was the drive behind the reform of the SVS and the creation of the Animal Health Executive Agency.

The Reform of Organisational Functions: From the SVS to the Animal Health Executive Agency

The SVS was made an Executive Agency in early 2005 and was renamed Animal Health in 2007. It is important to note that it is difficult to see an X and Y relationship between the 2001 crisis and the creation of SVS (and subsequently Animal Health) as an agency of the British civil service. This point reflects the point made in chapter 1 which is that it can be difficult to separate post-crisis change and learning from wider governmental initiatives such as the creation of government agencies and the modernisation of government. Therefore, it is fair to suggest that Animal Health is part of New Labour's wider commitment to creating government agencies to deliver public policy. However, DEFRA official F, who was a senior member of a team responsible for managing the creation of the SVS Agency and Animal Health, maintained that creating Animal Health was also a crucial element in restructuring the operational delivery of animal disease management. Moreover, the official argued that 'the 2001 crisis was a key reference point for informing

how the agency should be structured to deal with a widespread disease outbreak' (interview, 2008).

The agency, operating under a Chief Executive is responsible for all of the activities of culling, vaccinating, and disposal and whatever needs to take place operationally on the ground. This means that logistics have been sectioned off in order to separate delivery (operations) from policy (DEFRA official F, 2008). Thus, organisationally, the overall aim was to separate such responsibilities and create a clearer divide between DEFRA's delivery activities and accountability and the SVS. According to Glenys Stacey, the Chief Executive of Animal Health, this organisational change would 'encourage the development of Animal Health's capability and strengthen its management' (Evidence to the Anderson Review, 14 January 2008). The management of Animal Health deemed a change in the name from the SVS to be appropriate as, in becoming an agency, the SVS widened its organisational competences. In October 2006 the Dairy Hygiene Service and the Wildlife Registration Service merged with the SVS, with the Egg Marketing Inspectorate becoming part of the SVS in April 2007. These changes have not significantly changed the agency, as the number of personnel involved was small: Animal Health has approximately 1600-1700 staff, with less than 200 added by the mergers (Evidence to the Anderson Review, 14 January 2008). In short, as DEFRA official F argued, Animal Health has been an incremental but crucial development in terms of drawing up lines of accountability and separating roles and responsibilities since 2001:

I do go back to the creation of the Animal Health agency because restructuring yourself so that responsibilities are clarified and separated out means that you know what you are going to be accountable for and that we better make sure that we have got it right. (DEFRA official, F, 2008)

The Director of Veterinary and Technical Services at Animal Health, Rob Paul, made the case that Animal Health has invested in its core service infrastructure (e.g. human resources, internal communications, finance and procurement). The internal changes have developed in-house capabilities and 'freed senior vets from administrative tasks in an outbreak thus allowing them to concentrate on veterinary issues' (Evidence to the Anderson Review, 14 January 2008). This had not been the case in 2001 when little or no dedicated management infrastructure had been in place. This was most in evidence at the

early stages to the response to the 2001 crisis when, as outlined in chapter 3, state vets had to manage both administrative and veterinary work - at least until the creation of Regional Operation Directors. The (then) Director for Contingency Planning at DEFRA, Ann Waters, also made the case that, in reference to the organisational capabilities of Animal Health, that the contingency plan was up-to-date and improved. This improvement had been driven by 'learning lessons and responding to changes in legislation and the wider stakeholder and policy landscape' (Evidence to the Anderson Review, 14 January 2008).

Twenty-nine interviewees maintained that the creation of Animal Health was a reflection of the lessons learned from 2001. The same number of interviewees argued that the adjustments made to contingency planning meant that another animal disease crisis akin to the 2001 experience was unlikely. However, this is only if the initial safeguards are in place, in particular, if the disease is detected and reported in the first instance. Nick Brown made the case that the spread of disease before detection had made the scale of the 2001 response so vast (interview, 2008). In terms of the 2007 foot and mouth outbreaks, the former CVO, Debby Reynolds, believed that the government's resources would have been overwhelmed if the disease had spread before detection, and she maintained that more training and leadership was required amongst field vets to achieve confidence and ensure early detection (Evidence to the Anderson Review, 22 January 2008). What is clear, therefore, is that the policy and organisational changes since 2001, and the demonstration of those in a crisis response, are dependent upon the effectiveness of initial safeguards.

Animal Health now plays a significant role in the consideration of the scalability of the crisis management response. Rob Paul told the Anderson inquiry that the agency 'looked at a range of scenarios, using 2001 as a worst case, but also classical swine fever, bluetongue and avian influenza, in considering how quickly and what level of resources would have to be deployed' (Evidence to the Anderson Review, 14 January 2007). The policy was to use Animal Health resources first and foremost in the knowledge that Divisional Veterinary Managers (DVMs) understood how many people could be released to deal with an outbreak and how many had to be retained to deliver other key tasks. Furthermore, additional vets could be drawn from a trained cadre of 80 Contingency Local Veterinary Inspectors (LVIs). Beyond that, reciprocal arrangements were in place with other domestic and

international organisations so that vets could also be drawn more widely from private practice. In this context, the resources directed to contingency planning, according to DEFRA official A, has been a step-change in the organisational aspects to crisis management policy-making:

You have to look at the resources applied to contingency planning the existence of contingency planning divisions rather than being a part of other organisational activities. This shows you that there has been a step-change. The Animal Health agency has set up a new structure which seeks to link the policy centre and the field which is critical. (DEFRA official A, 2008)

Although there has been much improvement in the area of contingency planning, with the DEFRA officials all mentioning that there is a consistency in response to emergencies in that there are established practices in place for mobilising a response. At the same time, the uncertainties of how the crisis will pan out means that there has to be an element of *ad hoc* decision-making. Although this is the case, the Animal Health agency and the established networks of the NDCC, and the local structures in place for the 2007 outbreaks, symbolised a resilience-orientated approach to managing outbreaks. Yet, at the same time, resilience remains something that occupies the thinking of senior officials. For example, DEFRA official F said that two questions occupy much of his thinking: 'how do we know that our systems are resilient? How do we know that the next outbreak will not knock our systems over either because it is different from what we have previously experienced or just because of an accumulated impact?' (DEFRA official F, 2008). Ensuring that there is institutional resilience is important in case a widespread outbreak of an animal disease happens again. DEFRA official E noted that resilience is what brings a crisis to a swift conclusion and, in reality, 'ensuring resilience, and doing it, in very unpredictable circumstances, is quite a challenge' (DEFRA official, F, 2008).

Cultural Silos? Politico-Bureaucratic Coordination

A further manifestation of organisational change is the extent to which inter- and intra-politico-bureaucratic coordination has been in evidence since 2001. As noted in chapter 3, this was an acute problem during the foot and mouth crisis. Both the Anderson inquiry and

the government agreed that there had to be change in this area in terms of inter- and intra-relationship-building. This was to ensure that the department avoids the accusation that officials work in cultural silos before and during a crisis. DEFRA official I, in referring to the 2007 avian influenza outbreak, made the case that:

In terms of organisational culture it is fair to say that we no longer work in silos. We share our information with each other and actually it is quite important for us to engage with other departments because of the nature of different diseases. For instance, we have had avian flu which, as you know, has a public health implication or risk. Just this morning I met with the Health Protection Agency to consult with them about training their staff for dealing with an outbreak of animal disease. That is before a crisis but during crisis we have military style bird table meetings and we have telephone conferences whereby we can consult with multiple interested parties such as the devolved administrations and industry. So, to answer your main theme, much has changed over time and I'm responsible for accommodating that change in the contingency plans. (DEFRA official I, 2008)

DEFRA official B also argued that this breakdown of cultural silos, as Anderson recommended in his evidence to the Environment, Food, and Rural Affairs Select Committee, was developed in 'peacetime' in the intervening period between the 2001 outbreak and the 2007 outbreaks:

A cultural shift? Yes, you need relationships to develop in peacetime and to use them and to have a conversation which would normally have taken an hour to do in two minutes during an outbreak so the relationship needs to be developed. That is part of the job – you need to know who the key people are and they need to know who you are and that they have your telephone number. (DEFRA official B, 2008)

By the time of the February 2007 outbreak in Suffolk, there was a shift away from the politico-bureaucratic problems associated with the 2001 crisis (see chapter 3). The interview data highlights the fact that there are a number of ways in which formal partnerships have been made with DEFRA and other departments after the 2001 outbreak. For example, the UK zoonosis group, which is normally chaired by one of the chief medical officers, meets twice a year to decide and discuss certain issues on zoonosis (including avian influenza). There is also the surveillance group, chaired by the DEFRA-based CVO, which concerns animal disease and the risk of infections. The Department of

Health and HPA and a whole series of other organisations are represented on those groups. Depending on the nature of the disease in question, the HPA is involved in the development of DEFRA's contingencies for avian influenza and it is also closely involved in the crisis management response. DEFRA official C, who has been involved in the zoonosis and surveillance groups, offers an insight into the close collaboration between DEFRA and the HPA during the response to the 2007 outbreak and notes that the central-level developments in this area is solid:

When we had the Holton outbreak I worked with Nick Gent of the HPA and we worked together as we led a team that investigated the occupational risk and the health risks associated with the risk of and the possibility that meat had been imported from Hungary which was infected with the virus. That is an excellent example of collaboration given that we did that over the weekend. We wrote the document – he was in Cumbria and I was in Somerset and the team was in Suffolk so that was very good collaboration. In fact I was speaking to the chief executive of the HPA this morning – there is very good evidence of cross-departmental working. One of the things that I think probably needs to work better is the development of those links at local government. Central efforts are very good, it is well networked but also formally recognized and formally governed. (DEFRA official C, 2008)

DEFRA official F adds to this theme of partnership working by noting that this is part of the contingency planning process (such as in the construction of contingency plans and their operationalisation in the crisis management exercises). This is especially the case if DEFRA has to lead a response to an outbreak which has potential public health implications. Hence, when there is an outbreak of FMD the response is more structured than in 2001, which comes back to the theme identified earlier in this chapter that there is the clear allocation of responsibilities. The official argued that this change was driven by the Anderson inquiry into the 2001 outbreak:

As part of that the daily agenda of the activities that need to be done in order to manage the response is much more clearly structured and set out. We regularly get notifiable disease investigations where a vet will be called out to a farm on suspicion of a notifiable disease. When we have a positive result there is then a fixed procedure of setting up an amber telephone conference. There is a specified list of all of the people that have to be involved in that. There are the departmental Ministers, permanent secretary, the Department of Health etc. From my perspective, the basic structure of how we go into emergency management mode is much clearer and much stricter than it was before. Much of

that is due to the response from the 2001 outbreak because the recommendations from Anderson and others were strong in the twelve months after that ... The Anderson inquiry identified the things that needed to be identified (DEFRA official F, 2008)

DEFRA official B emphasised the point that this process of maintaining cross-government partnerships also operates in the opposite direction. For example, the HPA and the Department of Health work with DEFRA in the event of an outbreak such as rabies:

The exotic diseases contingency plan shows that the HPA and the Department of Health they are members of our amber telephone conference so they are in there from the start. Of course it is not only bird flu and foot and mouth and things like that it is also diseases like rabies where they would be in the lead. (DEFRA official B, 2008)

There is much evidence, therefore, of coordination between government departments and agencies. At the central level, it is the Cabinet Office that fulfils such coordinating functions. The next section provides an empirical account of the roles of the Cabinet Office in this process.

Working in the Central Executive Territory: DEFRA and the Cabinet Office

It is joined-up government and that is where the CCS, of the Cabinet Office, can play a very beautiful role. I think COBRA, of the CCS, is most useful when you have more than one government department with a role to play where you have things happening across a wide geography and where there are difficult tensions to be managed and the lead department might not be able to do that. That is when it is most useful. The other function, of course, is to reassure the Prime Minister that everything is OK and that is a perfectly legitimate function. (DEFRA official B, 2008)

Thirty two interviewees argued that the Cabinet Office, since 2001, has continued to present DEFRA with a policy challenge in the processes of contingency planning and crisis decision-making. The interview data confirms that there was a very clear understanding of how DEFRA and the Cabinet Office, with a standing secretariat, would operate and coordinate activities in the event of another animal disease crisis. Chapter 3 documented the fact that during the 2001 crisis the Civil Contingencies Secretariat (CCS)

in the Cabinet Office was crucial in centralising the response to the foot and mouth outbreaks. It was also noted that the creation of the CCS predated the 2001 crisis but it was the FMD epidemic that compelled DEFRA to coordinate its activities with the Cabinet Office. It can be deduced from the interview data that the Cabinet Office is now embedded in the response to a large outbreak of an animal disease - especially if the response calls for acute media handling and coordination across a wide geographical area. Although the CCS was *not* introduced as a result of the 2001 crisis, the crisis served to bolster its role and it became engrained in the crisis management process in order to ensure central-level coordination. In this context, the words 'joined-up', and 'partnerships' were frequently used in the interviews to describe the role of the CCS (and COBRA as part of the CCS). For example, in addition to the sentiments of DEFRA official B above, DEFRA official C argued that:

I think the Cabinet Office has been effective at securing or facilitating joined-up approaches ... They are very keen to make sure that there is a proper joined-up response but also making individual department properly accountable for those responsibilities. I believe that has had an effect. (DEFRA official C, 2008)

During the 2007 foot and mouth outbreaks the Cabinet Office drew together all the relevant parts of the government including DEFRA, the Health and Safety Executive and the Department for Universities, Innovation and Skills (DUIS) – especially at the early stages of the crisis when there was the initial investigation at Pirbright.

Interviewees from the Cabinet Office and DEFRA maintained that the Civil Contingencies Act 2004¹⁹ helped to solidify the role of the Cabinet Office and the general concept of resilience into the central organisation of crisis management. Indeed DEFRA officials engage with the CCS in development of plans and members of the CCS have an office in

¹⁹ Both Sir Brian Bender and Cabinet Office official A indicated that the Civil Contingencies Act 2004 did not generate a great deal of change in terms of the legislation itself. The fundamental thing that the Act did was to build a civil contingencies family. It means that in peacetime the departments have got to work together to prepare contingency plans and form resilience forums. For most policy areas resilience groups and departments come together in most emergencies. Animal disease outbreaks are slightly different in the sense that the actors involved are largely the same. The actors tend to be policy and veterinary officials and, to a lesser degree the police. Thus, the biggest change stimulated by the 2004 Act is to make sure that cross-governmental relationships are enshrined, codified and developed around the common theme of resilience.

DEFRA (DEFRA official B, 2008). The role of the Cabinet Office is to make sure that coordination happens effectively, and if there are issues that departments cannot resolve bilaterally, 'then the Cabinet Office will step in' (DEFRA official C, 2008). This intervention is designed to ensure that there is a strong collective sense of how the government is responding to the emergency.

Although the Cabinet Office acted as a coordinating body, as it did in the latter stages of the response to the foot and mouth epidemic in 2001, the DEFRA officials claimed that it 'owned' the response policies more decisively than in 2001. Nonetheless, the interview data showed that departmental tensions between DEFRA and the Cabinet Office exist in the area of contingencies and crisis management for animal disease outbreaks. There seems to be a departmental mindset in DEFRA which suggests that if the Cabinet Office becomes involved then it portrays the image to the public and other government departments that DEFRA, as the leading animal health ministry, is not in control of the response. Even a former opposition Minister argued that 'DEFRA recognises that when the Cabinet Office or COBRA gets involved then this adds a certain dimension to the process, it is a change in approach which insinuates that there is a *need* for a form of collective decision-making and this is something that DEFRA cannot fulfil' (Simpson interview, 2008 original emphasis). The Cabinet Office represented an added bureaucratic pressure to DEFRA's affairs – resulting in a degree of resentment when the Cabinet Office intervenes. DEFRA official C argued that, 'I have noticed a lot of people in my career who say 'bloody Cabinet Office is poking their nose in again and who do they think they are telling us what to do?'' Tellingly, a Cabinet Office official, who is the contingency link and is ultimately responsible for making sure that departments are linking up and talking to each other, pointed to the fact that he regarded COBRA as a forum of accountability for DEFRA officials when he said that:

DEFRA officials come in on telephone conferencing or we use the video conference facility so we can bring them onto a screen if you particularly want to look into their eyes and say 'tell me straight, have you got this under control?' (Cabinet Office official A, 2008).

This undoubtedly adds pressure to the work of DEFRA officials, but DEFRA official C did say that for issues like avian influenza, where there are different interests involved, then it

is natural and sensible for the Cabinet Office to host meetings but 'it is at quite a bureaucratic level and often takes a 'nanny knows best' approach' (interview, 2008). This is reflective of the argument of Marsh et al. (2003: 314) who maintain that 'the code that underpins the British political system is still one that emphasizes that Whitehall, that is the core executive, 'knows best''. DEFRA official D also argued that COBRA can be rather 'over the top' in the event of an outbreak:

I think that there are times when COBRA has been formed when perhaps it need not do and it has been a bit over the top. In a sense I suppose it is fairly harmless and acts as a good way of keeping the wheels oiled as it were so people understand what they are doing. There is not great harm in it but I am not sure if it is always necessary. (interview, 2008)

During the 2007 outbreaks DEFRA had to provide daily updates and key statistics (e.g. the data and information on the number of outbreaks and the risk of its spread) to the Cabinet Office. A senior Cabinet Office official noted in an interview that the Cabinet Office requires data in order to make sure that there is a consistency in government communications; and that data will inform decision-making beyond DEFRA's organisational boundaries, which includes whether or not the armed forces need to become part of the response:

We need information in the centre which enables us to do three things. One is to do the checking. We need enough information to say whether the operation is being managed properly. Two, we have to enable those strategic decisions. For example, do we need to involve the armed forces or should we agree to vaccinations? Three, we need the information for public communications material. So when a Minister goes out and has to say something like 'today's culling total is as follows...' and that is for any Minister and not just the DEFRA Secretary of State like some random Minister appearing on Question Time there needs to be a common set of data. We should have data which says 'DEFRA are going to take out animals on three farms, there is fourteen hundred animals and it will take Animal Health two days to do it or four days to do it'. We should be able to say that 'by the end of day one this is the number culled, by the end of day two this is the number culled' and so on. You tell us that then we check for ourselves. (interview, 2008)

DEFRA officials A, C, D, F, J all believed that the collection of data for the Cabinet Office was burdensome and a distraction from actually managing the 2007 foot and mouth outbreak. In the aftermath of the outbreak the former CVO Debby Reynolds argued in her

evidence to the Anderson review that it was impossible to coordinate a response without COBRA but that it was demanding in terms of the resources that it consumed and, of course, resources were not at a surplus in times of crisis – justifying the proportionality of resource demands (Evidence to the Anderson Review, 22 January 2008). Sir Richard Mottram, Permanent Secretary for Intelligence, Security and Resilience, outlined that both the Prime Minister and Secretary of State were conscious of the events of 2001 and the importance of putting in place a high-level focus and the Cabinet Office provided an arena for this to occur (Evidence to the Anderson Review, 17 January 2008). The Secretary of State, Hilary Benn argued, with sentiment that would fit within the symbolic politics literature, that the meetings of COBRA *‘showed how seriously government took the outbreak* and had provided the opportunity for the Prime Minister to be fully briefed on the response and satisfied that DEFRA was on the case’ (Evidence to the Anderson Review, 23 January 2008, emphasis added).

COBRA’s demand for substantial amounts of information was noted by Cabinet Office official A who maintained that this information was required in order to build a common picture at the strategic level. In particular, the official argued that it was important to provide the Prime Minister with specific details of information (such as surveillance and the amount of calls made to help-lines) in order to validate and provide assurances that crisis management strategies would be delivered on time (interview, 2008). The burden for DEFRA officials was that the CVO requested that officials double-check all information before it was passed to COBRA which created an ‘inevitable overhead’ (DEFRA official F, 2008). In referring to the role of the CCS in phase two of the 2007 FMD outbreak, Andrew Burchell, the Director of the Service Transformation Group, argued that the CCS was a ‘good information collector and helped to galvanise other departments’ but ‘it was quite burdensome and there were too many meetings phase two of the outbreak’ (Evidence to the Anderson Review, 9 January 2008). Notwithstanding the heavy administrative pressure, Cabinet Office official A maintained that the information requested by the CCS of the Cabinet Office was information that DEFRA needed itself in managing the outbreak:

If we in COBRA require data then it should be data that already exists. If we are asking for new data which has not been collected already then we will ask for that data for that purpose or, by definition, it is something that DEFRA

ought to be thinking about. Otherwise they should be asking for the data to inform their thinking before they come to the COBRA table and get cross-questioned. (interview, 2008)

There seems to be a general agreement in the interviews with the senior DEFRA officials who have worked closely with the Cabinet Office that the Cabinet Office's functions, in the event of a disease outbreak, is almost a necessary evil in that it ensures a coordinated response but is also a top-down bureaucratic pressure. Sir Brian Bender regarded the setting up of COBRA as the biggest significant change to the organisation of British crisis management and that the 2001 crisis emphasised the need for its role (interview, 2008). Bender, based on his experience of foot and mouth in DEFRA and his recent experiences of DBRR (specifically concerning energy provision risks associated with the strikes at the Grangemouth oil refinery), goes as far to say that there has been a cross-governmental cultural shift to the point that 'thinking about emergency management has become the lifeblood of a number of departments, not just DEFRA' (interview, 2008). Intriguingly, the former MAFF Minister for agriculture, and author of the Environment, Food and Rural Affairs Select Committee report into the 2001 crisis, argued that COBRA met too frequently in order for the government to show the public that the response was centralised and that the issue was being taken seriously:

COBRA and the Cabinet Office has not been that helpful. I mean, Prince Charles will be involved next. Having a structure like that attempts to convey that point that they are on top of it. It is almost like the Prime Minister is standing there with his binoculars looking at everything from above. His steely eyes, or eye should I say, will be on the glitch. COBRA will be convened the next time that there is a traffic jam in Parliament Square. (Curry interview, 2008)

This is quite an unsophisticated way of viewing the central level organisational changes to crisis management since the 2001 crisis. However, it does illustrate the extent of change since 2001 - even if David Curry views COBRA as more of a symbolic forum for decision-making rather than a vital part of the crisis management machine. Indeed, Sir Brian Bender argued that the development of the CCS in the Cabinet Office had been the '*most transformative change* because of the regular implications that it has for the department' (interview, 2008, emphasis added).

The next section presents findings relating to the debates on the impact of central and devolved level relations, in particular the SG, on the organisational change process. The interviewees for the thesis were asked to consider any other factor(s) which were not covered directly in the interview questions but they felt were important in having an impact on the dynamics of organisational change since the 2001 foot and mouth crisis. Twenty interviewees, 63 percent of the respondents, believed that the fact that there was a different political administration in office in Scotland from the UK level makes a difference to change processes. The other 12 interviewees believed that the main issues had been covered and made no further comment.

Multi-Level UK Governance: Sub-National and National Dynamics

In terms of linking up [with the SG], it can be difficult to do because there are different political organisations in office in Scotland to England so we try to focus our efforts on the operational and official levels because you know each other and have to get on. Disease does not care if it is in Scotland or England. (DEFRA official B, 2008)

In May 2007 the Scottish National Party (SNP) made political history by becoming the first nationalist party to head the Scottish Government. This meant that the Scottish Labour Party, which had been the dominant force in the Scottish Government since devolution in 1999, became the official opposition to the SNP in the Scottish Parliament. With a Labour government still in office at the UK level, this, inevitably, changed the political dynamics between Scotland and the UK level. As the narrative of the 2007 outbreak illustrated in chapter 4, the SNP administration was at odds with the UK government as the former took the view that responsibility over funding compensation packages resided with the latter. Although this was an example of policy and political tensions between the two administrations, the interviewees made the case that having to take into account an added political dimension to contingency and crisis management arrangements had an impact on organisational processes.

The post-1999 Scottish Parliament has primary legislative powers over animal health and welfare policy²⁰ but because diseases are no respecters of national boundaries, the UK and Scottish governments still have to work closely in the processes of contingency and crisis management (SG official, 2008). The responsibilities for disease management were previously the responsibility of the Secretary of State for Scotland but were shared with MAFF. When MAFF was terminated in 2001, and DEFRA came into being, the operational delivery of animal health in Scotland was separated from the UK CVO's remit. As established earlier in the thesis, Animal Health, the delivery arm of DEFRA, became an executive agency soon afterwards. This meant that the CVOs in Scotland and Wales were both employed by the Animal Health agency. The SG interviewee made the point that a CVO post in Scotland and Wales was created 'on the back of the foot and mouth crisis which was developed specifically as a result of the recommendations of the 2001 Anderson inquiry' (SG official, 2008). The CVO for Scotland, Professor Charles Milne, was appointed as CVO for Scotland on 1 April 2003 after the UK CVO, Jim Scudamore, retired in 2002. It was agreed that the CVO for Scotland would work under the Animal Health agency up until 1 April 2007. Since April 2007 veterinary officials have been independent from Animal Health and are part of the SG Environment and Rural Affairs Department. Three UK administrations - Wales, England, and Scotland – all use Animal Health as their delivery agency.

Multi-Level Politico-Bureaucratic Coordination

Processes

The arrangements for coordination between the SG and its UK counterpart operate in several key ways in the event of an outbreak. Much of the details surrounding these arrangements are set out in Concordats. Concordats are agreements that are 'binding in honour' (MAFF, 1999: paragraph 3), or non-statutory, which appear in documentary form and are written by devolved and central UK level departments. The Concordats act as a procedural mechanism for channelling the views of the Scottish administration on such

²⁰ This is with the exception of the Veterinary Surgeons Act 1966 which remains reserved to the UK Parliament.

policy matters. Under the Concordats there are arrangements in place for the coordination of animal health and welfare/veterinary services and for emergencies that affect the agricultural, fisheries, and food policy area (MAFF, 1999: paragraphs 28, 27, 38; MAFF, 1999b). Beyond the Concordats, specific inter-organisational practices between the Scottish administration and DEFRA have also developed since 1999. During an outbreak, therefore, the devolved administrations are involved in the 'bird tables'²¹ and are invited to London to be involved in national disease control activities in the Cabinet Office. Policy officials from the devolved administrations attend COBRA so it would be better described as a 'policy' rather than 'veterinary' meeting. On the veterinary side, there are CVO meetings and expert group meetings, such as meetings of the National Emergency Epidemiology Group (NEEG), which feed into the policy work of colleagues who are mainly involved in COBRA. The Animal Disease Policy Group (ADPG) acts as an information channel. This is because information from the bird tables and expert groups are synthesised by the ADPG and this ultimately determines disease control policies. A SG official argued that this is 'a process of synthesis in the sense that everyone feeds in from the four administrations' (SG official, 2008). In addition to the bird table meetings, whenever there is an outbreak there is what is called an 'amber telephone conference' and the devolved administrations are part of that. When there is an outbreak, the UK, Welsh, Northern Irish, and Scottish CVOs talk to each other on a daily basis. This also applies to Ministers and other officials such as the respective senior officials in the animal health and welfare policy area:

During the avian influenza outbreak the CVO at the time and I had a number of conversations with the chief vet in Scotland and my opposite number in Scotland regarding what would be a sensible line to draw in terms of the birds that we are going to kill and the birds that we would not kill ... We mutually supported one another to make sure that we came up with decisions that we

²¹ In bird table meetings during an outbreak the role of the devolved administrations depends on the geographical location of the outbreak. The role of the devolved administrations is to discuss devolved issues. If there is a foot and mouth outbreak in England and this has implications for Scotland then SG officials play a greater role in the meetings. If the outbreak is in Scotland then, as one would expect, the Scottish administration takes more of a prominent role because they would be the ones supplying the majority of the information that DEFRA colleagues would be diffusing to other departments and ultimately the media. Furthermore, the SG has its own Disease Strategy Group (DSG) which is another forum which facilitates information exchange. The DSG includes SG Ministers, senior officials from the Scottish Government Environment and Rural Affairs Department, Animal Health, communications officials, and the Cabinet Secretary.

were both happy with. At peacetime, on the technical side, I think the links across the UK are very strong the four CVOs (including Northern Ireland) we meet every month to discuss mutual problems, individual problems but also the technical input that we are going to put into advice to various Ministers and we try to ensure a consistency, where possible. Ministers were also engaged in that process as they wanted to know what was going on and to be kept in touch. Ross Finnie at the time was in charge of the public presentation. That is how it worked then. It is a partnership between two sets of policy people supported by the one animal health agency. (DEFRA official, F, 2008)

However, during the 2007 foot and mouth outbreak the Scottish government did not use its powers to the same extent that it did in 2001. The outbreak was very different to 2001 because in 2001, as detailed in chapter 3, the disease spread around the country. The 2007 disease outbreaks were in a low livestock density area and officials 'knew where it was and the national movement controls were in place very quickly' (SG official, 2008). Nonetheless, at the SG level, the politics of the situation resulted in a very clear desire to implement policies that were appropriate for the Scottish administration (SG official interview, 2008). Before 2007, the Scottish administration developed its own policies and contingency plans, even before the SNP were elected to government. Ostensibly, this was 'not with the intention of trying to get one over on anyone else but just doing what was right for the administration - yet coordinating that was quite a challenge' (SG official, 2008). DEFRA official B went further to say that 'it is getting more difficult working with the devolved administrations as they often seek a different outcome' (interview, 2008) and DEFRA official F stated that 'with the change in politics – both in Scotland and Wales it may be that it might work differently in future' (interview, 2008). In this context, the next section of the chapter identifies some key issues surrounding such inter-bureau-politics between the two administrations (see chapter 1 for the debates surrounding the bureau-politics of crisis management).

Problems and Prospects

As detailed earlier in the present chapter, the national and sub-national levels are supported by one Animal Health delivery agency which attempts to ensure multi-level coordination. This remains a sensitive issue in terms of the politics of crisis management for animal

diseases. It is an issue that has grown because of the public debate about who should fund compensation for farmers as a result of the 2007 foot and mouth outbreak. More specifically, this concerned the SNP demands for Whitehall funding for the sheep welfare scheme. A SG official argued that ‘the concordat is quite clear that where there is a GB [Great Britain] policy they should fund it and when we get something different then we should fund it’ (interview, 2008). In addition, despite officials taking the view that DEFRA’s management of relationships with the devolved administrations are the best in Whitehall (Evidence to the Anderson Review, 17 December 2007), the official cited argued that ‘I think we need to go back and look at the concordats again’ (SG official, 2008). Interestingly, in June 2008 that Professor Jim Scudamore, the CVO in charge during the 2001 foot and mouth crisis, published a review of Scotland’s contingency planning arrangements on behalf of the Scottish Government in light of the experience of the 2007 outbreaks. The report notes the disagreements between the Scottish Government and DEFRA with regards to funding disease outbreaks:

A number of the misunderstandings arose as a result of the current arrangements for funding FMD control policies in Scotland as most of the budgets are held by DEFRA and spent on a GB-wide basis. With the devolution settlement it was agreed that DEFRA would pay for compensation and control measures associated with exotic disease outbreaks. However there was a lack of clarity in the Concordats on where responsibility for funding lay if the Scottish Government wished to pursue a policy of its own which was not agreed on a GB-wide basis. ... However, the continuing progress of devolution means that the present situation has been a potential cause of misunderstanding when developing and arranging funding for animal health and welfare policy.

(Scottish Government, 2008: x)

The core of these disagreements are, therefore, ‘outdated concordats’ and that they need to be reviewed in order to accommodate the changes of circumstances the Scottish and UK levels (Scottish Government, 2008: xi). These circumstances are that Scotland has now taken ownership of its own contingency planning arrangements for managing animal diseases. Interestingly, the Scottish Government report indicates that there was a perception that in England ‘a number of the actions taken by the Scottish Government were purely for political reasons and not related to best scientific and veterinary advice’. Yet the report concludes that ‘the Scottish Government took appropriate action based on the

best veterinary and scientific advice available. Indeed if the Scottish Government had failed to implement evidence-based policies for the control of FMD quickly and effectively they would have lost credibility from their industry and electorate' (Scottish Government, 2008: x).

The Concordats, therefore, need to be reviewed in order to accommodate the changes of circumstances and the Scottish and UK levels. It is likely that unless Concordats are subject to reform then tensions between the two administrations will only worsen. The fact that the Scottish Parliament has primary legislative powers over animal disease and welfare policy, whereas the budget to deliver the policy resides with DEFRA, is a recipe for future breakdowns in communication and coordination. What is intriguing, however, is that the Scottish Government's report set a tone which can only be described as lopsided with its subsequent conclusions. The report initially conveys the impression that relations between DEFRA and Scottish Government 'ran smoothly' and that 'there has been a perception in England that a number of the actions taken by the Scottish Government were purely for political reasons ... this does not appear to be the case' (Scottish Government, 2008: ix-x). This tone departs, however, from the key recommendations actually put forward in the report. The report's recommendations are categorised into high priority (critical), medium priority (essential), and low priority (desirable). Within the high priority (critical) category are specific recommendations that highlight the extent of the sub-national and national tensions between the Scottish and UK governments. These recommendations are shown below:

- The Scottish Government and DEFRA should prepare a guidance paper on relationships with the devolved administrations in order to stress the importance of respecting confidentiality and of being as open as possible. The benefits of agreeing such a protocol with the devolved administrations should be emphasised in order to improve working relationships at both the ministerial and official level.
- In light of political, financial and organisational developments the Scottish Government and the UK Government must urgently review the existing Concordats to take account of these changes. They should ensure that the financial

arrangements are clear and that budgets where appropriate are transferred to the Scottish Government to implement all the policies related to exotic disease control. DEFRA should not be required to fund any exotic disease control measures in Scotland.

- Scottish Government should consult with the Cabinet Office to review existing arrangements to take account of the lessons learned in 2007 and to agree formally the protocol for involvement by Scottish Government Ministers and officials in the Civil Contingencies Committee when Cabinet Office Briefing Room is activated during an FMD outbreak.
- The Scottish Government should conduct a fundamental review on the way in which animal health and welfare policy is delivered in Scotland in order to bring funding of service delivery into line with its devolved policy responsibilities. This may include the option of establishing a separate Animal Health agency for Scotland funded from a Scottish held budget or for maintaining a GB-wide agency but funded by the Scottish Government for the work undertaken in Scotland.

(Scottish Government, 2008: xvii-xviii)

The above recommendations point to deeper bureaucratic and political coordination problems and that 'the status quo is not sustainable' (Scottish Government, 2008: 61). What is clear is that the 2007 outbreak brought such multi-level coordination difficulties to the fore. Thus, although this chapter has shown that there has been a cultural change across Whitehall which, overseen by the Cabinet Office, facilitates joined-up government and the development of partnerships, this has not been matched by coordination between the devolved administrations (in particular the SG) and Whitehall. The change in political administrations in Scotland is a major factor in damaging Scottish and UK-level intergovernmental relations. According to 20 interviewees this relationship building will be a significant challenge for both sides but this does not mean that attempts should not be made to communicate and coordinate pre-emergency arrangements during peacetime or the intervening period between outbreaks. In referring to Scottish and UK government

relations during the 2007 outbreak of FMD, Sir Richard Mottram argued that the devolved administrations felt as if they were being excluded from the decision-making process at Whitehall. Therein lies one of the key tensions that exist because Sir Richard went on to say that there 'had been an issue of trust between the UK and the Scottish Governments and that there is a need to build confidence on both sides' (Evidence to the Anderson Review, 17 January 2008). The strained relationship with the devolved administrations in the second phase of the outbreak was not assisted by the acute economic consequences of decisions taken during the market season in September 2007. The SG went out on its own and moved separately from England and Wales when the SNP administration permitted the restoration of market trading before its UK counterparts. This made it difficult to manage stakeholder relationships at the UK level because of the lack of policy consistency across Britain.

A major question associated with ensuring policy consistency is 'the arrangements for delivering animal health and welfare policy in Scotland. That is consistent with the SNP's founding manifesto ... The big question is: Do we want a GB delivery service?' (SG official, 2008). The arguments against whether there should be a single 'GB' agency for policy delivery are twofold. First, that Britain is a single epidemiological unit since diseases penetrate national borders between Scotland and England and a single service allows for cross-border resilience and flexibility. DEFRA official C argued that the ability to bring staff from different parts of the country to deal with a disease outbreak in one corner of the country would be much more difficult if there are separate agencies. As a result, there is the potential danger that, because of the politics involved between administrations, that difficulties may arise in relation to whether Scotland decides to invest in work on a particular area and it then 'starts to cordon the resources to that part and to the detriment of elsewhere' (interview, C, 2008). Second, it will be more costly to have separate delivery agencies in Scotland and England because that would lead to the duplication of policy activities. However, the Scottish Government's review into whether Scotland should have a delivery agency concluded that Scotland remains a single epidemiological unit and that Scottish agriculture was so integrated into the UK economy that it cannot be separated into a separate entity (Scottish Government, 2008: vii). In the short to medium term it is more likely that the process of devolution will see Scotland

being divided into a separate risk area in order to satisfy appropriate regionalisation in the event of an outbreak (Scottish Government, 2008: vii). This would allow for licensed movements to take place much more quickly when a national movement ban is imposed at the UK level. In the longer term it remains to be seen what will unfold in the future regarding such institutional arrangements for planning for and managing animal disease outbreaks but one thing is certain and that is that the tensions between the Scottish and UK levels 'will be a catalyst for major change' (SG official, 2008).

The main point to emerge from the 20 interviewees in relation to the dynamics of organisational change at the sub-national and national levels is that politics matters. Indeed, this is summed up by Cabinet Office official A who argued that 'you can see how having different parties in government in Scotland and England might lead to tensions when managing cross-border problems like disease outbreaks' (interview, 2008). The official went on to say that at the Cabinet Office level there are meetings involving officials and Ministers but 'you have got to be really careful about divorcing or separating the devolved administrations because you have genuine differences over a policy'. These tensions are not assisted by the fact that 'you will always get different personalities who either get along famously or rub each other up the wrong way, it doesn't matter whether it is officials or politicians – it makes no odds'. The official, quite openly, went on to state that:

You may or may not get people playing political games. What we have got to do in running COBRA is to say 'that is just being bloody childish and sort it'. Or actually we say 'the Scots have got a point about getting the sheep down from the hills and it is not a political point – it is not Alex Salmond being childish or throwing something at Westminster – but actually they are making a point that we need to address'. That is the trick. Were people just behaving childishly or are these matters of high politics? If you have something with substance then we, if that is what it takes, have to say to these guys 'grow up, these are serious issues that you have got to address'. That said, there were one or two moments during foot and mouth when there were serious issues that had to be addressed like sheep welfare and we did address them. (Cabinet Office official A, 2008)

This illustrates arguments presented in chapter 1 of the thesis that crisis management is an inherently political affair. This might be exacerbated in years to come if different political

administrations remain at the sub-national and national levels of government. As David Curry argued in his interview, 'life has become more complicated in that the devolved administrations are now in place and they are now under different management' (Curry interview, 2008).

This complicated relationship, according to one interviewee, will become even more complicated because of the SNP's recognition that DEFRA represents the UK in Europe and internationally and that negotiating with the Commission is channelled through DEFRA (SG official, 2008). As chapter 4 showed, policies governing disease control policy options and crisis management arrangements are embedded within the EU policy system. The disjuncture in political control at the Scottish and EU levels has led to the SNP seeking to make its mark on EU-related policy. Carving out a separatist approach to the UK includes EU campaigning strategies in order to place tensions on existing Scottish-UK relations (Mitchell, 1996: 233-234; Smith, 2008: 3). Since becoming Scottish First Minister, Alex Salmond has initiated calls for the Scottish Government to take a leading role in formulating and directing the UK's line on other environment-related policies such as EU fisheries policy (The Herald, 13 July, 2007). Approximately one year later the SNP government published its action plan on EU engagement. This is all part of the SNP's desire to have an 'independent Scotland in Europe' (Scottish Government, 2008b: 5). The SNP, however, can only achieve influence through existing constitutional constraints (Smith, 2008: 3). Long-standing constitutional constraints, primarily the fact that EU policy remains a reserved power at Westminster, limit the SNP government's freedom to manoeuvre. At the same time, in terms of the case of policy and organisational arrangements for preparing for and managing veterinary disease-induced outbreaks, this does not mean that there are not short to medium-term pressures to intergovernmental relations. Before the 2007 Scottish Parliamentary elections, Jeffery (2007: 93) was clear that relying on the pre-2007 institutional continuities that has characterised the relationship between the Scottish Executive (and the Scottish Office pre-1999) with Whitehall could be a mistake and account should be taken of the implications that disparities of political control across different parts of the UK. Yet having a separate Animal Health delivery agency would not change this constitutional situation since EU policy remains a reserved power at Westminster. Thus, the dual tensions of the SNP trying to carve out their own

influence in EU affairs *and* have control over a separate policy delivery agency for animal disease control management means that intergovernmental relations concerning veterinary disease control policy will, in all probability, continue to come under considerable strain.

Organisational Aspects: Assessment of Change

This chapter has presented specific interview and documentary materials that concern the organisational aspects to post-crisis change. The chapter shows that there is an interconnection between a culture of lesson learning in DEFRA and the intra- and inter-departmental relationships that have developed in Whitehall. A reorientation of organisational cultures was not necessarily assisted by the fact that DEFRA was a new department in 2001. Yet there has been a change in the organisational aspects of crisis management such as working closely with the Cabinet Office and reconfiguring strategic and operational functions with the creation of Animal Health as the delivery agency. In this context, the study has shown that bureaucratic organisations (DEFRA in this case) do have learning capabilities which have translated into changes to the culture (software) and structures (hardware). These changes, however, as established in chapter 4, would not have been so acute if it was not for the 2001 crisis. Although the role of COBRA and the CCS in the Cabinet Office pre-dated the foot and mouth epidemic, the role of COBRA, and DEFRA's relationship with it, became solidified as a result of the crisis. This is despite, as the interview data suggests, the existence inter-organisational tensions in the post-2001 period. Thus, with the findings presented in chapter 4 in mind, the 2001 crisis can be seen as a major catalyst for both organisational and policy change. This reaffirms the function of crises as 'destabilisers' to pre-existing policy and organisational arrangements.

With respect to organisational learning, the finding of this thesis justifies the argument that bureaucratic organisations have the capacity to learn and to modify behaviour as a result (Judge, 2005: 14). Accordingly, the findings of this study can be viewed in the context of Argyris and Schon's (1978) characterisation of *single* and *double-loop* organisational learning. Chapter 2 noted that *single-loop learning* is when something goes wrong, and

given or chosen goals, values, plans and rules are operationalised rather than fundamentally questioned. *Double-loop learning* leads to an alteration in the governing variables because they are subject to critical scrutiny and, thus, a shift in an organisation's underlying norms, policies and objectives. The analysis, both in the present and preceding chapters, point towards, with the exception of changes to stakeholder engagement and information and data management, *double-loop* learning given the extent of the post-crisis changes. The Anderson inquiry formulated *double-loop* lessons, which post-crisis inquiries do not always do (Boin, 2008: 245-246), and DEFRA personnel accepted that their crisis management foundations no longer sufficed. This acceptance led to the implementation of *double-loop* lessons in the post-crisis phase (Boin, 2008: 239-240)

Concluding Comments

This chapter builds on the findings of chapter 2 and confirms that in times of crisis policy-makers will not necessarily prioritise preservation over reform. There is evidence from the interviews of a *paradigmatic* change in DEFRA; with the environmental policy remit of DEFRA leading to sustainability and sustainable development becoming engrained within the organisation. Margaret Beckett noted 'the idea of sustainable development and reforming agricultural, policy in line with the rural economy, was an important priority, I would say new model, for the department' (interview, 2008). DEFRA official D also argued that 'we have tried to obey the principles of sustainability as far as we possibly can. It is not easy to take a particular example but there all sorts of ways that we try to minimise the impact of what we do in relation to disease control for the environment' (interview, 2008). In terms of sustainable development, policies now have to be justified on the basis of their environmental implications. This is not directly related to the changes to crisis management that have emerged after the 2001 crisis but reflect the government's wider approach to environmental policy-making.

More specifically, the preceding and the present chapter show that policy and organisational change since the 2001 crisis has included both *fine-tuning* and *policy reform*. Again, change has been variable. The empirical analysis shows that, as

hypothesised earlier in the thesis, that change is not a one-dimensional phenomenon. In this respect, the next chapter of the thesis will consider the conceptual issues surrounding the dynamics of post-crisis change. Chapter 2 made key connections between the 'crisis' literature and the traditional policy and organisational/institutional change literatures. This theme will be revisited in the subsequent chapter. Chapter 6 considers the findings of the study in the context of the key precipitants of change. In addition, although this thesis has shown that there have been substantial changes to the policy and organisational aspects to change, many of these changes have largely been incremental in the period between the 2001 and 2007 outbreaks. This allows for a contemplation of how crises or critical junctures lead to incremental steps which can produce transformative results or a 'revolution in slow motion' (Streeck and Helen, 2005). The crux of the next a chapter, therefore, is to make a contribution to the conceptualisation of the nature of change based on the findings of the thesis.

Chapter 6

The Nature of Post-Crisis Change: The Bigger Picture of the Study

Introduction

The findings presented in chapters 4 and 5 showed that the 2001 foot and mouth crisis stimulated a process of change to most, but not all, of the key policy and organisational aspects identified in the case study chapter (chapter 3). As a result, a major conclusion that should be drawn from this thesis is that crises have the potential to be a significant force for change. However, this chapter is concerned with the 'results' of change. Streeck and Thelen (2005: 1-2) and Aldrich and Ruef (2006: 155) argue that to determine the effects of change the crisis or disruption should be separated from the change 'process'. It is on this basis that the present chapter returns to the conceptual aspects of change identified in chapter 2. The chapter aims to reflect on the empirical analyses of earlier chapters in the thesis.

Most studies that concern crisis management and change, like this one, generally conclude that *paradigm shifts* in the wake of a crisis are unlikely. If change does take place then it is more likely to be incremental which, over time, can be reformative (Boin et al., 2008: 292-293). Thus, based on the discussions in chapter 2, the present chapter revisits the work of Streeck and Thelen (2005) and shows how their work on institutional change is useful for explaining the results of post-crisis change. Hence, conceptual linkages are made between the crisis management organising concepts of *fine-tuning*, *policy reform*, and *paradigm shift* with the modes of change identified by Streeck and Thelen (2005: 18-30): *exhaustion*, *conversion*, *drift*, *layering*, and *displacement*. The themes emerge in order to question whether change has been evolutionary and transformative in the crisis aftermath. Thus, on this basis, the following research questions identified in chapter 2 will be addressed:

- To what extent did the 2001 foot and mouth crisis 'punctuate' the policy equilibrium and lead to a shift in the government's policy agenda?
- To what extent are Boin et al's (2008) categorisations of *fine-tuning*, *policy reform*, and *paradigm shift* suitable in explaining the dynamics of post-crisis change in the case of veterinary disease-induced outbreaks?

Based on the questions above, and the interview data, the suitability of Boin et al's (2008) categorisations of post-crisis change (*fine-tuning*, *policy reform*, and *paradigm shift*) will be considered in the context of evolutionary change. First, the next section of the chapter addresses the question of whether the 2001 foot and mouth crisis punctuated the policy equilibrium and led to a shift in the government's policy agenda.

2001 Foot and Mouth Crisis: Consensus Breaking and Agenda Shift

Punctuated equilibrium emphasises idea-based, rather than belief-based, shifts. Chapter 2 showed that punctuated equilibrium is concerned with public agenda shifts which can lead to major change. The media, government decision-makers, and the public have resource limitations in the form of time, knowledge, and attention which means that such actors cannot manage the full range of policy problems that they face. This means that they ignore most problems and promote a few to the top of the agenda (Cairney, 2007: 58).

The 2001 crisis shattered the ideational consensus about how to manage an animal disease crisis. In particular, there was a shift in the government's ideas about how central government coordinates an emergency response. The government sought to centralise crisis decision-making by making COBRA a permanent feature of the central-level crisis management machinery whilst attempting to ensure cross-governmental partnerships between departments and agencies. The government built these ideas into the 2004 foot and mouth and the 2006 avian influenza simulation exercises (Exercise Hornbeam and Exercise Hawthorne). In addition, the 2007 outbreaks of foot and mouth and avian influenza displayed much evidence of a shift towards cross-governmental coordination. For example, the Suffolk avian influenza outbreak saw the Health Protection Agency

working closely with DEFRA, especially given the potential public health implications of the influenza virus. However, at the same time chapter 4 elucidated the resource limitations that have faced DEFRA in terms of budgetary constraints imposed by the Treasury. This was a major reason for the limited development of information and data management systems (the most expensive area of change) (DEFRA officials A, C and D, 2008). This meant that, despite an agenda shift, this did not lead to a change to all areas of crisis management policy identified in chapter 1. Yet, in relation to overall public attention, all of the DEFRA officials interviewed made the point that the experience of the 2007 foot and mouth and avian influenza outbreaks show that media and public attention on disease outbreaks had been tempered (see also HC-312, 2008). This is because, as DEFRA official B put it:

Disease outbreaks happen and everyone has to get used to it. If you look at the media coverage during the 2007 outbreaks then we can see this has happened. This is certainly the conclusion of our press and communications officials. We have even got to the point where we call them 'emergencies' as opposed to 'crises'. (interview, 2008)

The official argues that the fact that government's crisis management efforts in 2007 were not subject to far-reaching media criticism shows that post-2001 changes have got to the point where the public, media, and the government accept the 'routinisation' or 'normalisation' of such incidents (Boin et al., 2005: 24). In conceptual terms, however, the main problem with punctuated equilibrium and its application to the present study is that it does not account for what happens between punctuation and equilibrium. Although punctuated equilibrium holds that crises seem necessary to drive change, punctuated equilibrium does not account for both minor *and* major change. With respect to this point, the findings of the thesis show that change has been variable and, therefore, crisis management policy and organisational changes cannot be regarded as *either* incremental *or* non-incremental.

In addition, the multiple streams approach to change refers to three streams: problems, policies and politics. First, the problems stream examines what factors make certain issues visible and others invisible. Howlett and Ramesh (2003: 239) note that 'the principal mechanism by which change occurs is ... very often in the form of enhanced

public attention being paid to a policy issue as a result of a perceived crisis situation'. Chapter 3 showed the mass arousal generated by the 2001 crisis. Indeed, the mass disposal of burning carcasses became embedded in the public consciousness as the lasting image of the 2001 crisis and aroused calls for reform. The amount of public attention was not just about images. Rather, the crisis caused vast economic damage to the agricultural and tourism industries and devastated the livelihoods of people across Britain; therefore, these were major drivers for calling public attention to the government's response. Second, the policies stream pertains to ideas, which can basically be seen as solutions to problems. This relates to the ideas or solutions that can be initiated by members of policy communities (for example bureaucrats and politicians). However, the solutions to address the pre-2001 crisis management arrangements were not recommended by bureaucrats and politicians as such. If the policy community is taken to be a tight-knit set of actors (Rhodes, 1996) then it is fair to say that non-community actors drove change. The independent inquiries into the crisis were the main initiators or drivers for change (see chapter 4). In addition, under this particular stream, the sustainability, or rate of survival, of a proposed solution depends on its technical feasibility and its practicability. There is evidence of the notion of technical feasibility and questions of practicability penetrating the government's responses to the foot and mouth inquiries (RRFMI, 2002). The government largely accepted the recommendations of the reviews and stated the recommendations that were rejected or accepted in principle. With regards to the Anderson inquiry (HC-888, 2002), chapter 3 showed that 12.3 percent of the recommendations were accepted in principle; 8.6 percent would be considered further; and 2.5 percent were not accepted in the form presented. Sir Brian Bender, DEFRA officials A, B, C, D, E, F, G, J, and Cabinet Office official B argued that knowing, as an organisation, what lessons are inappropriate for the policy and organisational context was not an exercise in pessimistically dismissing lessons that could be learned. Instead, it was more of a process of 'learning what we could do and what we couldn't do' (DEFRA official D, 2008). This means that although accepting recommendations from inquiries outright shows an overt willingness to change and learn lessons, the process of not accepting recommendations on the basis of the practicability or feasibility can also be evidence of policy learning (in terms of learning what not to learn).

What is of more concern is that there were recommendations that acted as the basis of commitments that were not followed through by the government. For example, the government did not fulfil their commitment to 'use data and information management systems that conform to recognised good practice in support on intelligence gathering and decision making' (RRFMI, 2002: 10-11). Further, the government's commitment to 'explain policies, plans and practices by communicating with all interested parties comprehensively, clearly and consistently in a transparent way' would have been improved by taking a more consistent approach to stakeholder engagement after the 2001 crisis (RRFMI, 2002: 10-11). Third, the politics stream refers to the 'national mood' (Kingdon, 1984: 155) as an important element to this ideational interpretation of policy change. The mood to which Kingdon refers is not explicitly public opinion but opinion polls, legislative changes, and pressure group campaigns. There are several examples from chapters 3, 4 and 5 which are of relevance to the politics stream in this context. Take legislative changes as a case in point. Shortly after the 2001 epidemic the government drafted the Animal Health Act 2002 and contingency management became embedded in the machinery of government as a result of the Civil Contingencies Act 2004. Specifically for foot and mouth, the 2003 Directive is a major indicator of change in this context as it included a series of disease outbreak options such as bringing vaccination to the forefront as a primary disease eradication measure. The pressure group element is also of key importance because the NFU contributed to a positive national mood regarding how the government managed the 2007 outbreak compared to the 2001 epidemic (HC-312, 2008) - although the NFU were not always satisfied with the amount of stakeholder engagement provided by the government. Moreover, interviews with current and former shadow ministers also show that, at the political level, there is general agreement that lessons have been learned (Curry interview, Gummer interview, Paice interview, Simpson interview, 2008). This agreement contributed significantly to an ideational interpretation that policy change had been significant by the time of the 2007 outbreaks. This justifies the point that if multiple actors agree about the future direction of policy then it is more likely that political incumbents will take this onboard in bringing about change, especially after a crisis. Kingdon (1984: 99-100) is right in this context when he argues that a crisis can reconstruct the policy agenda because it calls attention to a problem.

At face value it seems that the multiple streams approach is a useful lens for explaining the findings of this thesis. Yet, like punctuated equilibrium, multiple streams does not account for fluctuations in the post-crisis change process (John 1998, 175; Hansén, 2008: 195). It is also not clear whether the different streams are interdependent or independent of each other (John, 1998: 176). Nevertheless, the policy streams approach, as noted above, is relevant to the present study to the extent that it places emphasis on 'opportunity windows' and it is relevant for post-crisis politics in terms of agenda-setting and the relationship between crisis and reform.

The next and final section of this chapter examines the connections between post-crisis change and the idea that gradual adjustments may produce transformative results. This analytical theme was discussed in section [insert number] of chapter 2. The section addresses the question of the extent to which Boin et al's (2008) categorisations of *fine-tuning*, *policy reform*, and *paradigm shift* are suitable in explaining the dynamics of post-crisis change in the case of veterinary disease-induced outbreaks?

Evolutionary Change with Transformative Results: Empirical Findings

The conceptual frameworks detailed earlier in the present chapter do not place emphasis on the dynamics of both incremental and non-incremental changes. Streeck and Thelen (2005: 8) note that 'we must avoid being caught in a conceptual schema that provides only for either incremental change ... or disruptive change'. This has key relevance to the findings of this thesis given that chapters 4 and 5 concluded that post-crisis change can be described as variable.

The interviewees for the thesis were asked to consider the nature of change since the 2001 crisis. The interviewees were asked to 'stand back' from the previous questions on the policy and organisational aspects to change and provide a judgement on whether change had been transformative, evolutionary, or indeed had taken any other form that they might like to categorise. These categorisations were more on the basis that transformation is major, revolutionary, or substantial change (Aldrich and Ruef, 2006: 133) and that the

notion of evolution is an incremental, continuous, directional, and hence cumulative process (Hay, 2002: 156, 160). Thirty interviewees (91 percent of the respondents) identified the period 2001 to 2007 as constituting a hybrid between evolutionary and transformative change. In Streeck and Thelen's terms, this can be described as 'gradual transformative change' (2005: 2). DEFRA official F, by drawing on examples, argued that there had been a combination of evolutionary and reformative aspects to change. For instance,

I think it [change since the 2001 crisis] has been both types of change, evolutionary and reformative. The 2001 outbreak had such a large impact that there were some important transformational changes made - particularly setting up Animal Health as an executive agency. I think producing the contingency plan in the form that they did in 2002 and publishing it and having that prescribed set of procedures to go through was again a transformational change. Some of the developments since then can be regarded as a gradual or evolutionary process of lessons we have learned about what we have found works and what does not work. The stakeholder groups that we have established have been developed in an evolutionary way ... Some areas have been subject to major changes. There has been the work that we did with the core group ... The core group sometimes puts advice direct to ministers rather than me on what our policy should be, which is a transformational change. (DEFRA official F, 2008, emphasis added)

DEFRA official B concurred with this perspective but preferred to take the view that the nature of change is inconsequential as long as the end result of the change process indicates that lessons have been learned:

I would say that a lot has changed since 2001 and it has been a radical change and evolutionary. But I am not sure it really matters as long as we are putting right the things that were wrong ... I think that the lessons learned exercises coming out of 2001 were bitterly painful although very much needed for the department and I think that DEFRA has taken them really seriously. Some of them were easier to put right than others such as clarifying roles and responsibilities. (DEFRA official B, 2008, emphasis added)

DEFRA official A takes a slightly different perspective on the question by arguing that changing policy direction can be revolutionary itself but within that there is a requirement to engage in a process of relationship-building which is an incremental process. This highlights the fact that change can be both incremental and transformative:

In terms of the characterisation of policy change, I think changing your policy direction can be quite revolutionary ... Those key policy decisions can be quite quick, however, within the nature of the beast in which we work, means that you have to take an incremental approach to bringing all of that into fruition because you have to maintain and build relationships. People don't do things just because we tell them to. Changing policy does not matter unless you change what happens on the ground. There has been work done on this since 2001 which has come out of the reviews into the landscape of animal health since this time. Therefore you change policy direction but change must manifest on the ground and, for change to take place on the ground, you have got to win people's minds to the direction that you are going. There are also the stakeholder relationships. It is a fact that we have increased our stakeholder relationships so that means that those quite fundamental changes take time to feed-in. Therefore, there are two or twin aspects to change in my view which together are evolutionary and intertwined. You can fundamentally agree a change a policy direction but it will take you time for it to feed through into action just because of the nature of the landscape that we work within. (DEFRA official A, 2008)

DEFRA official H also makes the case that change has been an evolutionary process at a number of levels:

There have been changes but those changes are, to a large degree, an evolution. I think that those evolutionary pressures would have applied to MAFF even if it was allowed to live ... Making policy is a process with a number of levels. Ministers make policy at one level but there is actually kind of the incremental policy shifts and the policy evolution happens at the working level. (DEFRA official H, 2008)

The same official went further to argue that there is a duality of change. There are short-term and long-term changes:

I think there is a duality of change. There are both incremental adjustments, things that you could regard as taking place on a short-term basis, and long-term strategic changes. It means that you have a particular recognition of the need to positively collect evidence and also use evidence that comes your way. That can be incremental or it can be strategic. But, I believe, change has been substantial overall. (DEFRA official H, 2008)

Margaret Beckett reflects on her time as Secretary of State for DEFRA and argues that the post-FMD reforms were a 'package'. According to Beckett, this package stemmed from

incremental relationship-building with stakeholders and changes to contingency planning arrangements. She went so far to say that this process has been 'revolutionary':

There are some elements of policy that can be pursued and redirected rigorously but others take time and incremental reform. That as a package can be quite revolutionary but one must not forget that after FMD government wanted to build strong relationships with its customer groups and relationship-building can take time. I am in no doubt that DEFRA went through a major process of change which I would describe as transitional. (Beckett interview, 2008)

These sentiments hark back to Margaret Beckett's comments to the Environment Select Committee in 2002. When discussing what her department would do to change in the post-2001 foot and mouth she made the case that 'I dispute, I am afraid, the notion that you cannot have radical change by transitional means' (HC-366-i, 2002: Q.64). This is an interesting point because underpinning this statement is that policy can be reformative after a build up of smaller changes over time. Indeed the former Secretary of State went on to say that 'if you want to be really radical you might be best advised to do it in a transitional way because of the shock to the system' (HC-366-i, 2002: Q.64). Sir Brian Bender adds to these sentiments by arguing that reformative changes had taken place because there was the organisational recognition after 2001 that change was required (interview, 2008). Sir Brian also maintained that 'change could have gone further' (interview, 2008) and he recognises the discontinuities in the change process:

In trying to bring about change what you need is a corporate recognition, a change of corporate behaviours, and also one of the things we did take a long way, and I wish I had taken further, is having an understanding from the top of the department of the top risks and how to mitigate them. I think in some respects I would have liked some things to have gone faster such as how DEFRA managed data and information. (Bender interview, 2008)

DEFRA official D adds to the argument that change has been radical. The official also implied that the DEFRA managerial team has change at the forefront of organisational activities. However, the official indicates that the department's approach to animal health and welfare has remained the same and that the overall organisational norms of DEFRA have not changed. This supports the argument made earlier in the thesis that policy and organisational changes have been non-paradigmatic:

Since 2001 I think that things have changed radically ... There is plenty of management theory around it about how you approach change and how you do it. I think that the model that has been adopted for change in DEFRA is a fairly assertive one. The outcome has been that there has been a very significant change. I think this department is a very different department from the old MAFF at the time of 2001 and it is changing even more now ... Having said all of that I think that what has not changed is that we still have this responsibility for animal health and welfare. I do get a little bit uncomfortable at times that the risks are going overboard and that in getting rid of waste and changing things don't also discard what is worth keeping. I think that a certain amount of changes are good but it has to be for a particular reason. I have never been a big fan of change for the sake of it and that we need to change all of the time because that is the way that the world works. I am sorry but I don't buy into that. (DEFRA official D, 2008)

The general message to emerge from the respondents, therefore, was that change has been both evolutionary and transformative since 2001. The excerpts from the interviews show just some of the ways in which this message has been articulated. From this empirical springboard, we can revisit the work of Streeck and Thelen (2005) and assess how their analytical categorisations apply to the findings presented in chapters 4 and 5.

Connecting Categories of Change: A Transformed Policy Sector?

To reiterate, the policy and organisational variables considered in chapters 4 and 5 confirm that the post-crisis changes after the 2001 foot and mouth crisis have been variable. This was illustrated by the movements between the *fine-tuning* and *policy reform* categories of change. We can now consider this finding in relation to Streeck and Thelen's (2005: 19-30) four modes of change (see section [insert number] of chapter 2). These modes are: *displacement, layering, drift, conversion, and exhaustion*. First, *displacement* holds that new models emerge which question the current organisational form and practice. This is a process of institutional rediscovery and activation whereby a number of actors defect to a new system which is radically different from traditional institutional forms and behaviours. Second, *layering* emphasises the 'lock-in' and increasing returns effects of change. According to this interpretation, change takes place differentially. Differential growth is associated with the introduction of fresh elements which involves the amendments and

revisions to what is already in place. Third, *drift* means that institutions erode because of a lack of strategic thinking or change. Institutional stability should not be taken for granted in this context. Institutions require ongoing care, attention and active maintenance. To avoid the pitfalls of drifting it is important that institutional actors continually monitor the external political and economic environment in order to effectively respond to external circumstances. If this does not occur then organisational actors will have allowed an institution to 'actively decay'. *Conversion* refers to the redirection of goals and functions of the institution. Existing institutional resources are redirected in light of environmental challenges. In addition, existing actors in the institution adapt according to the interests of new actors. The redirection of institutional resources may occur through political contestation over what the functions and purposes of an existing institution should serve. Third, *exhaustion* is more concerned with gradual, rather than abrupt, institutional breakdown as opposed to change. *Drift* emphasises a lack of direction but, in contrast to exhaustion, the institution retains its formal integrity. Institutional exhaustion occurs when the behaviours of actors are invoked to undermine the existing institutional rules. In a similar vein to conversion, time is also an important factor in the exhaustion and depletion of an institution. Institutions require elaboration and justification for their existence and the wrong choices made by organisational actors may limit their growth. The way in which institutions establish themselves is shaped by circumstances that develop externally and as well as its own strategic choices.

The empirical analysis of this thesis identifies *drift*, *layering*, and *conversion* modes of change. First, chapter 3 shows that before the onset of the 2001 epidemic MAFF displayed evidence of *drifting*. The department, in terms of crisis management preparations, required 'active maintenance' but, in reality, these preparations had not been 'reset or refocused' or 'recalibrated' (Streeck and Thelen, 2005: 24). Chapter 3 showed that the institutional memory of MAFF was deficient. In other words, the lessons of the 1967 foot and mouth outbreaks were not revisited or used as a point of reference. There was not an organisational culture aligned to maintaining 'cognitive scripts' (Hall and Taylor, 1996: 948) or a 'cognitive schemata' (Aldrich and Ruef, 2006: 118-119). The process of building up an organisational memory, which would create certain norms, behaviours, and values that become endemic within its fibre (Levitt and March, 1988: 326-327; Hedberg,

1991: 8), was left wanting. This prolonged loss of institutional memory was exacerbated by the organisational preoccupations with the 1996 BSE crisis. This combination was a recipe for a lack of foresight and preparedness for the epidemic that was to follow four years later. Streeck and Thelen (2005: 25) note that, 'failure to actively maintain an institution ... may amount to actively allowing it to decay'. With respect to a lack of pre-crisis planning and organisational foresight for managing animal diseases, Prime Minister Blair recognised this institutional decay and this contributed to the change from MAFF to DEFRA.

Second, the empirical findings presented in chapters 4 and 5 show evidence of *layering* in terms of the post-2001 policy and organisational changes. The different speeds in which the changes took place display what can be regarded as 'differential growth'. This is because some aspects of the policy and organisational arrangements for crisis management were subject to considerable reform whereas others were 'subject to increasing returns and feedback' (Streeck and Thelen, 2005: 23). In any governmental system there is evidence of dissipation' - meaning that friction in the system dampens the effects of any change (Jones and Baumgartner, 2002: 294). *Layering* goes some way to explain such dissipation in the change process. There is evidence of organisational and policy path-altering dynamics to the point where new elements became attached to existing arrangements. For example, political support for existing contingency planning arrangements, and the associated scientific policy structures, drained very quickly during 2001. Concurrently, organisational structures for the central-level crisis management at the Cabinet Office level predated the 2001 crisis but, at the same time, the crisis made the Cabinet Office an enduring feature of crisis management in British government. In other words, new policy and organisational arrangements have been 'created on the edge of old arrangements and that the new fringe has eaten into the old policy and organisational core' (Streeck and Thelen, 2005: 31). Another example can be seen at the policy level. There was a lack of change in terms of information and data management systems and practices whereas DEFRA's communicatory functions were subject to vast change. What is clear, therefore, is that layering is another way to describe the variability of change.

Nonetheless, the 2007 foot and mouth and avian influenza outbreaks both indicate that organisational and policy changes have outweighed the areas that have not been subject to reform. Thus, overall, UK crisis management arrangements for veterinary-induced crisis have altered significantly. In Streeck and Thelen's (2005: 25) terms, this involved the sponsorship of amendments, additions, or revisions, to an existing set of institutions. The introduction of new elements set in motion dynamics through which they actively crowded out or supplanted the old system (Streeck and Thelen, 2005: 25). This is also evident in the cultural shift that has permeated DEFRA, and, in fact, the central government, towards lesson learning (see section [insert number] of chapter 5). In other words, the pre-2001 problems associated with *drifting* has lost its grip and the post-2001 changes have impacted on governing organisational cultures and behaviours.

Third, *conversion* complements *fine-tuning* in the sense that change is associated with the 'redirection to new goals, functions, or purposes' rather than substantial reconfiguration (Streeck and Thelen, 2005: 26). Chapter 4 revealed that the changes to the processes of stakeholder engagement were generally described in the interviews as 'acceleratory' but not 'constant'. The relationship between the government and industry was redirected in order to solidify symbiotic relationships between the two camps. It is a symbiotic relationship for two reasons. First, the government's knowledge of the ways that the industry operated during an outbreak of an animal disease was lacking, therefore, stakeholders would be a source of policy advice. Second, as information seekers, stakeholders would be able to get information about government decisions and they would be able to communicate information back to their industry colleagues. In short, senior politicians and civil servants in DEFRA adapted their approach to communicating and working with the industry in order implement the lessons learned from 2001. This is best illustrated by the establishment of a core group of stakeholders.

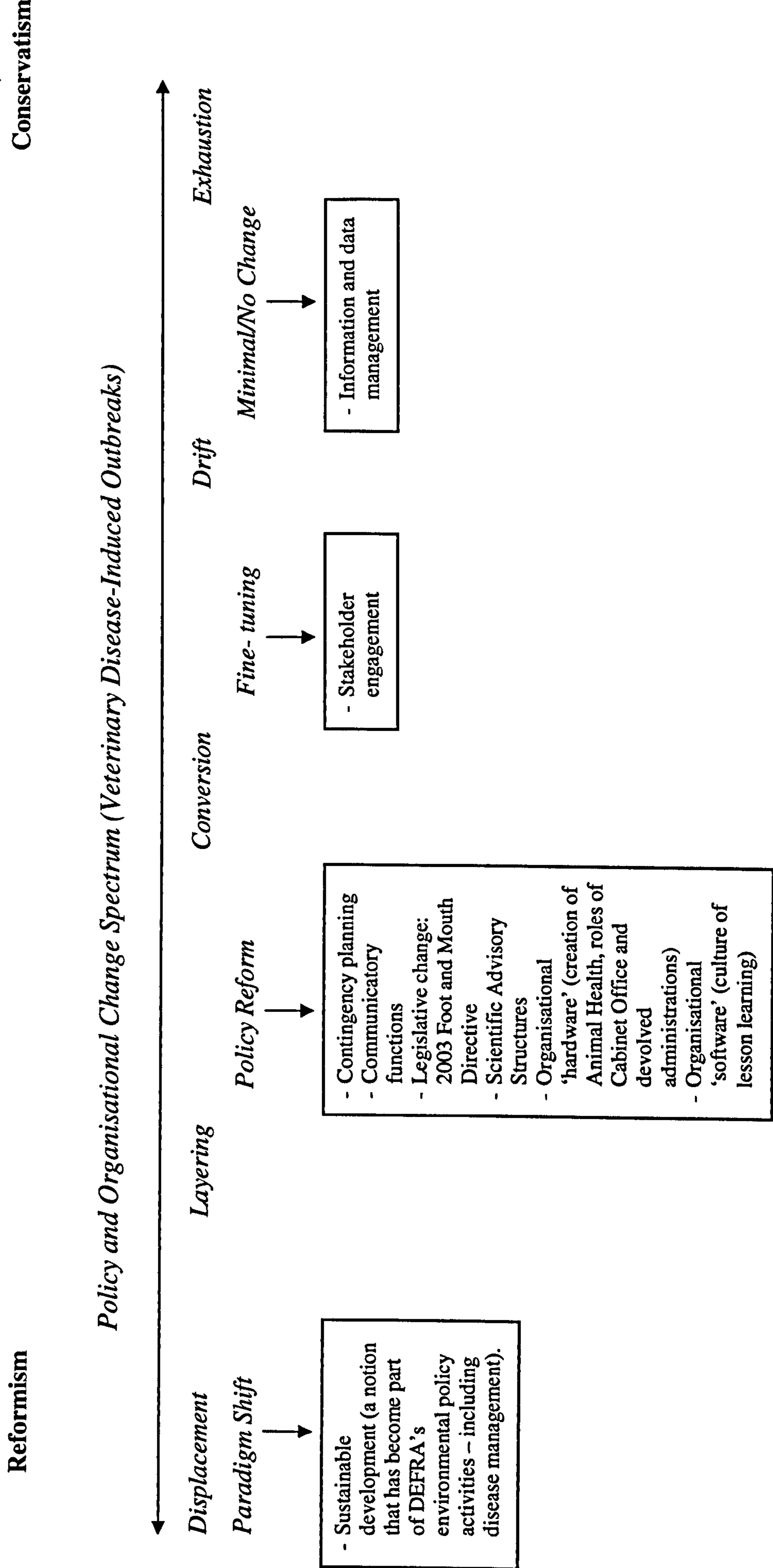
Conversion also links with the Europeanisation aspect to post-crisis change. Indeed *conversion* holds that 'actors are strategic and ... will do everything in their power to interpret its rules in their own interest' (Streeck and Thelen, 2005: 27). In terms of this thesis, the diffusion of the recommendations of the foot and mouth inquiries, in order to ensure their inclusion in the 2003 Directive, showed the deployment of the different 'hard'

and 'soft' stratagems of organisational actors. The drive towards ensuring that the lessons were learned from the 2001 epidemic saw DEFRA officials taking a state-centric approach to EU negotiations. The interviews confirm that this involved the active projection of the national position within the European Commission, despite the fact, as noted earlier, that the ultimate implementation of the Directive was bureaucratic, burdensome, and long-winded. What is more, the practice of working on the 2003 foot and mouth Directive allowed officials to draw lessons from the experience for future Directives. The interviews confirm that these lessons were applied to the 2005 avian influenza Directive which, incidentally, was much more flexible in terms of its implementation (Cabinet Office official B, DEFRA officials D, and J). Unlike the problems associated with implementing the 2003 Foot and Mouth Directive, the European Court of Justice did not have to threaten the UK government with infraction proceedings for the avian influenza Directive! Put succinctly, DEFRA has shown its wide-ranging strategic capacities in that political resources were mobilised at one level to influence decisions at the other (Streeck and Thelen, 2005: 27). Therefore, the strategic deployment of actors, which can be seen in Europeanisation processes, is a key source of such *conversion*.

Exhaustion is associated with minimal change. In terms of crisis management, this means that the crisis would lead to an institutional breakdown/depletion as opposed to change and growth - it is underpinned by decreasing returns and emphasises 'the pre-existing institutional essence in the face of pressures to change it' (Boin et al., 2005: 126-127). By contrast, *displacement* is of relevance for the *paradigmatic* aspects of change. This heralds the defection of what came before and the rediscovery of completely new bureaucratic norms and associated behavioural logics (Streeck and Thelen, 2005: 20) - leading to indigenous institutions becoming 'supplanted' or 'invaded' by completely new ones (Streeck and Thelen, 2005: 20). The findings of the thesis suggest that *exhaustion* and *displacement* are of less relevance for describing post-crisis change in the veterinary disease policy sector (with the exception of sustainable development which signifies *displacement* but is not a major aspect of crisis management arrangements). This, however, does not mean that they would not be of significance for crisis studies that discover that post-crisis change lurches towards the extreme spectrums of conservatism and reformism. Figure 6.1 illustrates the conceptual connections between the post-crisis

characterisations that have guided this study and the dynamisms of change espoused by Streeck and Thelen. The illustration shows the 'fit' between the degrees of post-crisis change (from conservative to reformism) and the location of such propensities to change in conceptual terms. This appears alongside the themes of change derived from the foot and mouth case study and the findings of chapters 4 and 5.

Figure 6.1: Incorporating Change with Transformative Results: The Dynamics of Post-Crisis Change



The insights of literatures that focus on transformational or evolutionary change are, therefore, of value to post-crisis change debates and expand on the *fine-tuning*, *policy reform*, and *paradigm shift* categorisations. For example, *fine-tuning* as a broad categorisation of post-crisis change is refined by the *conversion* aspects to institutional change. *Policy reform* is developed by *layering* and *paradigm shift* has clear connections with *displacement*. Indeed both crisis and non-crisis studies that consider reform and adaptation have been concerned with how organisations change in radical and non-radical ways.

It is important, in conceptual terms, to note that not all changes are transformative. Studies that analyse change at the organisational and policy levels need to focus on a clear set of identifiable changes (Aldrich and Ruef, 2006: 132). These identifiable changes, structured by analysing themes, are dependent upon the context and circumstances associated with a given sector. Due to the variance in research designs and the differences in how analysts classify themes, it is hence unsurprising that generic themes have not emerged in the study of policy and organisational change. On this basis, the use of themes should relate to specific organisational and policy practices. This is exactly the approach taken in this thesis. The case study chapter (chapter 3) identified specific themes from the 2001 epidemic that related to the governmental crisis management. These themes, such as stakeholder engagement, contingency planning, communications, and the role of scientific experts, served to structure the interview questions with key actors in the policy domain and, ultimately, the presentation of the research findings. The themes also allowed for conceptual lessons to be drawn which has been the main purpose of the present chapter.

The work of 't Hart and Boin (2001: 39) was cited in chapter 1 and they discuss the likelihood of crises to punctuate routine policy-making. The authors identified four key ways in which crises have the potential to bring about change: *mass arousal*, *focus attention*, *concentration of power*, and *political dynamics*. Circumstance dictates the extent to which the aforementioned four aspects to crises become salient. For the present study the 2001 foot and mouth crisis generated *mass arousal* because of the scale of the crisis and the fact that the crisis spilled over to sectors beyond agriculture. Similarly, the

crisis *focused the attention* of political and veterinary leaders and the public which was assisted by the substantial media attention devoted to the crisis. The centralisation of the crisis response, and the fact that the Cabinet Office has become embedded in crisis management responses for animal diseases (and for other types of crises such as terrorist attacks), changed a previously dispersed decision-making process. Finally, the *political dynamics* of the 2001 crisis were such that the Prime Minister rapidly established independent policy and scientific inquiries. This signalled a desire to reach a consensus on the way forward. The fact that the government set up a new department, and accepted the majority recommendations of the inquiries, meant that potential adversarial behaviours in the political environment (exacerbated by the so-called ‘blame game’) were not acute in the post-crisis phase. This made post-crisis reform much more likely. In fact, as shown in chapter 5, there was more evidence of culpability avoidance or ‘blame game’ politics in the aftermath of the smaller scale 2007 foot and mouth outbreak. This is because the SNP government in Scotland took a different policy position to that of the UK government over compensation packages for farmers. With these points in mind, and by way of summing up, DEFRA official E considers the political context and its relationship to change:

A lot has changed since 2001 and much of that is cause and effect. Things that needed fixing were identified then there was a political commitment to do it so things have changed. A lot of it could have happened anyway because these were ideas and opinions that were held in various areas of government anyway. Yet would it have happened? I mean if it wasn't for the crisis of 2001 then would there be the political impetus for such bold decisions to be taken? I don't think so. (DEFRA official E, 2008)

This study also holds that transformation only takes on meaning if it is generally assumed that relative inertia constitutes the normal state of organisational life (Aldrich and Ruef, 2006: 136). If a crisis, like the one chosen for this study, highlights performance deficiencies and inefficiencies, and the government's response emphasises the problems of institutional inertia, then such dramatic events allow one to study change and transformation over a period of months or years. However, if the government performs well during a crisis, such as the UK government's response to the London terrorist attacks in July 2005, then it is less likely that one will analyse change in terms of ‘transformation’. Crises that highlight government incompetence become even greater dramatic events than they would be otherwise. This is largely because, as Weick (1995) has maintained in the

past, interruptions in organisational routines that emerge, as a result of shocks or crises, disrupt the activities that are core to the organisation's existence, for example, organisational cultures and the organisation's associated aims and objectives. This stimulates a process of sense-making. This sense-making process is usually followed by commitments to change or to 'learn lessons'. By using the 2007 outbreaks as case study comparators to the 2001 foot and mouth crisis, this study shows that the retention of changes involve necessary alterations in organisational routines. This allows for the reproduction of a reformed organisation over time.

The thesis also provides empirical evidence of areas where the policy aspects to responding to a veterinary-induced crisis has not been subject to substantial change. This includes a lack of stable government-stakeholder relationships and a distinct lack of change to data and information management systems. In Streeck and Thelen's (2005: 19-30) term, it is these areas that require 'active maintenance' in order to avoid the organisation drifting from its policy path. If active maintenance does not take place then it will take another dramatic event, such as a crisis, to highlight the weaknesses in the government's crisis management armoury. This is particularly the case in the veterinary disease policy domain given that animal diseases are not a regular media item or a matter of major societal concern unless there is an outbreak. Apart from crisis management simulations and exercises, an outbreak is the only occasion for the execution of the government's crisis coping and decision-making mechanisms. Only then can external judgements be made about their performance.

The Dynamics of Post-Crisis Change

Chapters 1 and 2 examined literatures on the issues and debates associated with policy and organisational change. The questions posed at the end of each of those chapters were designed, after an analysis of the literature, to structure an empirical analysis of the nature of change within the veterinary disease policy sector. Ultimately the empirical chapters sought to 'answer' the questions regarding the nature, type, and extent of change. To this

end, an underpinning empirical finding to emerge from the thesis is that change has taken place differentially within the veterinary disease policy sector.

Chapters 4 and 5 showed that different elements within the veterinary disease policy sector changed at different speeds and, importantly, there is also evidence of different rates of change *within* elements. The temporal or speed dimension helps to specify the nature of change. Stakeholder engagement and Europeanisation can be used as examples. First, after the 2001 foot and mouth crisis, and encouraged by the recommendations of the Anderson inquiry, the government was committed 'to explain policies, plans and practices by communicating with all interested parties comprehensively, clearly and consistently in a transparent way' (RRFMI, 2002: 10-11). This basically meant that the government would ensure that mechanisms would be in place to facilitate communication between DEFRA and its stakeholders. This is exactly what the government did by setting up a core group of stakeholders in order to draw upon their expertise but also allowed stakeholders greater access to DEFRA officials and to the decision-making processes. In short, the interviewed DEFRA officials all agreed that this was a direct lesson learned from 2001. However, evidence submitted to the 2007 Anderson Review by the NFU (a key stakeholder group) confirmed that, although stakeholder engagement increased in the aftermath of the 2001 foot and mouth epidemic, and that better procedures were in place for engaging with the industry, DEFRA did not facilitate the opening up of consistent channels of communication. The impact of the 2001 crisis almost compelled DEFRA to change MAFF's poor habits of a lack of stakeholder communications yet, in the negotiation of the 2003 Directive and the subsequent development of a vaccination protocol, there was a deceleration in DEFRA-stakeholder communications. This shows how change can be variable within one component of change.

Europeanisation provides another example to show the dynamics of the post-crisis change process. Chapter 4 provided background and empirical data concerning the negotiation and implementation of the 2003 Foot and Mouth Directive. DEFRA officials were proactive when it came to negotiating the 2003 Directive. This major piece of legislation was a direct result of the 2001 crisis. All of the DEFRA and Cabinet Office officials interviewed maintained that they sought to ensure that the lessons coming out of the crisis

were not forgotten and were solidified within a new EU Directive. This was a very important exercise for DEFRA because the content of the Directive structures contingency planning options. For example, the Directive elevated emergency vaccinations to the status of a primary disease control measure. At the national level, the Directive required incorporation of its measures into the veterinary disease contingency plans. This led to the development of a 'vaccination protocol' and a 'vaccination decision tree' which is now a lasting feature of contingency planning arrangements.

The officials who engaged with the EU institutions were also responsible for the implementation of the Directive. However, it can also be deduced from the interviews, and from a Freedom of Information request, that a two-way process of Europeanisation (i.e. uploading and downloading or projection and reception) occurred unequally in the post-2001 period. In other words, the enthusiasm displayed by DEFRA for securing a fresh legislative framework at the EU level was not matched by an enthusiasm for ensuring a smooth implementation process. As noted in chapter 4, a lack of bureaucratic and administrative capacities in the department constrained the implementation process. Chapter 2 indicated that administrative capacity is a problem associated with the implementation of EU policy. This made implementing the Directive a long and burdensome process - to the point that the European Court of Justice threatened to introduce infraction proceedings against DEFRA. It seems, therefore, that the enthusiastic approach to negotiating the Directive displayed by officials was symptomatic of the fact that 'EU policy is the extension of domestic politics to another arena' (Marsh et al., 2003: 329). The EU provided DEFRA officials with an opportunity to change the policy options open to them in the event of an outbreak. These policy changes served to satisfy the domestic political demands evoked during the 2001 crisis, and subsequently codified in the Anderson inquiry report, which called for vaccination to become a primary disease eradication measure. In short, Europeanisation, as a precipitant for change, provided a sound conceptual base for studying post-crisis processes in the case of the management of veterinary disease outbreaks.

The present study of post-crisis change illustrates the fact that there is a dynamic at play. There were long-term changes such as reforms to contingency planning and cultural shifts

within DEFRA. At the same time, elements such as information and data management highlight a distinct lack of change if compared to other elements within the policy system. It is sufficient to argue, therefore, that the categorisations of *fine-tuning*, *policy reform*, and *paradigm shift* are not sophisticated enough to capture the nature and dynamics of change *within* and *between* elements within the policy system. As Figure 6.1 shows, *exhaustion*, *drift*, *conversion*, *layering*, and *displacement* are complementary analytical lenses for capturing the nature of change in addition to *fine-tuning*, *policy reform*, and *paradigm shift*. Tellingly, Capano (2009: 14-15) argues that ‘sometimes what may seem to be a radical change is simply an incremental change that has come about very rapidly; likewise, what seems to be an incremental change may be a radical transformation that has occurred very slowly’. This argument should be considered in studies that are concerned with understanding the nature of post-crisis change.

Furthermore, debates about the processes of policy and organisational change are also complemented by the evolutionary nature of change and the fact that this can produce transformative results over time. In short, the crisis management literature should pay greater attention to the dynamics and the evolutionary aspects of post-crisis change. It is also worth restating that the majority of interviewees for this thesis favoured ‘evolution’ as a metaphor for describing the nature of change since 2001. When the interviewees were asked about their view on the nature of change it was an ‘open’ question in the semi-structured interviews in order to tease out their beliefs and opinions based on their experience within government. On this basis, the evolutionary nature of change, and the fact that interactions take place within different units within the policy system, is a way to view change beyond either minimal or reformative debates in the crisis management literature (see chapter 1). It is insufficient, therefore, to categorise the complexities of the policy change process as either minimal or reformative forms of change.

In sum, policy and organisational changes are subject to multiple processes at different rates of change even if a crisis is a driver for reform. The interviews with politicians and civil servants confirm that if the 2001 crisis had not happened then there would have not been the amount of change to crisis management practices for veterinary diseases. It is possible, however, that MAFF might have been reorganised to form DEFRA anyway due

to changing agendas in environmental and consumer politics coupled with the pertinence of sustainable development. Yet substantial changes to pre- and acute crisis management practices within the veterinary disease policy sector became more likely because the 2001 epidemic changed the policy agenda and was a major disaster from which lessons could be drawn. A key theme to emerge in this chapter is that, despite the 2001 crisis punctuating the policy and organisational equilibrium, post-crisis changes have occurred at multiple speeds. Different rates of change have taken place within an overarching evolutionary process. The policy sector was subject to change as a result of two main drivers. First, change was driven by the recommendations of the 2001 Anderson inquiry. Second, change was driven by the political ramifications associated with failing to learn lessons. The competence of the government would be questioned widely if it performed badly in managing a future veterinary disease-induced crisis without drawing lessons from the 2001 epidemic. This might have caused considerable electoral damage and, indeed, led to questions about the government's ability to implement change in the first place.

Concluding Comments

The crisis management literature elucidates the fact that there is a tension between conservatism and reformism in the aftermath of a crisis. Literatures that concern bureaucratic change tend to conclude that change is path-dependent and based on pre-existing policy and organisational arrangements. In substantive terms, this study departs from this tendency. It is concluded, therefore, that significant change has taken place to crisis management arrangements for veterinary-disease induced outbreaks since 2001. However, each element/arrangement did not change to the same degree as each other. This points to the argument identified earlier in thesis (see chapter 2) which is that change is a dynamic process. This thesis has, therefore, as Judge (2005: 21-22) proposes, respected the forces, ideas, and constraints that impact upon organisational and policy forms.

In terms of explaining the change process, this chapter has shown that the categorisations of *fine-tuning*, *policy reform*, and *paradigm shift* are not always the most suitable for understanding the change process. By making linkages between the traditional notions of

evolution and transformation, researchers can better conceptualise and take into account *both* the reformist and conservative aspects to post-crisis change. Streeck and Thelen's (2005) work on the transformative aspects of change develops the idea that political change can be both rapid and gradual and that they are not mutually exclusive. Jones and Baumgartner (2002b) also emphasise that equilibrium models of change are useful in explaining parts of the process but cannot act as a basis for understanding other elements of policy dynamics.

A further key argument to emerge from this thesis is that more attention should be given to the impact of crises on policy and organisational arrangements in the bureaucratic context. As Jones and Baumgartner (2002: 294-5) argue, social scientists should avoid discounting 'extreme values' such as crises which may be, at first sight, be interpreted as a 'outlier' because they are unrepresentative of the data. Instead, in order to get to grips with the complexities of change, extreme values or inconsistencies should be explored rather than ignored. This would allow for more studies of the particulars of policy and organisational change and for an exploration of non-incremental and incremental dynamics as a result of crises. This study has shown that, in the crisis aftermath, organisational and policy aspects to decision-making are subject to multiple influences and interactions in the change process. Furthermore, crisis scholars are concerned with the role of 'crises' in breaking embedded policy and organisational routines whereas non-crisis scholars use words such as 'external perturbations' and 'shocks'. What this study has shown is that the two scholarly camps would benefit from considering each other's analytical insights.

Conclusion

Introduction

In overall terms, the thesis has operationalised the research questions by ‘interpreting the world of political elites’ (Richards and Smith, 2004) by relying heavily on narratives, context, and the opinions and beliefs of individuals (Bevir and Rhodes, 2003) in the process of addressing the two main research questions of the thesis. First, is there an incremental process of post-crisis change and learning, as organisational and bureaucratic change literatures might lead us to expect, or does a crisis stimulate more radical change? Second, to what extent are existing categorisations of the nature of post-crisis management relevant for understanding change within the veterinary disease policy sector? The questions and themes derived from the existing literature subsequently structured the case study narrative in chapter 3 and the research findings in chapters 4, 5, and 6. This concluding discussion will highlight some key conclusions as well as offer some further insights into the potential of the research findings of the thesis to act as a springboard for future research.

Processes of Change

As Capano (2009: 18) notes, it is the case that ‘public policy is a complex phenomenon in which institutionalized elements, formal rules, ideas, interests, and political institutions interact’; and it has been the challenge of this thesis to disentangle many of these complexities in order to analyse the post-crisis change process. It is concluded that, in the case of the veterinary disease policy sector, after 2001, post-crisis policy and organisational change has been variable. Undoubtedly, the 2001 crisis *stimulated* reform to several components of the crisis management process. Chapters 4, 5, and 6 show that contingency planning, communicatory functions, post-crisis legislative change, organisational changes (hardware and software), and change to the role scientific advice are areas that been subject to considerable reform. It is also the case that there were areas

that were not marked by significant reform such as stakeholder-government relations and a lack of change to DEFRA's management of data and information. In short, more components of the crisis management have changed than not. Thus, in 'measuring the entity of change' (Capano, 2009: 14) or, in this case, judging the degree of post-crisis reforms as a package, it is sufficient to argue that *the government has learned major lessons and implemented major policy and organisational changes since the 2001 crisis*. If learning is a deliberate attempt to adjust the goals or techniques of policy in response to past experience and to apply these to subsequent actions (Hall, 1993: 278; Real-Dato, 2009: 127), then both learning and change have largely, but not entirely, taken place. The most glaring example of learning without change was when the government promised to invest in and reform its systems of information and data management. Yet, as the experience of the 2007 foot and mouth and avian influenza outbreaks showed, this lesson did not translate into change.

At the same time, this should not be a question of simply the *number* of changes. Instead, account needs to be taken of the importance of the areas that have not been subject to significant policy and organisational realignment. Stakeholder engagement and information and data management, by their very nature, are crucial in informing policy responses to a crisis in the veterinary disease policy sector. Without accurate and consistent mechanisms for channelling data and information from the bureaucracy to the ground level (for example to industry and officials responding at the operational level), and from the ground level back into the bureaucracy, then this can have dire implications for the crisis management response. Although the cases of the 2007 foot and mouth and avian influenza outbreaks did not reveal the fact that the government's response was adversely affected by poor information and management, 12 DEFRA officials did confirm that if the 2007 outbreaks had been as widespread as the 2001 foot and mouth epidemic then this would have been critical to the crisis management effort. There remains a lack of change in this area despite the government's response to the inquiries into the 2001 crisis and its pledge that it would 'use data and information management systems that conform to recognised good practice in support on intelligence gathering and decision making' (RRFMI, 2002: 10-11). In addition, given the intricacies of the debates in the policy learning literature, particularly with regards to the debate that lessons might be learned

without change being implemented (Bennett and Howlett, 1992: 209; Levy, 1994: 289-290), it could be argued that the government was aware that strengthening data and information management systems within DEFRA was a lesson that should be learned. From this perspective, the experience of the 2001 crisis led to the production of new policy-relevant knowledge but the lessons were not implemented and this served to reinforce the status quo (Real-Dato, 2009: 127). This shows that learning lessons does not necessarily guarantee change.

The thesis also concludes that the 2001 Anderson inquiry, as the main policy inquiry into the epidemic, was a significant driver for change. The inquiry exposed the performance failings of MAFF at the early stages of the foot and mouth crisis and other reports of the National Audit Office and the Environment Select Committee (and evidence to this committee) showed a cultural problems in MAFF in terms of a distinct loss of organisational memory for managing veterinary diseases within the department (HC-888, 2002; HC-323, 2002; HC-939, 2002). Importantly, it was these reports upon which the government's agreement to change was based (RRFMI, 2002). Perhaps unsurprisingly, the officials interviewed from DEFRA and the Cabinet Office made the case that the post-2001 changes reflected a change in attitude within government towards lesson learning and was symptomatic of the government's professional, efficient, and effective approach to reform. By contrast, the opposition politicians interviewed (which include former government ministers and opposition ministers) generally agreed that the government learned lessons but came to the conclusion that the degree of policy and organisational changes since 2001 are a reflection of the *political damage* caused by the 2001 crisis rather than a managerial commitment to reform. Put differently, if the government had failed to change its practices for dealing with a veterinary disease-induced crisis, and if the government had been exposed for not implementing change, then this would have questioned the government's competence at managing a crisis that can have catastrophic implications for the agricultural and tourism industries (see chapter 3).

Researching and Categorising Change Processes

Based on the findings presented in chapters 4 and 5, there is also considerable potential for further research into the role of the EU as a driver for change to the policy and organisational arrangements for crisis management. The case of veterinary diseases prompts further questions about the development of frameworks for European level responses. The case of foot and mouth disease has shown that the EU institutions have been proactive in producing post-crisis reports and inquiries given the implications that such an integrated EU policy area has for the operation of the single market. The analysis of EU responses could be widened to consider other policy areas that have been subject to European integration. In addition, the thesis has shown the high level potential at the EU level to encourage lesson learning – particularly as a result of investigations by the European Parliament. This means that the impact of the EU as a force for lesson learning should be explored further. This thesis has provided interview data which confirms that the nexus between the UK and EU levels is far from simple. Managing change in a multi-level system is inherently complex and dynamic. There is much scope, therefore, for developing the analysis of the dynamics of change in a multi-level system. In fact, chapter 6 pointed to the utility of the concept of evolutionary change and this could be applied to the study of the Europeanisation of crisis management. This stimulates further questions such as whether Europeanisation might prompt more evolutionary patterns of change or fit with the categories of *fine-tuning*, *policy reform*, and *paradigm shift* or, from a more detailed perspective, *layering*, *drifting*, *conversion*, *displacement*, and *exhaustion*. Thus, the thesis concludes that studies that are concerned with the nature and extent of post-crisis reform should pay attention to the arguments developed in the wider literatures, such as Europeanisation, that allow for the study of the nature of change.

Furthermore, chapters 4 and 5 adopted the post-crisis change categorisations of *fine-tuning*, *policy reform*, and *paradigm shift* in order to analyse the study of the nature of change in the aftermath of the 2001 foot and mouth crisis. Chapter 2 considered some of the ‘non-crisis’ literatures on the topics of change including the arguments put forward by Streeck and Thelen (2005): *exhaustion*, *drift*, *conversion*, *layering*, and *displacement*. The arguments of John (1998) and Hay (2002) regarding evolutionary change with

transformative results were also discussed. The thesis concludes that the post-crisis change literature would benefit from making use of some of the insights provided by the policy and organisational change literatures – especially when change is characterised by variability. The reason for this is that Streeck and Thelen's *exhaustion*, *drift*, *conversion*, *layering*, and *displacement* categories provide a more detailed account of change (from minimal to radical). It is the case that these categories have never explicitly been applied to the role of crises but the findings of this thesis indicate their value in refining the categories provided by Streeck and Thelen. Nevertheless, the thesis does not argue that the categories advocated by Boin et al. (2008) are redundant by any means. Indeed, Boin et al. are clear that *fine-tuning*, *policy reform*, and *paradigm shift* are general categories which allow judgements to be made about the bigger picture when it comes to post-crisis reform. In fact this has been of considerable use for the presentation of the research findings in this thesis in that (as stated in the introductory chapter) this study has been concerned with the strategic or central-level changes to post-crisis management - the 'big questions'. Moreover, if one considers too many categories of change – for example *fine-tuning* (low to medium, medium to high, high to radical), *policy reform* (low to medium, medium to high, high to radical), and *paradigm shift* (low to medium, medium to high, high to radical) - then this leads to problems regarding how change can be quantified *between* and *within* the categories. Nevertheless, as shown in this thesis, the categories should be refined in order to develop the assessment of the nature of strategic level post-crisis change. Generally, *fine-tuning*, *policy reform*, and *paradigm shift*, as types of change, are useful for defining the mode of, and guiding studies charting, post-crisis change. Yet the crisis management literature needs to give more consideration to the particular temporalities of change. To this end, *exhaustion*, *drift*, *conversion*, *layering*, and *displacement* show potential as analytical categories. As this study has shown, change can be multi-speed - 'what may seem a radical change is simply an incremental change that has come about very rapidly' (Capano, 2009: 15). Likewise, 'what seems to be an incremental change may really be a radical transformation that has occurred very slowly' (Capano, 2009: 15). Thus, post-crisis management analyses should consider the multi-dimensionality of change and the drivers that 'accelerate' or 'decelerate' change. Such 'accelerators' in this thesis have included EU legislative changes, the role of post-crisis inquiries, and the severe political implications of not changing. Similarly, 'decelerators' for change that have been

in evidence in this study include budgetary constraints, a lack of strategic direction, and institutional inertia. Moving beyond particular components of policy and organisational change, there will need to be a judgement made regarding the cumulative or adaptive nature of change and whether changes are reversible or irreversible. On this basis, the findings of this thesis justify the utility of cumulative or evolutionary models of change. As noted earlier, the dichotomy of revolution vs. evolution (Capano and Howlett, 2009: 2) can be disaggregated in order to consider whether change has been evolutionary with transformative results. There is also potential for further research beyond the veterinary disease policy sector to examine the causes and consequences of the relationship between crisis and change and the relationship between learning and change.

Conclusion

To conclude, this final part of the thesis has revisited the key questions posed at the beginning of the thesis and has branched out further to provide some areas that have potential for future research. In sum, it is sufficient to argue that if the government's lack of crisis management armoury had not been exposed in 2001 then major lessons would not have been learned and, consequently, the responses to the foot and mouth and avian influenza outbreaks would not have been as structured or organised. In other words, governmental structures and the efficacy of the response would have been compromised and, in all likelihood, led to heightened vulnerability for the agricultural industry. In terms of the case of the central-level policy and organisation of crisis management for veterinary disease-induced outbreaks, the 2001 foot and mouth crisis has been a force for substantial reform but, overall, this reform has been evolutionary and has been characterised by different varieties of change. There is no simple dichotomy between post-crisis change being either conservative/incremental or radical/substantial. Nonetheless, despite some significant reforms being implemented since 2001, the empirical findings of this thesis indicate that the force of a crisis does not necessarily lead to paradigmatic shifts in policy. Nor does the devastation and political damage caused by a crisis mean that the problems associated with institutional inertia, a lack of policy direction, and budgetary constraints that existed before and during a crisis will always be eliminated after a crisis. The story of

the UK government's post-crisis management for veterinary diseases is such that existing categorisations of post-crisis change can be developed to analyse the issues surrounding the challenges, intricacies, and paradoxes of central-level and supranational policy and organisational change. By analysing change from one of the most serious crises in recent British history, the thesis concludes that the policy and organisational arrangements in place for managing veterinary disease-induced outbreaks have been transformed as a result of different varieties of incremental adaptation in the 2001-2007 period.

Appendix 1: List of Interviewees

Name: Rt Hon Margaret Beckett MP

Relevant position(s): Secretary of State for the Environment, Food and Rural Affairs 2001-2005.

Rationale for interview: As the first Secretary of State for the Department for the Environment, Food and Rural Affairs Margaret Beckett oversaw post-crisis policy and organisational changes from a level of high political office over a long period of time. In her role she was also involved with the inquiries into the outbreak and gave evidence to the Environment, Food and Rural Affairs Select Committee.

Name: Sir Brian Bender

Relevant position(s): Permanent Secretary for the Ministry for Agriculture, Fisheries and Food and the Department for the Environment, Food and Rural Affairs 2000-05.

Rationale for interview: As Permanent Secretary Sir Brian oversaw and was responsible for implementing post-crisis policy and organisational changes from a senior level within the department over a long period of time. In his role he was also involved with the inquiries into the outbreak and gave evidence to the Environment, Food and Rural Affairs Select Committee.

Name: Rt Hon Nick Brown MP

Relevant position(s): Secretary of State for the Ministry for Agriculture, Fisheries and Food 1998-2001.

Rationale for interview: Nick Brown was Secretary of State at MAFF during the 2001 outbreak. Mr Brown was the last Secretary of State in the department before it was reformed to the Department for the Environment, Food and Rural Affairs. Mr Brown oversaw the departmental response to the foot and mouth crisis.

Name: Colin Breed MP

Relevant position(s): A former member of Environment, Food and Rural Affairs Select Committee for the Liberal Democrats and Opposition Spokesman for Agriculture and Rural Affairs 1999-2002.

Rationale for interview: Colin Breed scrutinised the government's response to the 2001 foot and mouth epidemic. Mr Breed was also a member of the Environment, Food and Rural Affairs Select Committee and part of the team responsible for drafting the Animal Health Bill after the foot and mouth crisis.

Name: Rt Hon David Curry MP

Relevant position(s): Minister for the Ministry for Agriculture, Fisheries, and Food 1993, chair of the Environment, Food and Rural Affairs Select Committee 2000-2003, and Shadow Secretary of State for the Department for the Environment, Food and Rural Affairs 2003-2004.

Rationale for interview: As former chair of the Environment, Food and Rural Affairs Select Committee David Curry was active during and after the 2001 foot and mouth crisis. As chairman, he fielded questions and heard evidence from Iain Anderson (the author of the inquiry into the epidemic), Margaret Beckett, Sir Brian Bender, and several veterinary specialists. Mr Curry also has a wealth of experience in the veterinary disease policy domain as a result of his past ministerial portfolios.

Name: Rt Hon John Gummer MP

Relevant position(s): Minister for the Ministry for Agriculture, Fisheries, and Food 1985-1988, Environment Minister 1988-1989, Minister for Ministry for Agriculture, Fisheries, and Food 1989-1993, and Secretary of State for the Environment 1993-1997.

Rationale for interview: Mr Gummer is the MP for Suffolk Coastal. This is the constituency in which the 2007 avian influenza outbreak occurred. Therefore, Mr Gummer was active in parliamentary debates on the government's response to the outbreak. Mr Gummer also has a wealth of experience in the veterinary disease control policy area as a result of his past ministerial portfolios.

Name: Rt Hon Elliot Morley MP

Relevant position(s): Minister for the Ministry of Agriculture, Fisheries and Food 1997-2001, Parliamentary Secretary for the Department for the Environment, Food and Rural Affairs 2001-2003, and Minister for Department for Environment, Food and Rural Affairs 2003 -2007.

Rationale for interview: Elliot Morley was part of the ministerial team responsible for implementing policy and organisational changes after the 2001 foot and mouth epidemic.

Name: Lembit Opik MP

Relevant position(s): Member of Agriculture Select Committee 2001-02

Rationale for interview: Mr Opik was contacted because of the pertinent questions that he asked regarding the government's management of the 2001 foot and mouth epidemic when he was a member of the Agriculture Select Committee.

Name: Rt Hon James Paice MP

Relevant position(s): Opposition spokesperson for Agriculture 1997-2001, Shadow Minister for Agriculture 2005-2007, and Shadow Environment Minister 2007-2009 (time of writing).

Rationale for interview: Mr Paice critiqued and offered an opposition perspective on the extent of lessons learned since 2001 and in relation to the government's handling of the 2007 foot and mouth and avian influenza outbreaks.

Name: Keith Simpson MP

Relevant position(s): Opposition spokesman for the Environment, Food and Rural Affairs (2001-2005) and former member of the Environment, Food and Rural Affairs Select Committee.

Rationale for interview: As MP for mid-Norfolk Mr Simpson's constituency, directly or indirectly, felt the impact of foot and mouth and avian influenza outbreaks. Mr Simpson also asked many parliamentary questions relating to information processing, lesson learning, vaccinations, and resource issues during his time as a member of the Environment, Food and Rural Affairs Select Committee. As a former opposition spokesman for the Environment, Food and Rural Affairs, Mr Simpson also critiqued and offered an opposition perspective on the extent of lessons learned since 2001.

Name: Tim Yeo MP

Relevant position(s): Shadow Minister for the Ministry of Agriculture, Fisheries and Food 1998-2001.

Rationale for interview: Mr Yeo was on the opposition frontbench during the 2001 foot and mouth 2001 crisis and played a key/high profile role in scrutinising the government's response.

Name: Cabinet Office official A

Relevant position(s): Senior official in the Civil Contingencies Secretariat of the Cabinet Office.

Rationale for interview: The official has experienced and overseen changes to crisis management practices at central government level and has been very active in the Cabinet Office Briefing Rooms.

Name: Cabinet Office official B

Relevant position(s): Former official in the Department for the Environment, Food and Rural Affairs. The official now works at a senior level in the Economic and Legal Affairs section of the Cabinet Office.

Rationale for interview: The official was part of a team responsible for transposing of the 2003 Foot and Mouth Directive and has worked with stakeholder groups. The official has also worked on avian influenza policy.

Name: Scottish Government (SG) official

Relevant position(s): Senior official in the Rural Affairs Department of the Scottish Executive/Government and has had a long career in Ministry of Agriculture, Fisheries and Food.

Rationale for interview: The official has experienced the dynamics of sub-national and national government relationships. The official has worked on policy and organisational changes since the 2001 foot and mouth epidemic and in the veterinary disease policy sector more generally.

Name: DEFRA official A

Relevant position(s): Senior official in the International Policy Division in the Department for the Environment, Food and Rural Affairs and is a senior veterinary officer.

Rationale for interview: The official has had considerable in the veterinary disease policy sector and, more specifically, has experience of working on EU policy.

Name: DEFRA official B

Relevant position(s): Senior official responsible for a 'Business Change' portfolio in the Food and Farming Group of the Department for the Environment, Food, and Rural Affairs.

Rationale for interview: The official has chaired stakeholder meetings and has had policy change responsibilities.

Name: DEFRA official C

Relevant position(s): Senior official in the Food and Farming Group of the Department for the Environment, Food, and Rural Affairs.

Rationale for interview: The official has had a wide policy remit which include lesson learning from the 2001 foot and mouth epidemic and contingency planning.

Name: DEFRA official D

Relevant position(s): Senior official in the Food and Farming Group of the Department for the Environment, Food, and Rural Affairs.

Rationale for interview: The official has worked in multiple areas in their long career in the Ministry for Agriculture, Fisheries, and Food and the Department for the Environment, Food, and Rural Affairs. These areas mainly cover contingency planning and EU policy. The official has also written reports on lesson learning strategies for veterinary disease outbreaks.

Name: DEFRA official E

Relevant position(s): Senior official in the International Division of the Department for the Environment, Food, and Rural Affairs.

Rationale for interview: The official has an international policy competence and has worked extensively with the EU institutions.

Name: DEFRA official F

Relevant position(s): Senior official in the Food and Farming Group of the Department for the Environment, Food, and Rural Affairs.

Rationale for interview: The official has chaired both foot and mouth and avian flu stakeholder meetings and has presided over general disease control policy remit, emergency response capabilities, delivery change programmes, and lesson learning functions.

Name: DEFRA official G

Relevant position(s): Communications official who works with both the Food and Farming Group and the Strategic Communications section of the Department for the Environment, Food, and Rural Affairs.

Rationale for interview: The official has experience of working in the areas of foot and mouth and avian influenza. More specifically, their role in the communications unit means that the official has experience and knowledge of communications dynamics and how this has developed over time.

Name: DEFRA official H

Relevant position(s): Senior official in the International Division of the Department for the Environment, Food, and Rural Affairs.

Rationale for interview: The official has experience of working with international organisations in the veterinary disease policy area.

Name: DEFRA official I

Relevant position(s): Senior official in the Contingency Planning Directorate of the Department for the Environment, Food, and Rural Affairs.

Rationale for interview: The official has experienced changes to contingency planning arrangements and is responsible for the department's contingency plan.

Name: DEFRA official J

Relevant position(s): Senior official in the International Policy Division of the Department for the Environment, Food, and Rural Affairs.

Rationale for interview: The official considerable experience of working on the UK-EU policy interface, research, and official control responsibilities.

Name: DEFRA official K

Relevant position(s): Senior official in the Food and Farming Group of the Department for the Environment, Food, and Rural Affairs.

Rationale for interview: The official has played significant roles in stakeholder meetings and has worked in the areas of organisational change, EU policy, and contingency planning.

Name: DEFRA official L

Relevant position(s): Senior official in the Food and Farming Group of the Department for the Environment, Food, and Rural Affairs.

Rationale for interview: The official has participated in stakeholder meetings and has chaired working groups in the department in relation to vaccination policy.

Name: DEFRA official M

Relevant position(s): Official in the International Policy Division of the Department for the Environment, Food, and Rural Affairs.

Rationale for interview: The official has considerable experience of working on the UK-EU policy interface and has border control responsibilities.

Name: DEFRA official N

Relevant position(s): Communications official who works with both the Food and Farming Group and the Strategic Communications section of the Department for the Environment, Food, and Rural Affairs.

Rationale for interview: The official has experience of working in the areas of foot and mouth and avian influenza. More specifically, their role in the communications unit means that the official has experience and knowledge of communications dynamics and how this has changed and developed over time.

Name: DEFRA official O

Relevant position(s): Senior veterinary officer in the Department for the Environment, Food, and Rural Affairs.

Rationale for interview: The official has had a long career in the Ministry for Agriculture, Fisheries, and Food and in the Department for the Environment, Food, and Rural Affairs. The official has had a high level overview of policy-making for foot and mouth and avian influenza. The official retired in May 2008.

Name: DEFRA official P

Relevant position(s): Senior official in the Research Directorate of the Department for the Environment, Food, and Rural Affairs.

Rationale for interview: The official is responsible for commissioning research into the veterinary diseases in the department. An example of this is a cost-benefit analysis of the use of different disease control options.

Name: DEFRA official Q

Relevant position(s): Official in the Food and Farming Group of the Department for the Environment, Food, and Rural Affairs.

Rationale for interview: The official works on EU policy and general veterinary disease policy.

Name: DEFRA official R

Relevant position(s): Senior official in the International Division of the Department for the Environment, Food, and Rural Affairs.

Rationale for interview: The official has considerable experience of working with international organisations in the veterinary disease policy area.

Name: European Commission official A

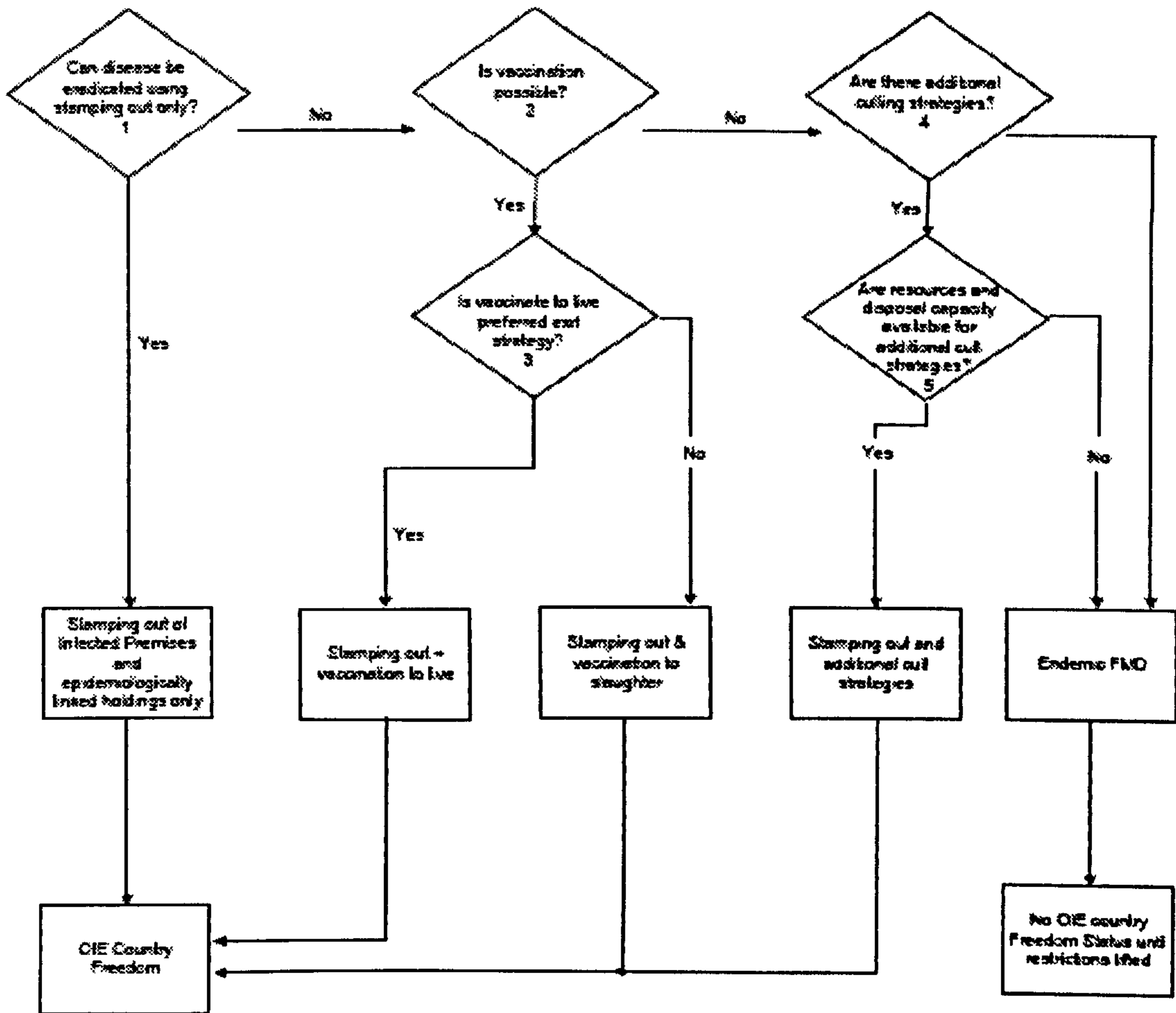
Relevant position(s): Senior official in the Animal Health and Welfare Section of the Health and Consumer Protection Directorate General of the European Commission.

Rationale for interview: The official has considerable experience of working with UK officials on policy-making for veterinary disease-induced outbreaks. The official was part

of a team involved in responding to the 2001 crisis from the EU level and was involved in the negotiation process that resulted in the 2003 Foot and Mouth Directive.

Appendix 2: Decision Tree on the Use of Emergency Vaccination During an Outbreak of Foot and Mouth Disease.

Note: Start at top left decision – diamond box



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Source: DEFRA (2008b: 54)

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