



Australian Government
Department of Agriculture,
Fisheries and Forestry

National Foot-&-Mouth Disease Simulation

Exercise Minotaur
Evaluation Report

A report to the Council of
Australian Governments

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At the time of this report being written, the Australian Government Department of Agriculture, Fisheries and Forestry (DAFF), was commonly referred to as Agriculture, Fisheries and Forestry – Australia (AFFA). References in the body of the report have not been changed to reflect the new departmental acronym. It should be noted that both AFFA and DAFF refer to the same government department.

Foreword

During the United Kingdom's foot-and-mouth disease (FMD) outbreak in 2001, we all witnessed nightly on television the devastation wrought on British agriculture. The spectre of animal pyres used to control the disease will not be easily forgotten. The social consequences of the UK outbreak are still being experienced and the ultimate economic costs were very high.

Although Australia has had significant involvement in FMD planning and preparedness, including liaising with countries in South East Asia, the UK experience brought home vividly to most how devastating such a disease can be and reinforced how important preparedness activities are in protecting our national interest. Over many years and well prior to the UK event, Australia developed arguably one of the best response systems to combat emergency animal disease incursions. However, regardless of how well prepared we are as a nation, the risk remains.

An FMD or other major animal disease outbreak in Australia would seriously damage our agricultural industries and harm those dependent upon them. Endemic in many parts of the world, FMD would, if it made its way to our farms have a devastating impact on domestic and international trade. It is estimated that an FMD outbreak in Australia would reduce export revenues by more than \$9 billion for a 12-month outbreak, with a loss in domestic meat revenue of \$2-\$3 billion, and disease control and compensation costs of up to \$450 million. The downstream effects of these losses across Australia would be devastating to many other sectors of our economy and many communities, not just rural and regional Australia.

It was against this backdrop and in the face of the real and increasing risk posed by this disease that decisive action was taken by the Australian Government to substantially enhance border controls. Australia continues to work cooperatively with neighbouring countries and trading partners on preventative measures. But it was decided Australia also needed to ensure it could deal with the disease if it breached our defences.

To this end the Council of Australian Governments (COAG) requested a review of the national capability to manage an FMD outbreak. *Exercise Minotaur* was designed and conducted to test this national framework, in particular how well each jurisdiction and industry could cooperate in dealing with an FMD outbreak and its socio-economic consequences.

Exercise Minotaur was a success by any measure. A national whole-of-government and industry simulation of this scope was an achievement just in itself. More importantly, it actively engaged senior management across the private and public sectors as well as government ministers and industry body presidents. All who participated are now better prepared for an emergency animal disease outbreak and have a clearer understanding of what their roles and responsibilities would be in a real event.

It was learned that multi-jurisdictional coordination works in Australia, but can be improved, and that industry participation in managing animal disease outbreaks is essential in terms of decision-making, communication networks and resource bases.

While *Exercise Minotaur* concentrated on FMD, the results provide positive spin-offs for any other national animal disease emergency. Although *Exercise Minotaur* did not test such things as systems for the coordination of national response information, resource management, and tracing of animal movements, it clearly demonstrated the need for adequate infrastructure and systems

¹ *Productivity Commission (2002) Impact of a Foot and Mouth Disease Outbreak on Australia*

In order to capitalise on Australia's investment in the review of FMD preparedness, and in *Exercise Minotaur*, it will be important to ensure the lessons learned are communicated and acted upon. This report has been presented to COAG and the Primary Industry Ministerial Council (PIMC) is overseeing the implementation of its recommendations. The national FMD action plan, which it contains, clearly points the way forward.

In the words of one of the simulation observers, "*Exercise Minotaur* was a very significant event in the emergency preparedness of Australia, thus it is critical that we must learn from the learnings (sic) and not just put the findings in some top drawer and move on to some normal business!"

The frameworks and systems developed might even be considered for more general application to national emergencies. The principles of emergency management and the need for effective collegiate operations across all jurisdictions have general application for all emergencies.

Exercise Minotaur would not have been the clear success that it was without the willing participation and commitment of many hundreds of people. The greatest debt is owed to the simulation participants, who responded to the simulated disease situation and the associated socio-economic crisis, and who came from the Commonwealth and state/territory government jurisdictions and industry associations.

The simulation facilitators, evaluators and assistants were invaluable in ensuring that the simulation ran smoothly. The international and domestic observers provided independent assessments of the validity of the simulation, and of the effectiveness of Australia's FMD preparedness arrangements. The Simulation Control Team was responsible for developing, conducting and evaluating the simulation; the Simulation Working Group provided advice and a communications network; and the Simulation Steering Committee provided the high level oversight for the project.

Exercise Minotaur generated a collegiate commitment that is hoped will help engender further improvements to Australia's ability to manage a national emergency animal disease outbreak.

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Overview and Key Findings

1.1

The states and territories have the prime statutory responsibility to ensure that agricultural practices are adequately controlled and that outbreaks of disease, such as FMD, are adequately managed and resolved. The Commonwealth's role in a major animal disease outbreak is to manage the trade response and provide leadership and coordination at the national level. An effective response to a major emergency such as FMD would require full input from all relevant agencies in all jurisdictions, going well beyond the technical disease control responsibilities of agricultural agencies and the scope of existing plans. In a major emergency, it can be expected that there will be complicated whole-of-government communication, economic, environmental, financial, health, industry assistance, legal, logistical, social and trade problems to be resolved. These issues will extend well beyond those industries and regions directly affected and the impact on other industries may be extensive, for example to tourism. Complex cross-jurisdictional issues would emerge for which prompt responses would be demanded. In recognition of the scale and nature of an FMD outbreak, plans were augmented by arrangements covering national whole-of-government involvement.

1.2

Exercise Minotaur held on 9-13 September 2002 simulated a major outbreak of FMD in the eastern states of Australia. It was the culmination of a series of exercises and policy improvements undertaken by all jurisdictions in the preceding 12-month period. The exercise successfully tested the following aspects of preparedness and response capabilities and identified areas where further improvements are required:

- integration of the national FMD response arrangements
- administrative arrangements in support of operations
- capacity and capability of resources for managing an FMD outbreak and its consequences
- logistics arrangements
- communication
- disease control policies and strategies
- trade management arrangements
- socio-economic relief and recovery strategies and processes.

1.3

As a deliberate strategy, activities such as operations of local disease control centres and field activities were not specifically tested as part of *Exercise Minotaur*. Any limited local activities that were initiated were only carried out to support the tested activities at state/territory and national levels.

1.4

Exercise Minotaur was the largest ever agricultural simulation in Australia and may have set an international benchmark. It provided an extensive training opportunity applying emergency management principles. There was also a significant enhancement of awareness, particularly across non-agricultural agencies, of the potential impact of a major national animal disease outbreak such as FMD. There was increased awareness of the complexity and importance of national preparedness and response activity required to deal with a major national incident.

1.5

Tangible evidence of enhanced awareness and training was the number and level of people involved in the lead up to and during *Exercise Minotaur*. Over 1000 people from a range of government and industry agencies were formally involved (and most likely, a multiple of this number unofficially involved), as well as 100 observers/facilitators/evaluators and 18 people in the control team. There was serious engagement at the highest level of government and agricultural industries.

1.6

There was a high level of media coverage of *Exercise Minotaur* across Australia, which also assisted to create awareness to the importance of reporting diseases and being prepared to respond to disease outbreaks. International understanding and perception were well managed.

1.7

Understanding and debate of some key technical and scientific policy issues have been advanced. There is now heightened recognition of the importance and value of training and exercising. The Primary Industries Ministerial Council (PIMC) has agreed to develop a five-year plan of exercises to ensure the process of continuous improvement is carried forward.

1.8

In the lead up to *Exercise Minotaur* there were around 45 smaller exercises and workshops across the country testing components of the preparedness and response systems. Enhancements were made to preparedness and response capability by all jurisdictions. A framework for national coordination of the response to a major FMD outbreak was agreed. Industry biosecurity plans were developed and awareness campaigns were increased. Response plans were reviewed and updated. In a number of jurisdictions enhancements were made to infrastructure, such as laboratory diagnostics capacity. New communications networks were established and comprehensive information about FMD and related preparedness activities was developed and placed on the Web. In the 2001-02 Budget the Commonwealth announced significant additional funding for enhanced border control facilities and related activities.

1.9

Notwithstanding these important improvements, a number of significant lessons for Australia's preparedness to deal with a major national animal disease outbreak were identified during *Exercise Minotaur*. To ensure that a structured approach is adopted to address actions arising from the simulation, a national FMD action plan has been prepared and is attached at Annex D. It is intended that this draft be further developed and updated as required.

Integration of national FMD response arrangements

1.10

The national FMD coordination framework, which reflects the roles and responsibilities under the Commonwealth/state system of government, proved to be robust. The Memorandum of Understanding (MOU) underpinning the framework, which establishes basic operating principles and guidelines as well as defining roles and responsibilities, has been tested and was subsequently signed by First Ministers on 6 December 2002. Nevertheless, to ensure the currency of the framework, there is a need to further enhance awareness and understanding of the roles and responsibilities of the various national groups under the framework.

1.11

During the simulation, a number of evaluators and international expert participants reported a perceived lack of a "national leader" for the response. However, given the federal system in which emergency responses are managed and the relatively localised nature of previous animal health emergencies (i.e. contained within one jurisdiction), there has not been a need to identify a "national leader". There is a range of "leadership" groups working within the national framework which worked well in the simulation. Key to these at an officials level are the National Management Group and the High Level Group. Ultimate responsibility for leadership lies with government First Ministers.

1.12

Over a number of years prior to *Exercise Minotaur*, a comprehensive agreement¹ on the sharing of costs in dealing with outbreaks of 63 animal diseases, including FMD, was developed between Governments and livestock industries. This agreement was a landmark as it established a positive partnership of responsibility and decision-making involving industry. However, while the agreement was found to be generally robust when put to the test by *Exercise Minotaur*, further work is required to ensure that diseases with significant impacts, such as FMD, are adequately catered for to avoid any delays to response activities.

Recommendation 1 – high priority. Processes contained in the cost sharing deed be reviewed in light of the lessons learned from the simulation to minimise any issues that might delay response activities, and an explanatory memorandum be incorporated into the document to provide guidance as to its overall intent.

¹ *Government and Industry Cost Sharing Deed in Respect to Emergency Animal Disease Responses*

Administrative Support Arrangements

1.13

AUSVETPLAN and Commonwealth/state/territory emergency plans proved to be sound during *Exercise Minotaur*. As a result of lessons learned, plans are being revised and upgraded. All plans need to be reviewed regularly. The proposed ongoing program of exercises agreed by PIMC will provide opportunities for staff training and review of plans as testing of plans would be an integral part of the program.

Recommendation 2 – high priority. To ensure currency of arrangements, an ongoing program for the review and exercising of national and jurisdictional whole-of-government decision-making and consultative groups be incorporated into the targeted rolling plan of exercises agreed by PIMC.

1.14

The roles and responsibilities of the national committees are well defined. During the simulation, committee secretariats set up meetings, prepared agendas and coordinated and distributed relevant papers. They undertook policy analysis including epidemiological, risk and cost benefit analysis, as well as the collation of information and issues from across jurisdictions; the assessment of this information; and the provision of high-level advice to decision-makers. In undertaking this role a natural filtering of information needs to take place that will prevent committees experiencing information overload.

Recommendation 3 – medium priority. The secretariats of national and jurisdictional committees include policy analysis capabilities and have adequate resource capability to efficiently maintain their functioning.

1.15

During *Exercise Minotaur* different approaches by states and territories under their legislation caused significant delays in disease response. In addition there were doubts in some jurisdictions as to the adequacy of powers to enforce a standstill of livestock and high-risk materials, and the consistency of animal disease control with related (e.g. emergency management) legislation.

1.16

Those parties that might have difficulties with their state/territory government legislation should move expeditiously to make appropriate amendments to allow for appropriate and consistent actions to be taken. Specifically, following the simulation, PIMC agreed that state and territory governments reassess legislation to ensure that it would adequately cater for an outbreak of FMD.

1.17

The *Quarantine Act 1908* provides broad powers for use during a major national emergency. If they were used all parties would be responding uniformly and consistently. Recent amendments to the *Quarantine Act 1908* grant the powers necessary to provide

authority for states to meet the 16 factors, identified as critical, for successful response activities. Consideration was not given to invoking these powers during *Exercise Minotaur* and further action is required to explore issues associated with use of those powers.

Recommendation 4 – medium priority. In consultation with the states and territories, the Commonwealth continues to enhance state/territory familiarity with the scope and powers of the Quarantine Act 1908 and potential for use of the Act in an animal disease response.

Capacity and Capability of Resources

1.18

The sheer scale of response operations required to contain and eradicate FMD and to manage relief and recovery operations highlighted the need for detailed and meticulous planning and preparedness that allows for use and integration of all available national resources, including skilled scientists and trained technical staff and laboratories, to build on existing capabilities.

1.19

The duration of an outbreak will be directly related to the ability to rapidly deploy large numbers of appropriate personnel at the initial stage of the response. The spread and duration of an FMD outbreak will be substantially extended and the consequences intensified if large numbers of resources are not deployed immediately. This mobilisation issue needs to be cooperatively addressed by jurisdictions as a matter of urgency.

1.20

Exercise Minotaur clearly demonstrated that an outbreak of FMD would quickly exhaust existing human resource capacity in a number of key areas, particularly skilled scientific and trained technical staff. It is apparent that most response agencies have experienced a run down of specialist staff over the last 10-years and are faced with an ageing population of remaining staff. This is a critical issue for government agencies in particular. To ensure that there are sufficient personnel, national performance standards need to be developed with oversight of these standards being allocated to an appropriate national body.

1.21

The roles of state/territory laboratories and the Australian Animal Health Laboratory (AAHL) in an emergency need to be clarified. This could be done through the Subcommittee on Animal Health Laboratory Standards (SCAHLs).

Recommendation 5 – high priority. All government emergency animal disease management agencies

- **ensure they have an adequate level of trained emergency response personnel, including specialised scientific staff, to be able to participate in a sustained emergency response**
- **endorse the importance of development and implementation of national performance standards**
- **develop, through SCAHLs, a policy on the respective roles of AAHL and state/territory laboratories during an emergency.**

1.22

To supplement the Australian response effort, it is likely that it will be necessary to draw on resources from other countries. Arrangements for accessing and integrating overseas personnel remain to be finalised. AFFA has lead responsibility in this regard.

Recommendation 6 – high priority. The international animal health agreement and associated administrative arrangements be completed urgently to enable rapid and efficient deployment of personnel from overseas to assist in the management of a major national disease emergency.

1.23

The extent of human resource availability across Australia, in the event of a national animal disease emergency should not be underestimated. Industry and local communities, as they do now in localised emergencies, would play a pivotal role. However, an FMD emergency would need a quantum increase in the scope of their involvement. This potential resource is relatively untapped and perhaps not as organised as it could be. The UK experience saw outsiders brought in to handle the emergency while locals, with their local knowledge, were largely not used.

Recommendation 7 – medium priority. In recognition that there is a significant skills base in affected industries, the private sector and communities, response agencies develop proposals for the engagement and training of such personnel to assist in the management of animal disease emergencies.

1.24

The human resource capability in a more general sense also poses an important but "must do" challenge. Focussed, planned and structured training to nationally accredited competency standards is essential. Given rapid turnover of personnel this must be an ongoing program involving a commitment from all jurisdictions.

1.25

Further exercises, given the high yield they produce as a training tool, should be part of the ongoing training program. PIMC has endorsed the need for development of a 5-year rolling plan for future exercises involving 3-4 small simulations each year to test parts of systems, with a major simulation to be held every 3-4 years.

1.26

Training in management of emergency animal and plant diseases can be better-focussed using existing resources. In this regard Emergency Management Australia (EMA) can play a significant role. It is suggested that:

- EMA programs be further developed to include training in the management of agricultural disease
- the various and separate activities being funded by governments and industry be redirected and consolidated to have people trained by EMA
- Governments and Animal Health Australia focus on the development of competency standards for their jurisdictions, which would lead to national accreditation through the training provided by EMA in conjunction with state/territory agencies.

1.27

The value of this proposal derives from rationalisation of resource use i.e., bringing together the general training on emergency management with specialist agricultural training needs; having people from separate jurisdictions work together on training so as to establish better understanding of each person's roles in an emergency; and help establish collegiate networks.

Recommendation 8 – high priority. Training programs be coordinated nationally by EMA to ensure the maximum benefit is obtained and training courses include a mix of cross jurisdictional personnel to facilitate better collegiate behaviour and understanding of roles and responsibilities.

Logistical Arrangements

1.28

The simulation demonstrated the importance of effective management of logistics. However, historically, Australia has not experienced a large-scale animal health emergency that has required the long-range identification and scheduled deployment of large numbers of personnel. Each jurisdiction during the simulation confirmed that they had limited resources available to respond to the "outbreak" and that within a short timeframe even the larger jurisdictions would be seeking external assistance. There is currently no national logistics co-ordination.

Recommendation 9 – high priority. A system to facilitate the national coordination and prioritisation of resources be developed.

1.29

Control headquarters facilities have been significantly upgraded in most jurisdictions. Some States received commendations from observers.

Recommendation 10 – medium priority. Jurisdictions review control centre facilities and implement the necessary upgrades in activation procedures and capacity identified in the simulation.

Communications

1.30

Of the lessons learned, those relating to information management and communications were by far the most pervasive. The exercise highlighted the importance and need for communication systems, networks and administrative arrangements to ensure there are robust, consistent national and international communications in the event of an FMD outbreak.

1.31

There is a need to ensure that response personnel (at all levels) are fully cognizant of the importance of public relations in disease responses. To ensure this, the communications aspects of AUSVETPLAN and the MOU (and jurisdictional plans) need to be enhanced and

public relations adequately integrated within national disease response competencies. While the new national network was highly successful, this was largely due to the currency of the arrangement at the time of the simulation. Over time there will be a level of change in personnel and organisational arrangements and unless measures are taken to ensure the continued currency of the arrangement, the risk of failure in this area is heightened. The processes and procedures for the network have not been fully documented.

Recommendation 11 – high priority. As appropriate, the MOU, AUSVETPLAN and jurisdictional emergency plans be upgraded to ensure:

- **the critical role of communications is fully recognised and adequately resourced taking account of new technologies and the need for network systems that convey information accurately and rapidly**
- **technical disease and emergency management information are integrated and incorporated in response arrangements, including the competencies of senior disease response personnel**
- **the newly created national communications network roles, responsibilities, processes and procedures are documented**
- **the potential number of national communication spokespersons is minimised.**

1.32

To ensure that the networks remain current and ready, it is essential that these arrangements be used on a regular basis in more routine animal health emergency responses.

Recommendation 12 – medium priority. To ensure continued currency of arrangements, the national communications network be used as an integral part of more routine animal health emergency responses.

1.33

The most appropriate national spokespeople (training, knowledge and status) need to be identified, and media briefings and content need to be coordinated with the states, territories and industry.

1.34

To address the problem of under-resourcing of the communications function across all jurisdictions, consideration needs to be given to amalgamating this function through a national response with staff from all jurisdictions being located at the National Disease Control Headquarters (NDCHQ).

Recommendation 13 – high priority. AFFA, in consultation with other Commonwealth agencies, states, territories and industry, refine national communication arrangements, including staffing resources.

1.35

Regardless of the information provided by government, the media will actively seek an independent view of the effectiveness of disease response activities from key opinion leaders, including interest groups, academics, local communities, etc. During the exercise, this aspect was tested through simulated media reports critical of the response. The communications network recognised their efforts would be severely undermined by the views of opinion leaders who influence public confidence. It was concluded that it would be in the interest of the response for identified key opinion leaders to be kept fully informed of developments, priorities and other critical issues, and encouraged to become advocates.

Recommendation 14 – medium priority. Key opinion leaders be identified and a mechanism be developed to ensure they are kept fully informed prior to and during animal disease emergencies.

1.36

During the simulation overseas posts were not always notified of new and/or emerging information in a timely manner. In order to respond to trade and market access issues adequately and reduce the risk of unnecessary adverse market impacts, it is essential posts be provided with a copy of all public documentation and information with supporting talking points, immediately this information has become available.

Recommendation 15 – low priority. A policy of providing overseas posts all relevant response information in advance of public release be facilitated by AFFA and DFAT, and incorporated in both departments' plans.

1.37

Existing information systems are inadequate to handle the significant volume of information, which needs to be transmitted to aid decision makers and keep the public informed. There is no system for monitoring resources, which would be deployed in response activity.

Recommendation 16 – high priority. As a matter of urgency, a national information management system linked to an upgraded ANEMIS be developed and used to ensure rapid and accurate transmission of information between field operatives and decision makers in all jurisdictions. There should be an exchange of liaison officers between combat agencies and with affected industry groups.

Disease Control Policies and Strategies

1.38

During an outbreak of FMD, high-level decision-makers will be required to make key decisions based on only limited information, particularly in the early days of an outbreak. To not do so would run the risk of allowing the virus to unnecessarily spread. Lessons from Europe for both BSE and FMD demonstrate the importance of decisions being based on a sound risk assessment that is justifiable to stakeholders and takes account of the need for rapid action.

1.39

There is a need to promote increased awareness of the complexity of any decision to use FMD vaccination as a disease control strategy. Science/technology will advance and thus the vaccination option needs to be under continual review. Guidelines, including agreement about trigger points for using, ceasing use and not using vaccination under Australian conditions, need to be established and agreed to from a "national perspective".

Recommendation 17 – high priority. The policy for the use of vaccine be continuously reviewed and any significant changes in policy be considered by PIMC.

1.40

AHA needs to move rapidly to develop a contract and secure supplies of priority use vaccine.

Recommendation 18 – high priority. The preferred government–industry option for the supply of FMD vaccine be established as soon as possible.

1.41

Exercise Minotaur highlighted the need for further debate and agreement on state/territory and national livestock standstill arrangements for the purpose of disease control, including the potential geographic extent of a standstill. It is suggested that powers to establish a livestock standstill be invoked immediately in all jurisdictions on the basis of reasonable suspicion of an FMD outbreak, unless there is certainty that possible contact animals and material have not traversed into specific geographic areas.

Recommendation 19 – high priority. Jurisdictions and industry develop an agreement that allows for the rapid implementation of a national livestock standstill and, where relevant, inclusion as part of an Emergency Animal Disease Response Plan (EADRP).

1.42

While livestock tracing was not directly tested under *Exercise Minotaur*, the exercise did highlight the importance of being able to rapidly and accurately trace livestock and other potentially infected material. This remains a fundamentally important critical success factor and must be high on the national agenda. While it is encouraging to see momentum gathering with commitment and roll out of the National Livestock Identification Scheme for cattle in Victoria and potentially in New South Wales, it will be essential to ensure that this is fully effective and that national co-ordination is consistent. Following the simulation, PIMC appointed a working group to progress this issue as a matter of urgency.

Recommendation 20 – high priority. Jurisdictions cooperate in the development of a nationally compatible livestock identification system for all FMD susceptible species that can rapidly and accurately trace animals.

1.43

Animal welfare was reaffirmed as a significant issue during *Exercise Minotaur*, including for over 325,000 live animals "on the water" to overseas markets. A plan needs to be developed to assist with the management of such animals. Further, there are animal welfare issues associated with livestock standstill and in relation to inability to get livestock to market due to quarantine restrictions. Large-scale slaughter of animals will emerge as a major issue should an outbreak occur. These plans would build on, and be consistent with, existing standards that have been developed by the National Consultative Committee on Animal Welfare.

Recommendation 21 – medium priority. Plans be developed to manage animal welfare issues arising from an FMD outbreak and that they be consistent with existing standards.

1.44

Risk management requires a full assessment of current and future threats to identify risks and prioritise them; identification and evaluation of options to treat those risks; and implementation of treatments. This applies to disease management as well as social and environmental issues arising from a disease outbreak. Risk assessments are likely to be made publicly available, as happened in the UK.

Recommendation 22 – medium priority. A risk management approach be adopted for all animal health emergency responses.

1.45

Disease forecasting will be fundamental in formulating medium to long-term response strategies and associated resource allocations. More work is required on modelling of FMD outbreaks, both epidemiological and economic, to aid decision-making on disease control strategies. This must incorporate the provision to decision-makers of decision support tools based on this modelling.

Recommendation 23 – medium priority. Forward planning, linked to epidemiological modelling, be adopted as part of animal disease emergency management culture, and roles and responsibilities for such planning and modelling be clarified under AUSVETPLAN.

Trade Management Arrangements

1.46

Exercise Minotaur highlighted the importance of effective and timely consultation between industry and government on the impact of an FMD outbreak on trade in agricultural products and measures to subsequently restore trade. While the importance of the Trade Market Access Group (TMAG) was recognised during the simulation, a need for clarification of the TMAG roles and responsibilities and membership became apparent.

Recommendation 24 – medium priority. TMAG roles and responsibilities, modus operandi and membership be updated.

1.47

Within the exercise, the debate on FMD zoning focused on a cost-benefit analysis by the Commonwealth Treasury and more generally highlighted tensions between ‘infected’ and ‘free’ zones over the use of shared technical resources. The policy relating to zoning needs to be further advanced with international trading partners. The potentially limited practical use of zoning (given the time taken to develop a submission and for trading partners to process such a submission - 1 year minimum for the United States of America) and the jurisdictional resource commitments that would be needed to respond to an incursion are important issues requiring further debate and a higher level of understanding and definition.

Recommendation 25 – high priority. Stakeholders be made fully aware of issues relating to a zoning application and decisions to pursue zoning applications should only be considered in the context of the full national cost–benefit analysis.

1.48

Given the timeframes involved in developing and gaining approval for an application for zoning (estimated to be at least 12 months) and the substantial surplus of product that would be available, a further option identified during the simulation was to pursue non-traditional, lower value markets through bilateral agreements. This option should be investigated in advance of an outbreak, and would have to be considered within a cost-benefit framework

Recommendation 26 – low priority: The option of bilateral arrangements with non-traditional markets be pursued by AFFA and DFAT in consultation with industry.

Relief and recovery

1.49

Constructive lessons were learned relating to the nature and extent of relief and recovery activities. Awareness and knowledge of the impact of an outbreak of FMD was advanced significantly.

1.50

The recent review by the COAG Taskforce on Natural Disaster Relief Arrangements (NDRA), submitted to COAG, has recommended that COAG note that the Commonwealth/State/Territory relief and recovery arrangements for natural disasters could be more widely applied in managing the consequences of other severe disasters and emergencies should governments choose to do so. The Taskforce's report has been considered by COAG Senior Officials who agreed that, where appropriate, there should be consistency in the response arrangements for natural disasters and a national animal disease emergency.

1.51

There is no question that a significant outbreak of FMD in Australia would have a much greater social and economic impact than other natural disasters that regularly occur in Australia. The Productivity Commission report and other available material including the range of impact statements prepared during *Exercise Minotaur* provide useful information for jurisdictional relief and recovery plans.

Recommendation 27 – high priority. Jurisdictions agree to assess the potential social and economic impacts of an FMD outbreak, review FMD relief and recovery plans, identify best practice guiding principles and implement improvement where warranted. In this context jurisdictions commit to share information with other jurisdictions.

Integration of National Arrangements

2.1

Australia's federal system of government is comprised of six states, two territories and the Commonwealth. Under the Constitution, states and territories have responsibility for the protection of life and property, and are responsible for the delivery of emergency responses within their borders. The Commonwealth is responsible for quarantine, international affairs and trade and has national coordination responsibilities for emergency responses.

2.2

The United Kingdom's FMD outbreak in 2001 demonstrated that if Australia were to experience an outbreak of similar magnitude, a national whole-of-government response that integrated all levels of government and industry within and across jurisdictions would be essential. Given the complexities that would emerge as a result of the federal system, there is a need to have clearly documented and understood roles and accountabilities established prior to an emergency. These need to be regularly updated and tested.

Key Points

- Rapid decision-making in an animal disease emergency is critical to the effectiveness of a response and will need to be based on only limited information within a risk management framework.
- A major strength in the national FMD coordination framework, which was found to be robust, is the inclusion of socio-economic decision-making forums that link with and complement those focusing on the animal disease response.
- The new agreement between governments and industry about who meets the costs of responding to an animal disease emergency¹ is robust, but further clarification is required to ensure there are no delays in responding to large-scale emergencies such as FMD.

Definition

2.3

Integration of national arrangements means how all tiers of governments and industry work together to respond to an outbreak of FMD and its consequences.

Risks

2.4

In the development of the simulation a number of risks associated with integration of national arrangements were identified and treatments developed. These risk treatments were tested during the simulation.

Integration of National Arrangements Risk 1:

Whole-of-government decision-making is disjointed both within and across jurisdictions resulting in an ineffective and inefficient response that undermines public and international confidence and exacerbates socio-economic impacts.

¹ *Government and Livestock Industry Cost Sharing Deed in Respect to Emergency Animal Disease Responses*

Rating²:

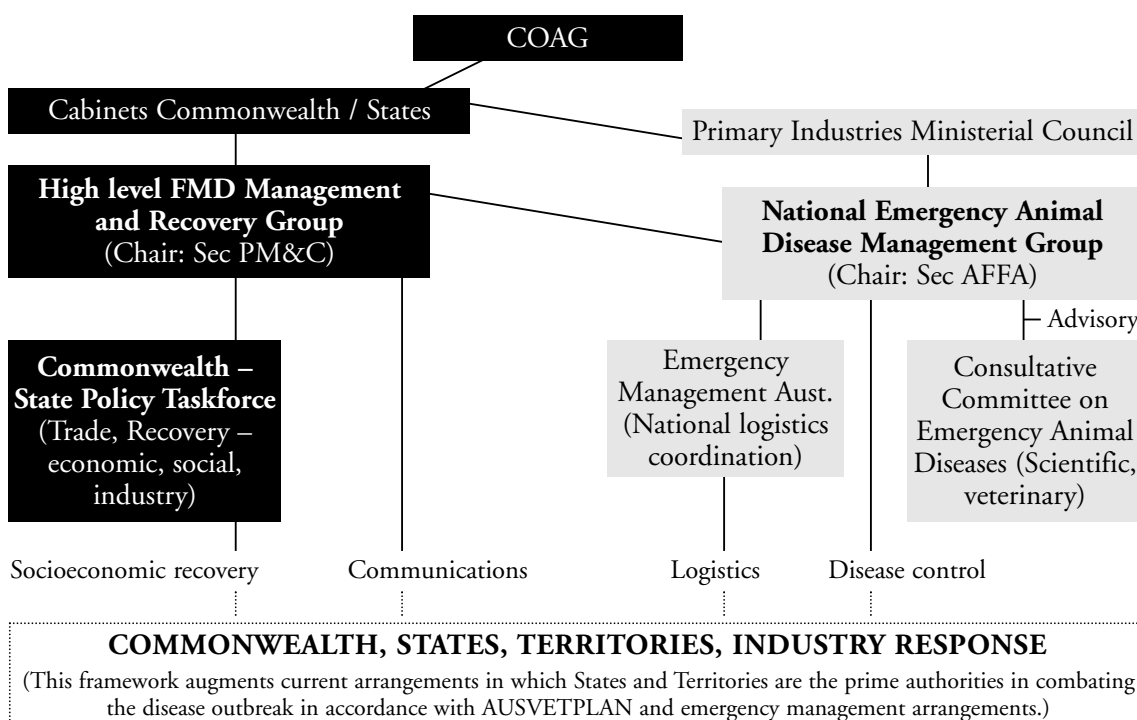
2.5

Prior to the development of the national framework, there was no agreed mechanism for the coordination of decision-making across jurisdictions. Therefore, it was possible decision-making would be disjointed. The consequences of this in a large-scale national emergency would be major, resulting in a severe impact on Australia's ability to respond. The resulting risk rating is extreme.

Risk Treatment (pre-simulation)

2.6

In June 2001, COAG noted that an effective response to a major emergency such as FMD would require full input from relevant agencies in all jurisdictions, going well beyond the technical disease control responsibilities of agriculture agencies and the scope of existing plans. In a major emergency, it can be expected that there would be complicated whole-of-government communication, economic, environmental, financial, health, industry assistance, legal, logistical, social and trade problems to be resolved. These issues would extend well beyond those industries directly affected and the impact might be extensive, for example in tourism. Complex cross-jurisdictional issues would emerge for which prompt responses would be demanded. Given this, COAG sought the development of a national coordination framework to bring together all levels of government to manage the full consequences of an FMD outbreak. In April 2002, COAG endorsed the draft national FMD coordination framework that would be tested in the simulation (refer diagram 1).



1. The framework as presented covers FMD. With BSE, State emergency services would not be used to the same extent, health authorities would have an important role.
2. Local Government Authorities would be linked in to the Commonwealth – State Policy Taskforce.
3. The Government and Livestock Industry Cost Sharing Deed in Respect of Emergency Animal Disease Responses (EAD Response Agreement) the National Emergency Animal Disease Management Group is referred to as "National Management Group".
4. The shaded boxes represent additions to current emergency animal disease management frameworks.

² See Annex C for a description of the risk analysis framework.

Diagram 1: National FMD Coordination Framework

2.7

The framework identifies COAG as the peak decision making body during a major animal disease emergency supported by a High Level FMD Management and Recovery Group (HLG). This group, comprising representatives of key agencies in each jurisdiction, and chaired by the Department of Prime Minister and Cabinet (PM&C), would coordinate and oversee whole-of-government actions on a national basis. The framework recognises that disease control and eradication is the constitutional responsibility of states and territories and that they would make the primary decisions in controlling and eradicating the disease. However, as an FMD outbreak would have ramifications affecting all jurisdictions, the framework would be activated to coordinate national activity. A draft MOU was developed to underpin the national coordination framework and to describe the roles and responsibilities and linkages for the groups identified. The MOU was tested during the simulation. Following its successful trial in the simulation, COAG First Ministers signed the MOU on 6 December 2002.

2.8

The framework brings together the disease response and relief and recovery components of the national response arrangements. The disease response stream of the framework had been used, tried and tested for many years and recently was upgraded and formalised in the Government and Livestock Industry Cost Sharing Deed. This framework brings together the Commonwealth, states, territories and industry to develop specific disease control and relief and recovery strategies. High-level linkages between these two components will assist in ensuring a fully coordinated and considered response.

2.9

Previously there had been a varying level of formalisation of whole-of-government emergency response arrangements across jurisdictions. Some, like Victoria (which experienced the Longford gas crisis), had very formalised whole-of-government response and recovery arrangements in place. Others, like the Commonwealth, had informal mechanisms. Following COAG's call for a review of whole-of-government decision-making mechanisms, all jurisdictions put in place more formal and documented arrangements. Prior to *Exercise Minotaur*, most jurisdictions held mini-simulations to validate their whole-of-government plans.

2.10

Recognising the importance that national coordination of public communications would play in an FMD outbreak, a national communications network was established that linked, through the AFFA communications group, to all jurisdictions. The purpose of this network is to streamline communications and to ensure consistency in public communication messages. In the event of an outbreak of FMD, AFFA would be responsible for coordinating communications with Commonwealth government agencies involved in the response. The NDCHQ at AFFA provides the cross jurisdictional link with states, territories, industry and local government that in turn have their own jurisdictional networks in place to coordinate communications with emergency services and other response agencies. The AFFA communications group works closely with the committees within the national FMD coordination framework and provides feedback to the jurisdictions and industry through the network.

Simulation Outcomes, Further Risk Treatments and Recommendations:

2.11

Each element of the national FMD coordination framework was tested along with the draft MOU and the cost sharing deed. The simulation was not designed to fully test ministerial involvement in decision-making. Although some overseas participants found the framework complex, overall it reflects the federal system of governments and it proved effective during the simulation. The increased understanding of the importance of national integration was a positive outcome of the simulation and demonstrated a high-level of participation by all jurisdictions in the simulated decision-making processes. This high-level of involvement by senior government officials and industry leaders needs to be maintained over time to ensure that policies and strategies developed prior to an emergency animal disease outbreak are well understood and implemented during a real event.

2.12

Rapid decision-making in an emergency environment is critical for the effectiveness of the response. Members of the committees in the national FMD coordination framework must be prepared to rapidly make and justify decisions with only limited information. Inherently this carries with it a level of risk, but protracted consideration of some issues could severely impact on the response and the disease consequences. The issue of making decisions on a risk management basis is further considered in Chapter 7.

2.13

Members of the groups in the national FMD coordination framework are representative of their jurisdictions and/or organisations. The framework has been structured to encourage each jurisdiction and organisation to form a cohesive position on items for discussion and decision prior to their consideration at national meetings. There was evidence during the limited time available for the simulation that some representatives had been unable to consult with their colleagues prior to their participation at national meetings. If this occurred in a real event, it could have the potential to slow decision-making processes or, in the worst case, cause failure in the implementation of response actions due to stakeholder groups not understanding the rationale for decisions. It is important that members have a good understanding of the extent that some decisions can be made 'lower down' the framework hierarchy. For example, routine socio-economic decisions should be able to be made by the Commonwealth-State Policy Task Force (CSPTF, Table 2) without consultation with the HLG.

2.14

The simulation demonstrated the strength of the framework in communicating information from the local level through to the high-level groups. For example, the news of a simulated death of an international worker in Queensland was communicated through the Local Disease Control Centre (LDCC), State Disease Control Headquarters (SDCHQ), National Disease Control Headquarters (NDCHQ), and the CSPTF to the HLG within two hours. It is essential that this level of awareness of the need to rapidly communicate information throughout the whole framework be maintained through continued training and simulation exercises.

2.15

The inclusion of the socio-economic component in the framework proved to be of great value in terms of learning and preparedness. Evaluators universally commented on the level of commitment and seriousness displayed by members of all groups responsible for considering the socio-economic consequences (HLG, CSPTF and jurisdictional whole-of-government committees). The majority of the participants in these groups had little or no experience in animal disease emergency response operations, but they were able to quickly become familiar with the implications and consider appropriate actions necessary to manage the national consequences. At the national level, this success was in part due to the effectiveness of providing high-level secretariat support (right information at the right time) and the immediate interaction between senior state, territory and Commonwealth officials.

2.16

The groups in the socio-economic stream of the framework met several times during the simulation. The key issues considered included:

- zoning
- jurisdictional situation reports
- national public communications
- trade impacts and strategies
- relief and recovery issues.

2.17

During the simulation, there were some reports of confusion and overlap between the roles of the CSPTF and the HLG. Both groups were required to consider similar agenda items in order to demonstrate a clear flow of decision-making from the jurisdictional level through the CSPTF to the HLG. The confusion may have been a construct of the simulation. Because of the timing of meetings, there was limited opportunity for the CSPTF and its secretariat to act as a filter of information for the HLG (Tables 1 and 2 outline the membership and key responsibilities of the HLG and the CSPTF respectively). This process needs to be more consciously considered in the delineation of roles and responsibilities between these groups and the supporting secretariats. Concerns about information overload noted by evaluators and participants could also be avoided by use of standard and scheduled reports that provide the base level of information to inform all response staff of current and emerging situations (refer to Chapter 6 on Communications for detailed information). Additionally, particularly early in the response, there may need to be a reliance on oral or 'key points' briefs rather than extensive written reports. It would be up to the chair of each group to determine *modus operandi*, bearing in mind the need to maintain an adequate decision-making audit trail.

2.18

In summary, the intention is that the CSPTF is to act as the "engine room" and advisor for the HLG in identifying the key issues that require high-level decisions. While the HLG is able to make decisions about major operational matters, issues of the highest level of significance would require referral to COAG and jurisdictional Cabinets. This level of decision-making was not tested during the simulation.

Table 1: High Level FMD Management and Recovery Group (HLG)

Membership

- Commonwealth:
PM&C [Chair], DTRS, FACS, DOFA, Treasury, AFFA [Chair NMG], DFAT, EMA, Defence
- states/territories first ministers departments
- ALGA
- Co-opt others as required

Key Responsibilities

- Consider recommendations from the Commonwealth-State Policy Taskforce.
- Consider advice/recommendations from the NMG on major disease control issues that may require Cabinet/COAG consideration.
- Resolve policy and strategic resourcing issues for the national whole-of-government response to disease control and social/economic recovery.
- Report to and make recommendations as required to COAG on national whole-of-government matters arising from the outbreak.
- Consider and make strategic decisions to ensure a whole-of-government approach on communications, especially to the media/public.
- High-level oversight of social, community and business recovery programs and policies.

Table 2: Commonwealth-State Policy Task Force (CSPTF)

Membership

- Commonwealth:
PM&C [Chair], DTRS, FACS, Finance, Treasury, AFFA [Chair NMG], DFAT, AG's-EMA
- states/territories first ministers departments
- ALGA
- Co-opt others as required

Key Responsibilities

- Report and make recommendations to the HLG on social, community, industry, business and economic recovery programs and policies.
- Coordinate and monitor policies and programs.
- Consider a national policy response to any legal issues that arise.
- Advise communications network on policy matters for purposes of media briefings.
- Provide secretariat for the HLG.

2.19

The NMG's primary role (see Table 3) is to take decisions on national disease response operations, bearing in mind that major national policy decisions might need to be referred to the HLG, PIMC and/or jurisdictional Ministers. The establishment of the NMG has been seen as setting a benchmark for interaction between industry and government. The simulation enabled industry members to increase their understanding of their role during an outbreak while also increasing their overall capacity to advance some important policy issues outside the constraints of the simulation.

2.20

The NMG was required to meet daily during the simulation. During a real event, the NMG would only need to meet daily in the initial stages of the response. As a decision-making body, the NMG meetings should only occur when key decisions need to be made. The main issues it addressed during the simulation included:

- monitoring of daily and projected situation reports
- consideration of emergency animal disease management response plans from all jurisdictions including resource prioritisation
- trade issues including zoning
- public communications
- financial matters.

2.21

There was a tendency during the simulation for the NMG to re-explore the technical aspects of CCEAD recommendations. While it is recognised that a degree of this will be inevitable during a real event, all representatives need to be conscious of the roles of the NMG and CCEAD which are decision making on overall response operations (NMG) and technical and scientific assessment and recommendations (CCEAD).

2.22

The simulation provided the first occasion on which the NMG was required to consider Emergency Animal Disease Response Plans (EADRP's) from a number of jurisdictions at the same time. Prior to the simulation the responsibility for developing a national response strategy, based on an amalgamation and analysis of the range of jurisdictional EADRP's, had not been tested. As a result, the NMG was challenged to assess the national picture including financial estimates and the adequacy of resources. It was recognised that this function would need to be an integral part of the work of staff at the NDCHQ.

Table 3: National Emergency Animal Disease Management Group (NMG)

Membership

- Secretary of AFFA (Chair)
- All state/territory Primary Industry CEO's
- Presidents of all affected Industries
- Animal Health Australia (observer)
- Ex Officio, Chair of CCEAD
- Ex Officio CVO of affected State(s)

Key Responsibilities

- Responsible for the implementation of emergency response actions.
- Consider advice from CCEAD and decide on recommended response actions relating to suspect/confirmed emergency disease incidents.
- Consider/approve Emergency Animal Disease Response Plans.
- Report/make recommendations to Primary Industries Ministerial Council, Commonwealth-State Policy Taskforce and High Level Group.

2.23

Within the national framework, CCEAD (see Table 4) is pivotal to the disease response. The confirmation by CCEAD that FMD is present is the trigger for a series of actions throughout the framework. Its primary role is to provide the best available scientific and technical disease response policy advice to the NMG. Due to the highly infectious and fast moving nature of FMD, CCEAD will have to make risk-based recommendations with limited information (at least initially) that will, in turn, have major implications for both disease control and the socio-economic consequences. To ensure that all CCEAD members, particularly those from industry, are rehearsed in rapid risk-based decision-making, it is essential that they have the opportunity to participate in more routine emergency responses as well as simulated large-scale events.

2.24

The simulation confirmed the importance of CCEAD also being able to provide medium to long-term forecasts to the NMG. Among other things, these predictions will be used for both resource planning and to inform the NMG when a review of cost sharing arrangements under the cost sharing deed needs to be made, specifically when the 1 per cent Gross Value of Production threshold will be reached.

2.25

As part of the simulation, CCEAD was required to meet at least daily. The outcome of these meetings provided the basis for considering issues throughout the framework. Due to the time constraints of the simulation, CCEAD considerations were limited to a number of key issues including:

- situation reports
- laboratory reports
- industry reports;
- the application of AUSVETPLAN policies to the simulated emergency
- emergency animal disease response plans
- movement controls
- livestock tracing and surveillance.

2.26

Given its pivotal role in the framework, in a real emergency CCEAD meetings would need to be timed to ensure effective information flows through the national FMD coordination framework. This will require targeted discussion on critical issues. All potential representatives on the committee need to be well acquainted with the modus operandi of the group. This has important implications for training and development given that there is frequent turnover of participants, particularly in industry groups.

2.27

An important issue that arose before, during and after the simulation was which group (CCEAD or the NMG) was responsible for approving the use of resources as part of an EADRP. In a major emergency such as FMD, CCEAD's technical workload is likely to be such that the NMG may need to assume a greater level of responsibility in handling issues such as public communications, budgetary and resource issues. This would allow CCEAD to focus its full attention on disease control strategies. This matter needs to be considered in the review of the cost sharing deed (see recommendation 1).

Table 4: Consultative Committee on Emergency Animal Diseases (CCEAD)

Membership

- ACVO (Chair)
- All state and territory CVOs
- For diseases under the Deed:
 - Affected Industry(ies) Representative(s)
 - Collective Industry Representative
- AQIS Representative
- CSIRO Representative

Terms of Reference

- Consult and advise on emergency terrestrial and aquatic animal health events. Such events include, but are not limited to, the occurrence of a suspected exotic disease in animals; serious epizootics of Australian origin; animal disease incidents of public health or trade significance; immediate disease threats to Australia; or major residue occurrences other than in cattle or sheep meats.
- Make judgements and provide advice regarding the presumptive and confirmatory diagnosis of outbreaks of exotic diseases of terrestrial and aquatic animals and for the purpose of invoking the provisions of the Deed.
- Advise on eradication or control methods for presumptive or confirmed emergencies.
- Facilitate Australia meeting its international reporting obligations in respect of emergency animal diseases.
- Advise the NMG on emergency animal disease responses including provision of reports containing budgeted, committed and actual expenditure on an EAD Response Plan as required by Clause 1.2 (a) and (b) of Schedule 8 of the Deed.
- Advise the NMG and PISC of significant developments during an EAD response and when an emergency is over, on any post-emergency action, such as further research and revision of contingency plans (AUSVETPLAN and AQUAVETPLAN) which should be undertaken.

National Leadership

2.28

A number of evaluators and overseas participants reported a perceived lack of a "national leader" for the response. Although this was not elaborated upon, it has been taken to mean an overall "chief of national operations" (disease response and relief and recovery) working to COAG (in the same way as a managing director works to a board of a company), but who would not supersede jurisdictional, legal or administrative responsibilities.

2.29

This is a difficult concept given the distribution of Constitutional powers across the federation under which emergency responses are managed by the relevant state/territory. In the relatively localised nature of previous animal health emergencies (i.e. contained within one jurisdiction), there has not been a need to identify a "national leader/chief of operations". In a real FMD emergency, the high level group structure in the national framework would provide a coordination mechanism and the necessary leadership. This was not fully tested in the simulation. Care would be needed to ensure very close cooperation amongst the chairs of the various high level groups and the various jurisdictions to ensure public and international confidence is maintained.

Integration of National Arrangements Risk 2:

Response activities are delayed due to problems with the practical application of the cost sharing deed in a large-scale emergency response as would be caused by FMD.

Rating

2.30

It is possible that disease response activities could be undermined or delayed due to issues associated with the cost sharing deed. The consequences if this should occur would be moderate. This would result in a risk rating of high.

Risk Treatment (pre-simulation)

2.31

In 1999, recognising that both industry and government had a clear vested interest in managing emergency animal disease incursions, there was agreement to modify previous cost sharing arrangements to integrate industry into the decision-making and related cost sharing process. A new agreement was signed in March 2002 that provided for the sharing of eligible costs of an emergency animal disease response by governments and affected livestock industries covering 63 significant animal disease threats to Australia. The cost sharing deed details the decision-making arrangements to be used in an emergency, built around the operation of the NMG and CCEAD. This deed does not provide for the management or funding of relief and recovery operations.

2.32

Under the cost sharing deed, diseases have been classified into four categories and a cost-sharing formula applied to each category. This categorisation is based upon an independent expert scientific assessment of the relative impact of each disease on human health, domestic and international trade, the national economy, animal production and the environment. The cost-sharing formula for each category reflects the relative responsibilities of the parties (industry, Commonwealth and state/territory governments) apportioned by an assessment of the public and private benefits involved. This means that where the public benefits from disease eradication have been assessed as greater than the

benefit to industry, governments will meet most or all (as in category one) of the costs, but where the benefits to industry are substantial, industry will be required to contribute a set portion in accordance with the agreed industry share for each category as shown below:

Category of Disease	Government Funding	Industry Funding
Category 1: very high public benefits	100%	0%
Category 2: high public benefits	80%	20%
Category 3: moderate public benefits	50%	50%
Category 4: low public benefits	20%	80%

2.33

Within the deed there is provision to review cost shares when eligible costs look like reaching 1 per cent of GVP of the affected livestock industries.

2.34

The cost sharing deed was successfully used in the management of Newcastle disease outbreaks in both Victoria and New South Wales during 2002. This provided the opportunity to use the provisions of the agreement in a small but real situation. The deed proved to be robust under these conditions. However, there was an identified need to more clearly document government and industry roles and responsibilities through the development of detailed modus operandi. Further, as part of the national training program (refer Chapter 4 Capacity and Capability of Resources) industries were asked to nominate personnel likely to be involved in either CCEAD or the NMG to undertake training for this role. Representation of all FMD susceptible industries received training prior to the simulation.

Simulation Outcomes, Further Risk Treatments and Recommendations:

2.35

The simulation provided an opportunity to validate the cost sharing deed in a large-scale national emergency. In general, the principles of the deed appeared to be robust. Participants were required to use the deed as the underlying authority for disease control decision-making. For example, "infected" states and territories were required to complete an emergency animal disease response plan (at least in part) in which information of proposed control strategies, resources and financial information are detailed for consideration by CCEAD (for technical viability) and the NMG (for financial and policy approval). Some states and territories were reluctant to take critical response decisions without prior funding approval of the plan by the NMG, although the deed encourages

jurisdictions to not delay response activity pending receipt of this approval by allowing cost sharing to be backdated to the time response actions commenced.

2.36

The simulation highlighted a degree of ambiguity in the interpretation of some aspects of the deed. In general, there is no "purpose" clause for the deed nor is there any general explanation of the document's intent. A number of practical use issues requiring further consideration are detailed below. It is proposed that these could be better clarified through the inclusion of an explanatory memorandum.

Consensus in Decision-Making

2.37

The cost sharing deed requires decisions for both CCEAD and the NMG to be made by consensus to ensure a fully supported and agreed approach by all parties. During the simulation both CCEAD and the NMG were successful in meeting this requirement. However, there is some concern that in a real emergency there remains a possibility that a single party to the deed could potentially delay response activity.

1% of Gross Value of Production

2.38

Under the cost sharing deed, costs are shared between parties to an agreed limit of 1 per cent of the GVP of affected industries. In an exceptional multifocal, large-scale animal disease outbreak such as FMD, this limit is likely to be exceeded within a short timeframe. Industry members identified that there appeared to be no mechanism to provide the NMG with early warning of when the 1% would be reached. They recognised a need for disease prediction to be complemented with financial models to provide the NMG with advance notice. The timeliness of financial accounting by all parties to support any such modelling will be a critical success factor for financial decision-making by the NMG. Under the costing sharing deed, AHA is responsible for the collation of such costs and financial reporting to the NMG. However, the role of financial modelling has not been previously allocated to any party. The simulation highlighted that due to a lack of administrative arrangements to manage the process of reviewing the sharing of costs once the 1% figure has been exceeded, there were times when participants in the NMG were distracted from more important response decisions. In an FMD emergency, resolution of cost sharing must not become an impediment to control and eradication.

Claimable Costs

2.39

The cost sharing deed identifies a range of "claimable costs" and also provides some discretion to the NMG to approve other associated costs. During the simulation, some potentially high-cost activities were considered that would not have been immediately covered under the deed. These included:

- zoning (cost of surveillance)
- national livestock standstill (policing costs, particularly in non-infected states/territories)
- animal welfare measures (cost of responding to live animal shipments, destruction and disposal of intensive livestock due to movement restrictions, etc)
- pre-emptive slaughter (destruction and disposal of high risk non-infected animals);
- environmental monitoring (monitoring of disposal sites)
- preventative action in non-infected jurisdictions (surveillance, border security, etc)
- whole-of-government arrangements (non-agricultural agency costs beyond direct field disease control measures e.g. national call centre arrangements and relief and recovery operations).

2.40

Some non-infected jurisdictions, industries and laboratories such as AAHL may be able to claim costs associated with the response activities. Under the current arrangements, there is no requirement for these groups to produce a response plan and therefore these claimable costs are not approved by the NMG as required under the deed. To assist the NMG to assess the full national resource and cost implications, a mechanism is required for all jurisdictions, industries and laboratories to complete the equivalent of an EADRP.

Secretariat Support

2.41

Under current arrangements detailed in the deed, AHA is required to provide secretariat support to the NMG. Prior to the simulation during the Newcastle disease outbreaks in Victoria and New South Wales, the Chair of the NMG requested that this service be provided by AFFA. This also occurred during the simulation. The rationale for the decision to have AFFA provide the secretariat services to the NMG include:

- government is responsible for disease control operations and is accountable to the public and parliamentary review unlike a private company
- AFFA already provides secretariat services for PISC, the largest component of the NMG
- familiarity and integration with government and industry operational arrangements particularly with the secretariat of CCEAD (located within AFFA)
- capacity for secretariat services (including communication and quantity of skilled personnel) and integration with policy support
- the NMG (PISC) secretariat is permanently located within AFFA.

Recommendation 1 – high priority. Processes contained in the cost sharing deed be reviewed in light of the lessons learned from the simulation to minimise any issues that might delay response activities, and an explanatory memorandum be incorporated into the document to provide guidance as to its overall intent.

Administrative Support Arrangements

3.1

The agreed arrangements for an FMD outbreak require the rapid activation of a number of jurisdictional and national whole-of-government and industry/government decision-making and consultative committees. Each of these groups requires a high level of administrative support, including policy advice, in order to meet their roles and responsibilities. Underlying the decision-making capability of these groups, and the ability to act, are the legislative powers held in each jurisdiction.

3.2

This section of the report focuses on these administrative arrangements rather than the framework in which they function.

Key Points

- Face-to-face meetings of decision makers are preferable to remote distance communications.
- The secretariat function supporting decision-making forums should also include policy analysis capacity, in part to address information overload by converting data into policy advice.
- The broad ranging powers under the *Quarantine Act 1908* are not well understood and differences in approaches to issues under state and territory legislation could cause significant response delays during the critical initial days of a disease emergency.

Definition

3.3

Administrative arrangements are the means by which people are organised to consult, make decisions and take action during an emergency response. This incorporates:

- modus operandi of national committees
- secretariat support for those committees
- legislation.

Risks

3.4

In the development of the simulation a number of risks associated with administrative arrangements were identified and treatments developed. These were tested during the simulation.

Administrative Support Arrangements Risk 1

That national and jurisdictional decision-making and consultative groups are unable to function effectively due to inadequate administrative arrangements and support.

Rating

3.5

A large-scale outbreak of FMD would require the activation, over a sustained period, of jurisdictional and national decision-making and consultative committees. While the jurisdictional whole-of-government arrangements were generally well established, the national arrangements were new and untried until the simulation with the exception of the activation of the NMG during the Newcastle Disease outbreak in Meredith, Victoria in May 2002. Therefore, prior to the simulation, it would have been possible that aspects of these arrangements would have failed at the national level. The consequence of this would have had a moderate impact on Australia's ability to respond resulting in a risk rating of high.

Risk Treatment (pre-simulation)

3.6

Most jurisdictions have their own well established whole-of-government arrangements with supporting mechanisms. The new national FMD coordination framework provides a linkage between these and national arrangements. Prior to the simulation, most jurisdictions rehearsed the convening and operation of their decision-making groups including the provision of secretariat support.

3.7

At the national level, pre-simulation activities were focused on the development of the documentation detailing the modus operandi, membership and contacts for the groups included in the national framework. To provide an aide-memoire to members, brochures were developed that summarised these elements. Additionally, arrangements for secretariat support were developed for these groups but their functionality had not been tested prior to the simulation.

3.8

The cost sharing agreement provides for industry participation in CCEAD and the NMG. The simulation provided the first opportunity for all industry groups covering FMD susceptible species to engage in these forums. Prior to the simulation, AHA undertook training for a number of industry personnel likely to participate in CCEAD or the NMG. To complement this, closer to the simulation a "walk through" of the operating arrangements was provided to all members of these two groups. A further real test was provided by the Newcastle Disease incident in Victoria but this event did not involve leaders of livestock industries susceptible to FMD.

Simulation Outcomes, Further Risk Treatments and Recommendations

3.9

Following the simulation, all jurisdictions, as part of their debriefing process, have undertaken a review of their administrative arrangements and have detailed specific issues that will be addressed by them. This report will focus on broad administrative arrangements that impacted on most or all jurisdictions.

3.10

AUSVETPLAN and Commonwealth, state and territory emergency plans proved to be sound during the simulation. As a result of the lessons learned, plans are being revised and upgraded.

Modus Operandi

3.11

The simulation was successful in testing the modus operandi and membership of the committees in the national framework. Simulation observers were impressed with the seriousness and professionalism demonstrated by members involved in these groups. Members showed a good understanding of their respective roles and responsibilities and the operating procedures of the committees. This was evidenced by the effectiveness of meetings. This successful outcome was replicated at the jurisdictional level with all whole-of-government committees being fully activated with members fully participating in the simulation. It was generally agreed that the membership of the jurisdictional and national decision-making and consultative groups was representative of relevant parties (also refer to Chapter 8 for more detailed information on the Trade Market Access Group).

3.12

While the NMG and CCEAD are standing committees that meet on a regular basis, the national framework as a whole is designed to only be activated in the event of a major national emergency such as an outbreak of FMD. As a result, there is the prospect that the framework in its entirety may not be well practiced and members dealing with relief and recovery issues may not have the opportunity to meet in earnest or, at best, infrequently. Therefore, without regular review and exercising of the arrangements, there is a danger that the system may not remain well prepared. Since PIMC has already approved the development of a five-year rolling program of four to five mini-simulations each year to test parts of preparedness arrangements and another major simulation in three to four years time, some of these simulations need to also include whole-of-government issues, in addition to the animal disease control focus. Unlike *Exercise Minotaur*, future major simulations would be targeted at specific interjurisdictional issues and specific aspects of the national coordination framework.

3.13

Industry members of the NMG reported that operating remotely caused some difficulties during the simulation. They believed face-to-face meetings would help facilitate communication and decision-making in that forum. Some representatives raised the problem of business continuity noting that the absence of key personnel from their normal management structures led to delays in decision-making and document clearance relating to an outbreak. To ensure these delays do not occur within emergency operations, all representatives need to appoint deputies, not only as backup during an emergency but also to manage continuity of their businesses.

Secretariat

3.14

Although jurisdictional and national decision-making and consultative groups had advance notice of meeting schedules, secretariats were required to set up the meetings, ensuring that members' details were correct and papers prepared and distributed. At all levels, this activity was done in a professional manner with all meetings commencing within the timeframes allowed in the simulation.

3.15

The inclusion of industry members on the NMG and CCEAD created a new complication for information management. Many members, particularly those in remote areas, experienced problems with the timely receipt of documentation. This issue was compounded as some members were reticent to make policy/budgetary decisions without having adequate time to read papers. During an emergency response, decisions will have to be made on the basis of the best available information recognising that there will be gaps in the full understanding of the rapidly changing situation. Particularly in the early stages of the emergency, there will be limited time to prepare comprehensive agenda papers on which decisions would be based. Given this, the modus operandi of the groups needs to reflect acceptance of much more precise "key point" written briefs supported by oral briefs from relevant experts.

3.16

While the roles and responsibilities of the national committees are well defined, there is a need to ensure the secretariats to these groups are appropriately resourced and include a policy analysis function. This would involve the collation of information and issues from across jurisdictions, the assessment of this information and the provision of high-level advice to decision-makers. It would provide a natural filtering of information that would prevent committees experiencing information overload.

3.17

During the simulation, members received highly detailed information that required significant time to assimilate. However, documentation for these groups needs to be concise and targeted providing clear options with consideration of implications. The

simulation highlighted that to perform these functions adequately would be more resource intensive than previously anticipated. It also reinforced the importance of planning for staff relief and rotation in major emergencies. These resourcing issues were reported by some jurisdictions as having highly significant implications for their whole-of-government arrangements. (Refer to Capacity and Capability Chapter 4)

Recommendation 2 – high priority. To ensure currency of arrangements, an ongoing program for the review and exercising of national and jurisdictional whole-of-government decision-making and consultative groups be incorporated into the targeted rolling plan of exercises agreed by PIMC.

Recommendation 3 – medium priority. The secretariats of national and jurisdictional committees include policy analysis capabilities and have adequate resource capability to efficiently maintain their functioning.

Administrative Support Arrangements Risk 2

A disease response is inhibited due to a lack of appropriate legislated powers or inconsistencies between jurisdictional powers.

Rating

3.18

The ability to implement a fully effective national disease response is dependent upon the legislative powers available. For a number of years Australian governments have sought to put in place a legislative framework designed to ensure national consistency in response activities. However, prior to the simulation a check of response legislation against critical success factors identified some deficiencies and differences between jurisdictional powers. Given this, it is considered possible that these differences may impede national or cross-jurisdictional response activities, the consequences of which would be a major impact on disease response. This results in a risk rating of extreme.

Risk Treatment (pre-simulation)

3.19

As animal production and health issues are the responsibility of states and territories, it is predominantly their animal health legislation, with support from emergency management legislation, which will be used in the event of an animal disease outbreak. However, any response to a disease such as FMD will require consistency of approach by the states, territories and the Commonwealth. Following the United Kingdom FMD outbreak, the Standing Committee for Agriculture and Resource Management (SCARM) called for a review of legislative powers against the following critical success factors:

- To enter and search any land (independent of any warrants or permits), place or item for the purpose of determining the presence or not of an animal, exotic disease agent, fomite, vector, fodder, contaminated product or other materiel
- To require a person to take reasonable steps to provide information

- To muster, inspect, confine, count, examine, mark for identification, test, vaccinate, treat or disinfect any animal, place, land or item
- To take and remove for analysis or examination samples of or from any land, place, item or animal considered necessary to determine the presence or otherwise of an exotic disease agent, vector, contaminated product or other material
- To require an owner to muster, yard, secure or identify, vaccinate, treat or disinfect the owner's animals and to provide adequate facilities and assistance to allow the safe and efficient conduct of those activities
- To declare any animal, place or item as infected
- To immediately declare areas including any land or place and to impose conditions under which movement of animals, people or items may, or may not, occur into, through or out of the declared area
- To require immediate destruction of any animal or item and to restrict the purposes for which they may be used
- To require any animal, place or item to be cleansed, disinfected or otherwise treated for the purpose of freeing them from a disease agent
- To require the decontamination of people, animals or items that wish to enter, or have recently left suspect or infected land or place (prior to or following confirmation or detection of disease)
- To control the keeping, transport or management of animals and items through a range of enforcement measures considered necessary to assist in the prevention, control or eradication of a disease agent
- To require identification of animals, items and places and to trace the movement of people, animals, items and vehicles
- To destroy animals showing no indication of infection and require the decontamination of places, people or items in order to provide a buffer zone for disease control
- To provide compensation for animals destroyed for the purpose of controlling or eradicating an exotic disease; for animals that have died from an exotic disease; and for any place or item that is ordered for destruction because it cannot reasonably be effectively disinfected
- To enlist the powers of other disaster legislation and agencies for the purposes of controlling an exotic animal disease outbreak
- To forcibly enter any land or place, independent of any permits or warrants, for the purposes of inspecting and taking samples of any item or animal to ascertain compliance with national animal health standards.

3.20

The review indicated some level of inconsistency between jurisdictional powers as well as the absence of full powers in some jurisdictions. Of particular concern is the variation in the ability to control the movement of people, animals and items on suspicion of disease presence. Given this, the Commonwealth in consultation with the states and territories agreed to the amendment of the *Quarantine Act 1908* to provide for the Commonwealth to authorise state and territory agencies to take necessary actions under the

Commonwealth quarantine power. This enhanced the legislative authority of the states and territories and can be used where their own legislation has gaps or is inadequate. It is important to note that these are not powers imposed upon the states and territories, and do not constitute transfer of control to the Commonwealth. They provide for transfer of powers to the states/territories under the protection of the Act.

3.21

To test the new provisions of the Quarantine Act and its application in an emergency response situation, a mini-simulation on legal issues was held on 31 May 2002 involving legal and disease control experts from most jurisdictions. The mini-simulation concluded that, in the case of a cross-jurisdictional event, invoking the Quarantine Act would be important in ensuring that jurisdictions have the same powers (eg. in the case of a national livestock standstill). However, there was some concern that there could be confusion among response personnel about which head of power they would be using.

Simulation Outcomes, Further Risk Treatments and Recommendations

3.22

During the simulation jurisdictions were required to put in place a national livestock standstill. Minutes of a CCEAD meeting reflect discussion on the variations of legislative provisions to undertake this activity, and the effect on the national response arrangements particularly in relation to the ability of states and territories to quickly impose a livestock standstill without a clear suspicion of presence of disease within their borders. There appears to have been no consideration given to invoking the Quarantine Act powers to overcome these concerns.

3.23

Different approaches by states and territories under their legislation caused significant delays in disease response during the simulation. There were reported tensions between New South Wales and Queensland in the implementation of cross-border restricted areas and in the identification of dangerous contact properties under respective legislation. Evaluator comments indicate concern that in reality the disease may have remained unchecked for 2-3 days due to incompatibility of legal powers across borders. It is noted that a number of jurisdictions have been developing inter-state agreements to clarify cross-border operational issues. In order to avoid critical delays in response activities, jurisdictions should develop agreements with their neighbouring jurisdictions covering the practical aspects of cross-border operations.

3.24

The importance of complementarity of related legislation between and within each state/territory (eg animal health and emergency management) was also highlighted in some jurisdictions. Subsequent to the simulation, PIMC agreed that state/territory governments reassess their legislation to ensure it would adequately cater for an FMD outbreak.

3.25

While no thought was given to invoking the Quarantine Act during the simulation, this may have been due to unfamiliarity with the Act and also concerns about its practical application. It is essential that jurisdictions regard the Quarantine Act as an integral part of their response armoury. Given this, there is a need for the development of a better understanding of the powers of the Act and the importance it would have in ensuring a nationally consistent and effective response. A further workshop involving a desktop simulation was held in April 2003 to assess jurisdictional legislative powers and the best potential use of the Quarantine Act. Further work is required.

Recommendation 4 – medium priority. In consultation with the states and territories, the Commonwealth continues to enhance state/territory familiarity with the scope and powers of the Quarantine Act 1908 and potential for use of the Act in an animal disease response.

Capacity and Capability of Resources

4.1

Australia has in place well tested emergency response procedures that have been successful in dealing with animal disease emergencies and a wide range of natural disasters. This chapter discusses issues relating to the full spectrum of resources that would be required in an FMD emergency – veterinary, scientific, diagnostic, emergency services, management, administrative, policy analysis, private sector, etc. The simulation reinforced the expectation that an outbreak of FMD would place a resource demand (human and materiel) on all jurisdictions (infected and affected) never before experienced. This pressure would be felt not only in those agencies responsible for disease response but also in those handling broader relief and recovery operations.

Key Points

- Outside of war, Australia has not experienced the scale of operations that would be required to combat an FMD outbreak.
- The duration of a response is directly related to the level of resources deployed in the initial stages.
- It is critical for jurisdictions to establish and maintain a capacity of skilled personnel within and beyond agricultural agencies that can immediately participate in an emergency response within or beyond their borders.
- There is an opportunity to better use resources drawn from emergency services, the private sector, specialists from overseas, private veterinarians, administrators from non-combat agencies, local industry and the local community.
- Ongoing training, including national and jurisdiction specific simulations, will generate a high level of preparedness and readiness in the event of a real FMD outbreak.

Definition

4.2

Capacity relates to the quantity of resources that can be applied and capability relates to the ability of resources to fulfil a need. Resources include the personnel and materiel that may be required in managing an outbreak of FMD and its consequences.

Risks

4.3

In the development of the simulation a risk associated with capacity and capability of resources was identified and treatments developed. These were tested during the simulation.

Capacity and Capability of Resources Risk

Australia lacks the capacity and capabilities to effectively respond to an outbreak of FMD and its consequences due to insufficient or inadequate human or physical resources.

Rating

4.4

Resources, human and physical, are fundamental elements in an animal disease response operation. For FMD, it is almost certain that Australia's agricultural agencies would not have sufficient resources by themselves to rapidly initiate a large-scale response and to maintain this for any length of time. If contingency arrangements were not in place, the consequence of this would have a major impact on Australia's ability to respond resulting in a risk rating of extreme.

Risk Treatment (pre-simulation)

4.5

Australia has a large number of resources available to combat an outbreak of FMD. They are drawn from agricultural agencies (veterinary, scientific, broader animal health and administration personnel), emergency services agencies (police, fire, SES volunteers, etc) and industry (livestock handlers, enterprise managers, etc). However, the spread and duration of a response will be substantially extended and the consequences intensified if large numbers of resources are not deployed rapidly. In recognition of the importance of resource numbers, PIMC and COAG initiated a review of capacity and capability in all jurisdictions.

4.6

For many years it has been recognised that the most critical resources needed by Australia for making a rapid and effective response are trained professionals and well-equipped personnel. The Exotic Animal Disease Preparedness Consultative Council (EXANDIS) was established in 1990 to enhance Australia's preparedness. The program included a wide range of training, awareness and preparedness activities over a five-year period ending in December 1995. Following the completion of the EXANDIS program, there was no national preparedness activity, although some jurisdictions conducted their own training, until the establishment of the Animal Health Australia (AHA) Emergency Animal Disease Preparedness Program in 1997. In 1999, national emergency animal disease preparedness competency standards were developed for AUSVETPLAN positions and a training coordinator was appointed to implement them. To date, competency based training has focused primarily at the control centre manager, infected premises site supervisor and field surveillance veterinarian levels.

4.7

To complement the AHA competency based training, jurisdictions have undertaken a high level of training both across and outside the AUSVETPLAN positions. New South Wales for example has recognised that during an FMD response, a significant component of the

workforce will be engaged at the time either through contract arrangements or an employment agency. To address this, the New South Wales' training plan includes the provision to recruit and provide on the job training to personnel during an operation, prior to deployment into specific roles. In AFFA a five-year rolling training program has been established for AFFA personnel who may be deployed in AFFAEMPLAN positions.

4.8

Larger jurisdictions have the capacity to maintain teams of people skilled in the essential facets of LDCC and SDCHQ management and operations. However, smaller jurisdictions are less able to guarantee availability of enough highly trained people to staff all key facets of an LDCC or SDCHQ. All jurisdictions (and industry) have a shared interest in ensuring that a disease is brought under control as quickly as possible, wherever the location of the outbreak. With this in mind, the Commonwealth, in consultation with states and territories, has initiated the development of a "rapid response team" concept. The objective is to provide rapid assistance to smaller jurisdictions in the initial establishment of LDCCs.

4.9

The rapid response team would comprise highly competent personnel drawn from across the country. The team would have the capacity to be deployed within 24 hours of notification. The team would be called in by the smaller jurisdiction's Chief Veterinary Officer (CVO) and would be responsible to the CVO, through the director of the SDCHQ, of the recipient jurisdiction for the duration of their stay. Once the LDCC is operational and local or inter-jurisdictional disease control staff are able to take over, the rapid response team would stand down. This concept is still under development at the time of writing. Another option for smaller jurisdictions is to cover resourcing matters in their MOU's with neighbouring states/territories.

4.10

For many years Australia has been party to an International Veterinary Agreement with the United Kingdom, Ireland, Canada, Australia, and New Zealand to share veterinary resources in the event of a major animal disease incident. During the United Kingdom's outbreak of FMD in 2001, around 160 Australian veterinarians, animal health and emergency service personnel volunteered to help in the response. Lessons from this included:

- the conditions for the deployment of overseas personnel were not fully documented and would benefit from clarification;
- recognition that in addition to veterinary services, other animal health and emergency service personnel are critical resources and should be covered by the agreement
- the integration of overseas personnel into the emergency response workforce was a significant management task.

4.11

Australia has been participating in the development of an extended agreement that sets out terms and conditions for the sharing of all specialist resources. This is yet to be finalised. However, recognising the large management task associated with the integration of overseas personnel into an Australian response team, AFFA has developed a job card under AFFAEMPLAN to manage this responsibility.

Simulation Outcomes, Further Risk Treatments and Recommendations

Capacity: Personnel and Materiel

4.12

The simulation confirmed previous expectations that extensive resources, both human and materiel, would be required to respond effectively to an outbreak of FMD. The scale of operations required would be of a magnitude that has not previously been experienced by Australia. The planning and logistical management that would be required is also of a level that Australia has not previously encountered.

4.13

The nature of the simulation required extensive pre-planning for the selection and deployment of response personnel. However, it is recognised that in a real event, no such warning would be available and the capability to quickly identify and deploy large numbers of personnel remains untested. The direct correlation between initial response measures and the duration of the response requires that this mobilisation issue be cooperatively addressed by jurisdictions as a matter of urgency.

4.14

Government human resources that are fundamental to the national disease response include:

- animal health personnel
- specialist epidemiologists and virologists
- emergency managers
- slaughtermen
- communication personnel
- strong management
- human resource managers
- laboratory personnel
- livestock inspectors
- veterinary personnel
- police and emergency services personnel (including volunteers)
- administrators

- planners (strategic and tactical)
- policy analysts
- local government.

4.15

Given the nature of the simulation, it was not possible to fully test the national resource capacity. However, while more than 1000 personnel were deployed nation wide to respond to the simulated outbreak, this did not include any field operatives. The tasks given to locations during the simulation were only a sample of those that could be expected in a real emergency. Most jurisdictions reported they had difficulty in responding to these tasks within the constraints of their available resources. Substantially more resources would need to be deployed to effectively respond to an outbreak of FMD.

4.16

Additionally, most jurisdictions indicated that they would have insufficient resources to sustain a response of the duration and scale of that simulated. Prior to the simulation, larger jurisdictions indicated they would only be able to staff one to two LDCCs for a short period, while others would require immediate assistance to implement a field response. Many of the positions required to staff LDCCs and SDCHQs require technical competency and it is these positions that are likely to limit the response. Beyond the technical and scientific aspects of a response, there is a range of other specialist positions without whom the field operations and SDCHQs would not function effectively including communications personnel, information technology specialists, registry staff, financial, human resource and purchasing personnel.

4.17

It is therefore critical that jurisdictions establish and maintain a level of technical capacity that is ready to participate in emergency responses, whether within or beyond their borders.

4.18

The simulation demonstrated that for an outbreak of FMD, national agricultural and emergency service response personnel need to be augmented by personnel from the private sector, specialists from overseas, private veterinarians and administrators from other non-combat agencies. At this time there is no clear understanding of the quantity and availability of these resources. Equally, no standards have been set for jurisdictions in terms of numbers, training and experience. To overcome this and to ensure that resource capacity and capability is maintained, the ongoing oversight and management of the national integration of all resources needs to be allocated to an appropriate group such as Animal Health Australia. This group would be responsible for:

- developing national performance standards that establish targets for each jurisdiction including the Commonwealth and
- ensuring that individual agencies and jurisdictions have mechanisms in place to identify available resources.

4.19

Given that a multi-focal outbreak of FMD would require more than resources available in any one jurisdiction, all resources must be considered part of a national pool from which personnel and materiel will be deployed on the basis of nationally agreed priorities. This pool of national resources would have to be augmented by overseas and private personnel. If non-infected jurisdictions were to hold back resources, for surveillance activities for example, there would be a danger that the disease situation could be worsened leading to eventual infection of non-infected jurisdictions. As a result economic and recovery impacts would also be exacerbated. Consideration needs to be given to how the national resources pool might work (see recommendation 9).

4.20

With only limited numbers of emergency response personnel within agricultural agencies, the simulation demonstrated the efficiencies that can be gained from utilising the skills and expertise of emergency services personnel. During the simulation the technical and emergency management personnel worked together, allowing each profession to work within their area of expertise. This delineation of responsibility permitted limited resources (such as veterinary personnel) to be deployed in a more efficient manner. This should be incorporated into AUSVETPLAN and related documentation.

4.21

The simulation demonstrated the depth of human resource capacity that exists within AAHL, which was able to quickly respond to the laboratory needs of the simulation. Links between AAHL and state and territory laboratories were used to develop capacity plans for dealing with changing testing requirements. However, it was identified that priority criteria need to be developed for laboratory reagents, equipment and human resource allocation. It was also noted that there is no policy on the respective roles of AAHL and the state and territory laboratories during an emergency response for screening, zoning and freedom verification. A simulation evaluator suggested that the Sub-Committee on Animal Health Laboratory Standards (SCAHLs) is well placed to assist with the clarification of these roles. There remains, however, a level of development work to be completed before AAHL's automated diagnostic systems are fully operational. Once this has occurred, AAHL's ability to control and process the volume of samples would be greatly enhanced. Additionally, AAHL will need to work with state and territory laboratories to better develop the national sample tracking and related information systems. There would be benefit in testing these new arrangements and technologies in a simulated environment in 2003.

Recommendation 5 – high priority. All government emergency animal disease management agencies

- **ensure they have an adequate level of trained emergency response personnel, including specialised scientific staff, to be able to participate in a sustained emergency response**
- **endorse the importance of development and implementation of national performance standards**
- **develop, through SCAHLs, a policy on the respective roles of AAHL and state/territory laboratories during an emergency.**

4.22

To facilitate the deployment of international animal health specialists to supplement the national pool of personnel, Australia is participating in the development of an international agreement that sets out terms and conditions for the sharing of specialist resources. At the time of the simulation the agreement had not been finalised and only its generalities were tested. Managers and other professionals may also be required from overseas to assist in a major FMD emergency. It was clear that the logistical arrangements for integrating this potential pool of international resources would be a substantial task in its own right and would require appropriate systems and people to manage it effectively. The private sector may be best equipped to manage this task to ensure that government personnel are focused on core government business.

4.23

AFFA employs about 200 veterinarians Australia-wide to supervise AQIS operations on export registered abattoirs and associated enterprises. Given all cloven-hoofed livestock and livestock products are susceptible to carrying FMD, all export markets would probably close immediately on notification of an outbreak of FMD. Therefore, this group of personnel could provide a further pool of available skilled resources. Additionally, there are approximately 50 veterinary personnel employed within AFFA who, in the case of FMD, would be deployed to undertake NDCHQ activities.

4.24

A practical limitation for the use of overseas and Commonwealth veterinarians identified during the simulation was that registration of qualifications would need to occur prior to their deployment in response activities where formal qualifications are required under legislation. It can be anticipated all overseas veterinarians and a substantial number of Commonwealth (AQIS) on-plant veterinarians will not have been registered with respective Australian jurisdictions. The deployment of these staff to positions that require veterinary skills but not veterinary qualifications may overcome this difficulty. States and territories should examine opportunities to use these personnel and adjust contingency plans accordingly.

Recommendation 6 – high priority. The international animal health agreement and associated administrative arrangements be completed urgently to enable rapid and efficient deployment of personnel from overseas to assist in the management of a major national disease emergency.

Capacity: Private Sector Assistance

4.25

The identified gap in available national resources could be augmented by better utilisation of industry, local government and community personnel and materiel as well as a greater willingness to engage the commercial sector to handle non-core government business. While there was limited scope to explore these options during the simulation it was noted that at least two jurisdictions considered calling upon the military for support. Under current COMDISPLAN arrangements, the use of Commonwealth resources, particularly the military, is only to be pursued by states and territories after all commercial options have been exhausted. The private sector has a high degree of capacity in a number of services that would be required in a large-scale emergency response including:

- transport
- logistics
- travel management
- personnel recruitment and placement.

4.26

There may be a need for jurisdictions to plan for the use of commercial suppliers in disease responses and to have in place standing arrangements and contractual agreements as necessary. Some states/territories already have such arrangements.

4.27

Affected industries also provide a pool of as yet untapped resources. During an outbreak of FMD, many industry members (managers and employees of intensive livestock enterprises, abattoirs, dairies, etc.) may have spare capacity due to a downturn in their core business. Many of these enterprises operate under quality assurance or similar arrangements and personnel would be well suited to ensuring AUSVETPLAN operations are completed to the required standard. In advance of a real emergency, jurisdictions should work with industry to identify opportunities that would suit the skills of industry personnel. Where suitable personnel are available, they could participate in more routine emergency responses as already occurs in some jurisdictions.

4.28

Similarly, given their knowledge of the local environment, members of the local community could play a critical role in assisting the LDCC in the implementation of response activities, such as, community liaison, movement restrictions, etc. As the scope of these resources is extensive, individual training would not be practical. However, jurisdictions could develop induction packages for the rapid employment and deployment of members of the local community.

Recommendation 7 – medium priority. In recognition that there is a significant skills base in affected industries, the private sector and communities, response agencies develop proposals for the engagement and training of such personnel to assist in the management of animal disease emergencies.

Capability

4.29

The lead-up to the simulation provided an opportunity for response personnel (disease control, emergency services and policy/administrative) to update plans, undertake training and participate in mini-simulations. The simulation itself provided a valuable training tool for all those involved and led to a heightened awareness of the challenges people would have to manage in a real situation. These activities have placed Australia in the best position ever to respond effectively to an FMD outbreak. Without an ongoing commitment to a program of continued review of plans, training and exercising, this heightened level of capability will quickly dissipate. Further exercises should be part of an ongoing training program. PIMC has endorsed the development of a five-year rolling plan for further exercises involving three to four small simulations each year to test parts of systems with a major simulation to be held every three to four years.

4.30

Exercise Minotaur clearly demonstrated the benefits of utilising multi-disciplinary teams (veterinary, scientific, policy, communications, administrative and emergency services) to deliver critical outcomes. Building on this, training and exercising should be designed to facilitate and continue this interaction to enhance Australia's resource capability. Unfortunately current arrangements do not adequately allow for this level of interaction focussing primarily on national competency assessment and training for veterinary emergency response positions.

4.31

Working with all jurisdictions, Emergency Management Australia (EMA) is well positioned to develop and deliver a national multi-disciplinary training program. EMA conducts a program of activities directed at developing particular knowledge, skills and attitudes in individuals and groups who contribute to the nation's emergency management arrangements. It also develops competencies in emergency risk management and stimulates action to improve specific aspects of the national emergency management capability. Given this level of expertise, it is suggested that consideration be given to:

- further development of EMA programs to include training in the management of animal, plant and human health threats drawing upon existing emergency services programs
- incorporation of emergency management philosophy and practices into training programs currently focussed on technical disease matters
- the various and separate agricultural emergency response training activities funded by governments and industry being redirected and consolidated to have people trained at EMA
- governments and AHA refining and broadening national competency standards against which personnel could be assessed and trained resulting in national accreditation for agricultural emergency responses.

4.32

Some states/territories already deliver accredited emergency management training. To encourage consistency across jurisdictions it might be feasible for these programs to continue 'in situ' but be based on national course content and coordinated through EMA.

4.33

The value of a national multi-disciplinary training program derives from:

- the rationalisation of resource use
- harmonising emergency management with specialist disease control training
- having people from separate jurisdictions and disciplines interacting
- establishing national collegiate networks.

Recommendation 8 – high priority. Training programs be coordinated nationally by EMA to ensure the maximum benefit is obtained and that training courses include a mix of cross jurisdictional personnel to facilitate better collegiate behaviour and understanding of roles and responsibilities.

Logistical Arrangements

5.1

The response to a large-scale animal health emergency requires the deployment of a substantial number of personnel and physical resources. In Australia, each jurisdiction has responsibility for the identification, employment and management of these resources. For a multi-jurisdictional, multi-focal disease outbreak, it is anticipated that state and territory resources would have to be augmented by overseas, Commonwealth and private sector personnel and/or equipment. The timely integration of national and international resources would be a critical success factor for any response.

Key Points

- Australia has never experienced an emergency animal disease of the scale of the 2001 United Kingdom FMD outbreak and this poses major implications for integrating government, private and international resources.
- There are significant benefits from utilising existing emergency services such as the SES and police to assist in emergency animal health operations.
- All jurisdictions would need external assistance in a national emergency within a short period of time.
- A national mechanism is required to identify and integrate resource needs, available skilled staff, and priorities as well as their deployment.

Definition

5.2

Logistics is the acquisition and deployment of resources, facilities and related coordination mechanisms.

Risks

5.3

In the development of the simulation a number of risks associated with logistical arrangements were identified and treatments developed. These were tested during the simulation.

Logistics Risk 1:

Human resources and materiel cannot be deployed efficiently due to a lack of national coordination/prioritisation capability.

Rating

5.4

A large-scale outbreak of FMD would require the deployment, over a long period, of a significant number of resources (human and materiel). Prior to the simulation, it would have been almost certain that these could not have been efficiently and effectively managed. The consequence of this would have been major, causing a severe impact on Australia's ability to respond, resulting in a risk rating of extreme.

Risk Treatment (pre-simulation)

5.5

During the United Kingdom FMD outbreak in 2001, a contingent of Australian veterinary and animal health personnel was deployed to assist in the response. A constant theme identified by returning personnel was that the task of integrating government, private and international resources was of a scale not previously managed by Australia. Prior to the simulation this issue was not fully addressed.

Simulation Outcomes, Further Risk Treatments and Recommendations

5.6

The simulation demonstrated the importance of effective management of logistics. Historically, however, Australia has not experienced a large-scale animal health emergency that has required the long-range identification and scheduled deployment of large numbers of personnel. Similarly, there has not been a multi-jurisdictional outbreak, other than the January 2003 bushfires, that has resulted in competition for resources (human or materiel). This type of long-range planning and prioritisation is a core function carried out in state emergency service groups to respond to natural emergencies such as bush fires and floods. The simulation demonstrated the benefits of integrating emergency service personnel with animal health emergency response specialists. It highlighted the expertise and capacity of emergency services to assist in resource planning activities and their ability to transfer systems and procedures to the emergency animal health operations. A clear message was that the disease response would only be successful if the right numbers of people, with the right skills, are deployed at the right time in the right place.

5.7

Each jurisdiction during the simulation confirmed that they had limited resources available to respond to the "outbreak" and that within a short timeframe even the larger jurisdictions would be seeking external assistance. This assistance would need to include

technical and administrative personnel and materiel such as chemicals, vehicles etc. Historically where small numbers of additional resources were required, CCEAD was the forum through which resource needs were managed. In a large-scale outbreak, CCEAD and the NMG would not be able to focus on this level of detail and would only set broad parameters for resource requirements. The scale of allocation of those resources would necessitate the use of a national resource management system that integrates the demand with availability. However, there would be instances where resource needs would outweigh availability requiring a balancing between relative priorities. While there may be systems within some jurisdictions, there is currently no national mechanism to:

- identify resource needs (short or long-term)
- identify available skilled personnel and other resources
- prioritise their allocation
- schedule and deploy resources.

5.8

It is suggested that while the states and territories would maintain their management responsibilities for the integration of resources within their borders, information should be provided by all jurisdictions to obtain a nationally coordinated picture of resource requirements and associated prioritisation. This would integrate international, government and industry resources. A multi-jurisdictional resource team, including expertise from emergency services, within the NDCHQ would be needed to coordinate resources management.

5.9

Resource planning cannot be handled in isolation from disease developments. Each element is reliant on information from the other. Given this, there is a need to ensure that all information systems are accessible, compatible and seamless. In developing a new national information system (refer recommendation 16), specifications will need to take account of this requirement.

Recommendation 9 – high priority. A system to facilitate the national coordination and prioritisation of resources be developed.

Logistics Risk 2:

Disease response operations are delayed or disorganised due to inadequate facilities (physical, information technology and telecommunications).

Rating

5.10

Given the potential scale of an FMD response and the associated resource needs, it is considered possible that facilities may prove inadequate. Not having appropriate infrastructure in place and operational, would have a major impact on operations and at least a moderate overall consequence. This results in a risk rating of high.

Risk Treatment (pre-simulation)

5.11

In preparation for the simulation, most jurisdictions examined and enhanced their plans for the establishment of disease control centres and headquarters. This greatly improved the adequacy of these facilities and the time needed to activate them.

Simulation Outcomes, Further Risk Treatments and Recommendations

5.12

During the simulation all states and territories activated their SDCHQs, Queensland and New South Wales activated a joint LDCC and Victoria activated an LDCC. The extent of LDCC activation was limited to that necessary to conduct the simulation. At the national level, AFFA activated the NDCHQ. The establishment of LDCCs and SDCHQs are part of core business for states and territories.

5.13

Notwithstanding that significant improvements were made to control centres, and there was strong evidence of improvement to operational and coordination arrangements, most jurisdictions reported that the facilities allocated for disease control centres would benefit from improvement. For example, the NDCHQ worked well but needs to be expanded in capacity to accommodate a larger communications team, liaison officers from the states/territories, other Commonwealth agencies, as well as industry leaders and their representatives. Given the length of time that an FMD outbreak response may take and the dynamic environment that is likely to be encountered, it is essential to ensure that all aspects of facilities including workspace (incorporating meeting rooms and staff amenities), communications, information technology, security, and location are adequate. All jurisdictions should have in place adequate plans for activation of these facilities that build in options for rapid deployment and expansion.

Recommendation 10 – medium priority. Jurisdictions review control centre facilities and implement the necessary upgrades in activation procedures and capacity identified in the simulation.

Communications

6.1

Prior to the simulation, there was a high level of awareness that communications, including relations with the media, would be critical to the success of any emergency response. In particular, lessons from the United Kingdom outbreak in 2001 demonstrated that:

- the response is likely to be judged by the communications capability rather than what is done
- the media needs to be rapidly and professionally engaged
- accurate information must be provided and the potential consequences of the worst case scenario not hidden
- there needs to be nominated authoritative, knowledgeable figures who engage the media within agreed limits
- the community needs to know and to be treated maturely.

6.2

In this context, it is critical that the communications aspect of an emergency response be strategic in its nature and not an afterthought, and be as integral to the first response as the veterinary focus. It needs to be recognised that communications has a vital role in informing stakeholders, maintaining the credibility of the veterinary and socio-economic response, and promoting behaviour that will help mitigate the impact of an outbreak.

6.3

The primary communications focus of *Exercise Minotaur* was on national, cross-jurisdictional and within jurisdiction communications. It did not extend to any significant degree to regional or local levels.

Key Points

- Communications is a critical, strategic function as integral to an emergency response as the veterinary focus.
- There is a substantial risk that if the communications function is not adequately resourced, the timely dissemination of information will not occur and there will be a substantial increase in the exposure of governments, Ministers and Australia's livestock industries to public criticism.
- Given the potential influence of the international media during an FMD outbreak on overseas consumer confidence, communications at all levels of the response (local, state and national) need to be cognisant of the longer-term impacts of public statements.
- The development of a national information management system is a high priority to standardise and simplify the collection and reporting of disease information as well as to address significant problems encountered when relying solely on email and facsimile technology.

Definition

6.4

Communications has a different meaning to different people. In the context of the simulation, communications means:

- public relations – creating a shared understanding between government organisations and the public including educating the public as to preferred behaviour during a crisis such as enhancing biosecurity arrangements
- system communications – ensuring people in organisations involved in the emergency response understand plans, decisions, resource allocation, implementation, leadership and control. This is reflected in instructions, systems, procedures, feedback and advice
- knowledge management – sharing common knowledge and ensuring that everyone is involved in the timely exchange, as well as the creation, of knowledge.

Risks

6.5

In the development of the exercise a number of communication risks were identified and treatments developed. These were tested during the simulation.

Communications Risk 1:

Lack of public confidence in the government-industry response due to conflicting public announcements, inaccuracy of information and delays in providing information.

Rating

6.6

Prior to the development of the simulation it was recognised that, due to the complexities of Australia's federal system of government, it was likely public relations failure could occur resulting in a major impact on the ability to respond. In risk management terms, this resulted in a risk rating of extreme.

Risk Treatment (pre-simulation)

6.7

To treat this risk a number of measures were put in place prior to the simulation.

6.8

Given the risk of communication breakdown, protocols were developed for the operation of the national FMD coordination framework outlining the significance of communication and its important contribution to decision-making. A standing agenda item on public communication was included for each of the decision-making groups.

6.9

A national communications network was established amongst jurisdictions and industry. Membership included communications managers from Commonwealth, state and territory agricultural departments as well as representatives from peak livestock industry bodies through AHA. Jurisdictional communication networks were also established where these were not already in place. For example, at the Federal Government level, agencies represented in the Commonwealth FMD Coordination Group nominated a key communications manager to facilitate the timely sharing of information. This whole-of-government arrangement was replicated at the state and territory level. During the simulation, these networks were responsible for the creation of public information that was consistent across the country. The networks produced consistent talking points and shared the timing and content of press releases. The communications unit at the NDCHQ acted as the coordinating hub for the national network.

6.10

Prior to the simulation there was potential for individual agency web sites on specific disease responses to contain conflicting information. To prevent this, the communications network was given responsibility for ensuring that agency web sites would be consistent and complementary, recognising the relative roles and responsibilities of the various agencies involved. These nationally linked web sites should provide ready access to the most current information for stakeholders and the community about broad ranging FMD response activities and other relevant information. Increasingly web sites are coming into their own in providing up to date information on which overseas trading partners make critical decisions impacting on Australia's ability to export.

6.11

Critical to any crisis communication is access to relevant and timely information by the community. Individuals will have personal concerns during a crisis and will wish to access advice that is relevant to their situation. The use of call centres provides an avenue for the provision of this tailored information. Most states and territories have in place call centre arrangements covering agricultural response and relief and recovery issues. The Commonwealth would respond to international and trade issues as well as providing information on any national assistance measures. Prior to the simulation, it was recognised that the scale of an FMD outbreak would require national coordination of all call centre operations through the establishment of a national call centre managed by Centrelink. The national call centre would provide the central contact and initial filtering to existing Commonwealth, state/territory and industry telephone information services.

6.12

A further mechanism for informing the public would be television, newspapers and radio coverage. At a time of crisis it would be critical to purchase adequate space in the commercial media for important messages. Prior to the simulation agreement was reached with PM&C to initiate standing arrangements for matters of public importance to ensure all Commonwealth advertising space on television, radio and print mediums would be immediately available for the provision of public announcements during an agricultural

emergency situation such as FMD. This is complemented by community service announcements to be aired on radio and television. States and territories have in place, or are examining, similar arrangements.

6.13

It is recognised that the media play a critical role in the communication of information to the public during an emergency. If the government does not provide adequate and timely information there is a risk the media will seek to fill the information gap from their own sources. This could provide disjointed coverage to the public. To minimise the chance of this occurring, and to meet the media demand for information, states and territories have established media liaison systems which would provide details of local disease response measures. At the national level, a national animal disease media centre has been established to provide daily briefings on diseases response and relief and recovery measures to the media by appropriate national spokespeople. The focus of *Exercise Minotaur* was on national communications, mostly through the media. In a real event media relations at local and regional level would be equally important, but this was not tested as part of the simulation.

Simulation Outcomes, Further Risk Treatments and Recommendations

Status of Communication in National Emergency Responses

6.14

The simulation was developed to ensure key communication issues would arise and be addressed. This occurred through numerous messages covering a wide range of domestic and international issues. All decision-making committees had a communications agenda item included in their modus operandi so that issues such as media focus and public concerns would be addressed and formal consideration given to a communications strategy. It was anticipated that this would result in all participants accepting "communications" as a major priority throughout the simulation. However, it was widely reported by communications staff that significant delays were experienced in the clearance of material for public dissemination such as talking points, press releases, web based material and scripts for call centres. The United Kingdom experience clearly indicates the importance of effective public relations in ensuring continued public confidence in the disease response.

6.15

Response personnel at all levels need to understand the importance of public relations in disease responses. Therefore, the communications sections of AUSVETPLAN and the MOU (and jurisdictional plans) need to be enhanced and public relations adequately integrated within national disease response and emergency management competencies. These changes should identify specific technical staff whose responsibilities would include the clearance of communications material.

6.16

Additionally, communications needs to be planned in a strategic manner using the "prevention, preparedness, response and recovery" continuum. While an "all hazards" approach should be used in this planning, the strategy for communications in an outbreak of FMD needs to take account of the broader impacts and stakeholder groups likely to be involved. Planning a communications strategy for such a large-scale outbreak clearly requires the commitment of significant resources by all jurisdictions (agricultural and non-agricultural agencies) and industry.

National Communications Network

6.17

During the simulation, national and jurisdictional communications networks were tested. Each day simulated media articles (occasionally misleading) were circulated to disease control and whole-of-government centres requiring a nationally coordinated communications response. Additionally, 'infected' states received "notices" from community groups that required advice on response actions and the impact on the community both in terms of environmental and social issues.

6.18

In response to the unfolding scenario, public relations teams across jurisdictions generated talking points, press releases, conducted press conferences, prepared radio grabs, developed and updated web sites, simulated the activation of call centres, simulated the obtaining of news footage (television and print) and identified and briefed media spokespeople. These activities were coordinated nationally through the national communications network ensuring consistency of information and timing of release.

6.19

The new arrangements proved to be highly successful in reducing the risks associated with public confidence. During the simulation all the public messages developed were consistent and there was a high level of cooperation between jurisdictions and agencies throughout the network. The simulation confirmed the importance and strength of an effective inter-jurisdictional communications network.

6.20

The success of the new national network was largely due to the currency of the arrangement at the time of the simulation. However, over time there will be a degree of change in personnel and organisational arrangements and unless measures are taken to ensure the continued currency of the arrangement, the risk of failure in this area is heightened. The processes and procedures for the network have not been fully documented and incorporated in appropriate national (MOU and AUSVETPLAN) and jurisdictional plans. Also, to maintain readiness, these arrangements need to be used on a regular basis in more routine animal health emergency responses.

National Communications Spokespersons

6.21

Schedule 4 of the MOU requires all Parties to the agreement to identify spokespeople and to restrict public comment to only these people. For example, the MOU recognises a public communications role for the Prime Minister, Premiers, agriculture Ministers, relief and recovery Ministers and CVOs resulting in some 40 people being able to comment publicly during an outbreak. Industry leaders would also be expected to make public comment. The simulation did not test the possible impact on public confidence of these 40 people commenting and the potential impact of significant differences in opinion being played out publicly through the media.

6.22

This issue requires further refinement and testing. The media can be expected to seek views from all these people and others. Consideration needs to be given to narrowing the field of nominees if at all possible as well as the means of ensuring uniformity of messages and inclusion of appropriate guidelines in the communication strategy.

Inter-jurisdictional and Interagency Communications

6.23

Inter-jurisdictional communication was tested during the simulation through the injection of messages requiring transmission to, or action in, other jurisdictions. This communication took the form of interaction within national committees and direct liaison between response locations.

6.24

There were instances during the simulation where the provision of information was delayed or not shared between SDCHQs until CCEAD had met. For example, jurisdictions neighbouring newly infected states were not aware of the spread of the disease until the matter had been raised in CCEAD. This delayed the opportunity for those jurisdictions to upgrade their surveillance and other response activities. While the normal approach of using CCEAD as the main conduit of information in more routine emergencies works effectively at that level, in a situation as fast moving as FMD there would be a need for SDCHQs to communicate quickly and directly. The use of a coordinated and shared national information system would assist in the rapid transmission of relevant disease control data (refer recommendation 16).

Scale of Operations

6.25

During the simulation, jurisdictions were required to activate their communications arrangement including the deployment of public relations personnel. Industry participated in this process. A consistent finding was that all jurisdictions significantly underestimated

the level of resources required. Some reported that the additional resources required would have to be increased by a factor of four. At the national level, a team of some 50 personnel (instead of the 10 deployed during the simulation) would be needed.

6.26

Therefore, consideration needs to be given to amalgamating communication effort by co-locating resources at the NDCHQ in an emergency outbreak to facilitate a truly national response. This would mean drawing some communication resources from the states, territories and industry to join with Commonwealth communication staff resources for a united effort from the one location. However, there would also be a need for sufficient communication staff to remain in affected jurisdictions to deal with regional and local media enquires.

Recommendation 11 – high priority. As appropriate, the MOU, AUSVETPLAN and jurisdictional emergency plans be upgraded to ensure:

- **the critical role of communications is fully recognised and adequately resourced taking account of new technologies and the need for network systems that convey information accurately and rapidly**
- **technical disease and emergency management information are integrated and incorporated in response arrangements, including the competencies of senior disease response personnel**
- **the newly created national communications network roles, responsibilities, processes and procedures are documented**
- **the potential number of national communication spokespersons is minimised.**

Recommendation 12 – medium priority. To ensure continued currency of arrangements, the national communications network be used as an integral part of more routine animal health emergency responses.

Nationally Linked Web Sites

6.27

During the simulation some jurisdictions actively developed web sites specifically for *Exercise Minotaur*. These web sites were a valuable tool for providing the public, media and overseas stakeholders with up to date, wide-ranging information on the simulation. Tasmania, for example, fully activated its web site for two days (which was updated twice daily) to reflect rapidly changing circumstances. Tasmania initiated a process for checking the accuracy of updates and removal of redundant information. Indications were that the process worked well. The Commonwealth had in place a dedicated team of two people who continually reworked web information to reflect decisions being made at high level groups and disease response activities at the state and territory level. However, some jurisdictions did not create web sites for the simulation due to resource restrictions. New South Wales has suggested that resource utilisation would be more effective through the establishment of a single national web site and has initiated further discussions with web masters in jurisdictions to examine the practicalities of this proposal.

6.28

Links were established between pre-existing national, state and territory web sites although this was initially slow to be set up. To ensure the process of linking information on websites readily occurs, it should be incorporated into day-to-day animal disease emergency response communication plans.

National Coordination of Call Centre Operations

6.29

A positive outcome of the simulation was the rapid activation of call centre operations by most jurisdictions. At the Commonwealth level, this included the development of scripts and the assessment of technological capacity. Issues identified include:

- the need for trained operators (both in terms of telephone technique and current issue specific knowledge)
- the ability to rapidly expand call centre operations
- the provision of up to date information
- linkages to industry call centres
- the need to clarify national, Commonwealth, state and territory responsibilities regarding call centre arrangements including the frequent updating of scripts
- the need for agreed processes for re-directing calls between call centres.

6.30

During the simulation Centrelink undertook an analysis of the capacity of its call centre operations and its impact on day-to-day business. It was found that the operation of a national FMD call centre would substantially disrupt Centrelink's normal call centre services (employment benefits, family assistance, etc.). Centrelink is in the best position to lead, in cooperation with states, territories and industry, an examination of the options to establish a fully coordinated national call centre service for an outbreak of FMD or similar agricultural emergency.

6.31

Call centre scripts, including those of any regional or local call centres, need to be nationally coordinated to ensure consistency. Without these actions being undertaken public confidence would be significantly undermined. This risk could be mitigated through the agreement and documentation of protocols governing this aspect of the communications response (refer to Recommendation 11).

National Animal Disease Media Centre

6.32

Many jurisdictions activated their media liaison arrangements at SDCHQ and whole-of-government levels simulating information that would be provided to the media. At the national level, the national animal disease media centre in Canberra was fully activated and

tested for the first time. Simulated press conferences were undertaken during which a number of different presentation formats were trialled. For the purpose of the simulation, three journalists and a television crew were contracted to act as the media. This proved to be a valuable media management training tool for those likely to give press conferences.

6.33

The contracted journalists reported that in a real FMD event the national animal disease media centre would go a long way to meeting media information needs and therefore would reduce the risk of damage to public confidence. Further work needs to be done to ensure that:

- the most appropriate national spokespeople (training, knowledge and status) are identified
- media briefings and content are coordinated with the states, territories and industry.

Recommendation 13 – high priority. AFFA, in consultation with other Commonwealth agencies, states, territories and industry, refine national communication arrangements including staffing resources.

Opinion Leaders

6.34

Regardless of the information provided by government, the media will actively seek an independent view on the effectiveness of disease response activities from key opinion leaders including interest groups, academics, local communities, etc. During the exercise, this aspect was tested through simulated media reports critical of the response. The communications network recognised that its efforts could be severely undermined and public confidence damaged by any different views from opinion leaders. It was concluded that identified key opinion leaders should be kept fully informed of developments, priorities and other critical issues.

Recommendation 14 – medium priority. Key opinion leaders be identified and a mechanism be developed to ensure they are kept fully informed prior to and during animal disease emergencies.

Communications Risk 2

Exports are adversely affected due to a lack of confidence in Australia's response because of ineffective communications with the international media and trading partners.

Rating

6.35

Prior to the development of the simulation it was recognised that market closure could be prolonged by poor communications with international media and trading partners. While it is anticipated that poor communications are unlikely, if they were to occur there would be major consequences. This would result in a risk rating of high.

Risk Treatment (pre-simulation)

6.36

To treat this risk a number of measures were put in place. At government level responsibility for export-related measures primarily rests with the Commonwealth on behalf of the whole of Australia.

6.37

AFFA, DFAT and Austrade have the major responsibility for minimising the impact of emergency animal diseases on Australia's international market access. AFFA has responsibility for notifying OIE and trading partners of disease situations through AUSVETPLAN and its own response plans. Prior to the simulation, DFAT and Austrade developed FMD-specific emergency response plans which included arrangements to alert Australia's overseas posts and complemented AFFA's response plans. Continued communication with overseas posts is critical to minimising adverse overseas market reactions. A mechanism was established with DFAT and Austrade to provide talking points for overseas posts on current or developing exotic disease outbreaks. This included alerting overseas posts to monitor local coverage about Australian exotic disease outbreaks, and to respond immediately to misreporting without the need to refer back to Canberra for advice.

6.38

It is also recognised that adverse reports by overseas media may influence the consumption of Australia's product in export markets and this will in turn impact on official positions on market access. In response to this issue, relations were established between AFFA and DFAT's International Media Centre in Sydney to brief overseas media based in Australia.

6.39

In addition to the formal government contact, industry linkages with export markets through Meat and Livestock Australia's (MLA) overseas liaison offices are well established. Access to these offices is facilitated through the national communications network via AHA, which has responsibility for coordinating industry communications.

Simulation Outcomes, Further Risk Treatments and Recommendations

Overseas Posts

6.40

During *Exercise Minotaur*, facilitators and observers assessed the effectiveness and pro-activeness of simulated communications with overseas posts through cable traffic and responses to inaccurate overseas press reports. Such communications were conducted pro-actively and in a timely manner. Reporting to OIE was timely and accurate. The control team held in reserve additional messages to stimulate interaction if this did not happen as a matter of course, but these messages were not required.

6.41

Liaison between DFAT, Austrade and AFFA was extremely effective throughout the simulation. This was facilitated by the co-location of DFAT personnel in NDCHQ. Issues raised in simulated cables required an immediate coordinated response between AFFA, DFAT and other Commonwealth agencies. In general, this was done in an effective and timely manner. Due to resource constraints in the NDCHQ, some key issues (for example, misreporting by some key overseas press of BSE in Australia when Australia has not had a BSE case) were given the lowest priority. In a real event all major issues would need to be efficiently and effectively addressed. This may require the deployment of additional resources to cope with cable traffic. It is recognised that, in a real event, DFAT would deploy a full departmental task force.

6.42

During the simulation it was noted that overseas posts were not always notified of new and/or emerging information before it was released to the public. To adequately respond to trade and market access issues and reduce the risk of unnecessary adverse market impacts, it is essential that posts be provided with an advance copy of all public documentation and information with supporting talking points. To facilitate better communications with posts, it has been suggested that specialist international media staff from DFAT be included in the DFAT personnel in the communications team in NDCHQ.

Recommendation 15 – low priority. A policy of providing overseas posts with all relevant response information in advance of public release be facilitated by AFFA and DFAT, and incorporated in both departments’ plans.

Overseas Media

6.43

During the simulation it was not possible to fully simulate the number of enquiries that would have come from the overseas media. However, during the first days of the exercise, simulated misleading overseas news reports were injected into NDCHQ. As noted above, these messages were not always given high priority but this may have been caused by resource constraints. A slow or incomplete response to international media enquiries or reporting may exacerbate adverse market impacts on Australia’s exports in a real event. There is now a heightened awareness of the need to appropriately engage international media, requiring a 24-hour commitment by the communication team to coincide with international time differences. This would have significant resource implications for both AFFA and DFAT. Consideration must also be given to the provision of translation services as it should not be assumed that all enquiries would be made in English as has been the case in other national emergency situations. It is anticipated that DFAT would take the lead in organising such arrangements.

6.44

Given the potential influence of the international media during an FMD outbreak on overseas consumer confidence, it has been noted that communication at all levels of the response (local, state, national) needs to be cognisant of the longer-term impacts of public statements. For example, statements made early in a response designed to address local concerns may, at some later date, be misconstrued to Australia's export detriment. Therefore, it has been suggested that an appropriate senior DFAT officer be assigned to the international and industry team in NDCHQ to provide guidance on the wording of statements.

Communications Risk 3

A breakdown in communications between and within jurisdictions leading to the right information not reaching the right people at the right time.

Rating

6.45

It is likely that a breakdown in communications could occur if there is a lack of clear articulation of roles and responsibilities, or a lack of awareness of these roles and responsibilities, or people failing to follow agreed protocols. This will result in problems such as information overload, inaccuracies, lack of currency of information and conflicting material. The consequence of this occurring is major. This results in a risk rating of extreme.

Risk Treatment (pre-simulation)

6.46

Communication within organisations and agencies is also an essential element in disease response management to ensure appropriate decisions can be made in a timely and strategic fashion. In the lead up to the simulation, many plans, protocols and procedures were developed to reflect the roles and responsibilities of stakeholders in the event of an FMD outbreak. Given that many of these plans were new, mini-simulations were conducted to raise awareness and train people about their roles and responsibilities. This training included the importance of information flow between and within organisations. To complement this, AHA conducted training for industry participants in CCEAD and the NMG. Undertaking this training/awareness raising activity greatly reduced the risk of communication breakdown.

Simulation Outcomes, Further Risk Treatments and Recommendations

Training and Awareness Raising

6.47

During the simulation each group in the national FMD coordination framework was required to assess issues and develop appropriate solutions to simulated problems. This required seeking information and options from other players within the simulation and the coordinated communication of decisions for implementation. Pre-simulation training and awareness raising activities on roles and responsibilities were central to the success of communications within the national framework. This was demonstrated by the swift communication of a simulated death in the field that was passed from LDCC to the HLG within two hours of it first being reported. However, given the high turnover in personnel and changing organisational arrangements, this level of awareness needs to be maintained through continuous training (to nationally accredited standards) and multi-agency and multi-jurisdictional exercises (refer recommendations 5 and 8).

National Information Management System

6.48

In a national emergency, a large quantity of constantly changing information will be generated in all localities. It would be essential for all SDCHQs and NDCHQ to have rapid access to the latest information to ensure that the right people are sufficiently informed to make decisions. This information need was not fully tested in the simulation as much of the basic disease control data was provided by the control team in the form of daily updates. The complexities associated with the rapid transfer of information were explored at two associated levels: disease control information transfer and national coordination of material for high-level committees.

6.49

During the simulation, disease control centres produced situation reports outlining measures that they had taken in response to the outbreak, including details of infected and dangerous contact animals, dangerous traces and control areas. The only means of transmitting this vital information was via facsimile or e-mail. Both means were at best slow and at worst failed. As there is no standard format for situation reports, inconsistencies of data delayed the development of a national picture. It should be noted that EADRP's and the Animal Emergency Management Information System (ANEMIS) both stipulate the requirement for similar information that would overlap a situation report. This potentially leads to a requirement for double entry of information that in turn could result in misreporting and inconsistencies across the country. While these problems have not been experienced to date as most emergency responses have been localised, single jurisdictional events, they are likely to surface in a large, multi-jurisdictional emergency.

6.50

All jurisdictions have access to a newly revamped ANEMIS. The system provides a Microsoft Windows-based application that captures local disease control information such as the location of infected premises, the number and type of animals, valuation for compensation, dangerous contacts, etc. The limitations of the system are that:

- jurisdictions lack ownership
- information quality controls available in Windows are not used
- it is not networked – it cannot be shared by SDCHQs or NDCHQ
- it is not a data base that would allow various reports to be easily generated from one set of consistent data
- there is a lack of familiarity with the system
- it has not been tested in a real emergency (and was not tested in the simulation) and lacks adequate supporting protocols.

6.51

While ANEMIS continues to provide a standardised approach to disease control data collection, it needs to be brought up to date with the latest technology to enable easier sharing of information (both within and across jurisdictions). Until the above limitations are resolved, widespread adoption will continue to be difficult. But when this is rectified, ANEMIS should be adopted as part of each jurisdiction's suite of day-to-day animal health management tools.

6.52

Maps of the developing situation are valuable communication resources at all levels in a response. Currently the infected state/territory has prime responsibility for the development and distribution of maps. For a multi-focal/multi-jurisdictional event there would be a need to coordinate the collection of consistent information to draw a national map, and for such maps to be produced in a timely manner. NDCHQ appears to be in the best position to do this, but currently it is unable to access sufficient information to produce a reliable map. This information requirement should be incorporated in the "upgraded" ANEMIS.

6.53

With regard to the broader information flow to policy makers, information is required by decision makers both within government and in industry under the new national coordination framework. A problem that emerged in the simulation was the inability to transfer information rapidly to committee members notwithstanding the use of both e-mail and facsimile. The e-mail system failed due to differences in operating systems between jurisdictions and with industry representatives – in some rural areas the system became overloaded. In some instances critical documents required for decision-making were not received in advance of meetings. Facsimiles proved to be just as unreliable. Lengthy documents overloaded machines particularly in rural areas. Also, all simulation participants experienced information overload at some stage largely due to transition of duplicated e-mail. The use of e-mail in an emergency is a relatively new communications

tool and rules governing its use are still to be documented. The use of a national information management system could overcome these issues, perhaps using a password protected web-based system. For example, the secretariats to national committees could use such a system to provide information to their members, and members could obtain direct access to critical meeting papers. In addition, disease control staff could obtain relevant information from the same web site, thereby reducing the reliance on e-mails. The effectiveness of this option would be reliant on the speed of Internet access at both the user and provider ends. It would be important for ANEMIS and the resource management information system (recommendation 9) to be closely linked to the national information management system.

6.54

Such a national information management system would require a minimum operating environment to enable access from anywhere in Australia. Additionally, a major benefit of such a system would be its use beyond major emergencies in the management of routine animal health issues.

6.55

Noting the time required to develop information management systems, it is essential that all jurisdictions maximise their use of currently available technology, particularly ANEMIS and the Internet.

Liaison officers

6.56

During the simulation, New South Wales SDCHQ located a liaison officer within NDCHQ. The role of the liaison officer was to facilitate the rapid exchange of disease control information between the two centres, and this was successful because the liaison officer had a complete knowledge of home state operations and an established working relationship with personnel in the SDCHQ. It is considered that the liaison officer greatly improved the flow of information and both jurisdictions would advocate a similar arrangement for future emergencies.

6.57

A number of control centres also included liaison staff from industry which assisted in information flow. The active involvement of industry personnel within the control centres is reflected within the cost sharing agreement.

Recommendation 16 – high priority. As a matter of urgency, a national information management system, linked to an upgraded ANEMIS and resource management system, be developed and utilised to ensure rapid and accurate transmission of information between field operatives and decision makers in all jurisdictions. There should be an exchange of liaison officers between combat agencies and with affected industry groups.

Disease Control Policies and Strategies

7.1

Australia, through AUSVETPLAN, has well-developed, world renowned, national strategies for the control of animal diseases. These strategies have been developed over the last 10 years and are subject to continuous review and improvement. The simulation provided an opportunity to test disease control strategies relating to FMD.

Key Points

- The simulation demonstrated that the high expectations about the benefits of vaccination to control FMD may be unrealisable in an emergency due to the practical logistics of rapidly implementing a vaccination program and the appropriateness of vaccinating in certain circumstances.
- The rapid implementation of a livestock standstill is a critical response measure but there remains a variable capability across jurisdictions in this regard.
- Australia's ability to implement an effective FMD response could be severely jeopardised unless there is a nationally consistent and compatible livestock identification system.
- Further development of disease control policies, such as vaccination, pre-emptive slaughter, livestock standstill and laboratory capacity, should continue to be a high priority.
- Australia's response to an FMD outbreak should be based on a formally structured risk management approach that demonstrates and communicates the rationale for decisions, including the context in which they were made.
- Disease forecasting is fundamental to formulating medium to long-term response strategies and associated resource allocations.

Definition

7.2

Disease control policies and strategies are plans for the management of an emergency animal disease. For example, FMD strategies include a description of the nature of the disease, principles for the control and eradication of the disease and agreed policies and rationale for disease control.

Risks

7.3

In the development of the exercise a number of disease control risks were identified and treatments developed. These were tested during the simulation.

Disease Control Policies and Strategies Risk 1:

Inadequate or out-of-date technical disease control strategies that result in a less than optimal disease response, leading to likely adverse impacts and costs.

Rating

7.4

Prior to the development of the simulation it was recognised that disease control policies were well developed, but it was possible some aspects may need revision or updating. The consequences of a policy being out of date are considered moderate as decision makers are highly experienced and aware of the changing technical environment. In risk management terms, this resulted in a risk rating of high.

Risk Treatment (pre-simulation)

7.5

To treat this risk a number of measures were put in place prior to the simulation.

7.6

In early 2001, the former Agricultural and Resource Management Council for Australia and New Zealand (ARMCANZ) commissioned the development of a risk management framework to consider the risks posed by FMD and bovine spongiform encephalopathy (BSE). In part, this study examined risks associated with a number of disease control strategies. In June 2001, COAG considered the national implications of an outbreak of FMD. They tasked PIMC with the review of emergency animal disease prevention, preparedness and response arrangements. Additionally, COAG agreed in April 2002 that jurisdictions report on their preparedness status against agreed performance criteria and assess funding implications for each level of government.

7.7

In November 2001, a forum of Commonwealth, states/territory officials and industry leaders considered a range of important policy issues relating to preparedness and response capabilities in dealing with FMD including:

- livestock standstill
- livestock tracing
- national information needs in an emergency
- laboratory capacity
- epidemiology and economic modelling
- vaccination policy and supply of vaccine
- zoning policy
- swill feeding
- feral animal risk.

7.8

These policy issues were identified as "critical success factors" for controlling and managing FMD outbreaks. Through the Primary Industries Standing Committee (PISC), jurisdictions were allocated the responsibility for leading the development and refinement of national policies on these issues as a matter of high priority. A number of components of AUSVETPLAN were updated as a result and further work continues in a number of areas.

Simulation Outcomes, Further Risk Treatments and Recommendations

Vaccination

7.9

During the simulation, jurisdictions were required to consider the use and consequences of using vaccination as a disease control measure. The scenario was designed to encourage Victoria to consider the use of vaccination to prevent the spread of the disease in intensive livestock areas. In advance of the simulation, Victoria had considered vaccination options and was able to act quickly when the simulated disease spread to that state. It should be noted that the decision to use vaccination as a disease control measure in Victoria was made in advance of consultation with CCEAD, and without broader discussion of the advantages and disadvantages. In reality, no single state or territory is likely to make a unilateral decision of this sort because the national impact would need to be considered, particularly the trade implications and the availability of vaccine.

7.10

The simulation demonstrated that there might be unrealisable expectations of the availability and benefits of vaccination. There is a need to promote an increased awareness of the complexity of any decision to use vaccination. Although vaccination has the potential to help contain the disease and reduce the number of animals that need to be slaughtered in the short-term, it will result in compliance costs associated with identifying and controlling vaccinated animals, have trade impacts, and in the longer-term may not reduce the total number of animals that are destroyed in order for Australia to regain its FMD-free status. Nevertheless, science and technology will advance and thus the vaccination option needs to be under continual review. Guidelines, including agreement about trigger points for using, ceasing use and not using vaccination under Australian conditions, need to be established and agreed from a "national perspective".

7.11

Although vaccine supply arrangements were not tested in the simulation, this remains a high priority issue. Since 1986, Australia has been a member of the International Vaccine Bank (IVB) which provides access to seven antigen strains and 0.5 million doses for tactical use. These strains were selected on the basis of the prevailing risks at that time. Given changing risks over the past years (epidemiology, trade regulations and improvements in testing technology) and improvements in vaccine standards, Australia and

New Zealand initiated a review of the current IVB arrangements. Proposals based on optimum technical specifications for a supply of FMD vaccine have been examined. These include the continued membership of the IVB and negotiation of new arrangements with the IVB, and separately, for commercial supply. AHA has been requested to rapidly progress the business case for obtaining commercial supplies of FMD vaccine in consultation with jurisdictions.

Recommendation 17 – high priority. The policy for the use of vaccine be continuously reviewed and any significant changes in policy be considered by PIMC.

Recommendation 18 – high priority. The preferred government–industry option for the supply of FMD vaccine be established as soon as possible.

Livestock Standstill

7.12

During the simulation, some jurisdictions were able to quickly and effectively put in place livestock standstill arrangements. Victoria, for example, had prepared in advance the legal instruments required to allow the state to be declared a control area. This resulted in the ability to declare a livestock standstill within two hours of notification of the disease being confirmed in Queensland. All jurisdictions appeared to be able to activate the necessary administrative arrangements. However, to enforce a standstill, jurisdictions need to obtain the assistance of agencies such as the police service, and in many jurisdictions the delegation of powers to these services is cumbersome and may have delayed implementation. Additionally, a number of evaluators noted that procedures for response personnel not normally involved in animal health emergencies (police, defence force, etc) would not have been adequate to enable them to effectively enforce the requirements of a livestock standstill - certainly not over any period of time more than a day or so. In addition, livestock standstills, especially if widespread, will cause significant problems for industry and consumers, and the practicality of maintaining these jurisdiction-wide for more than a few days needs to be considered.

7.13

Where disease control operations cross borders, two separate legislative frameworks come into play. For example, during the simulation Queensland and New South Wales operated a shared LDCC using two separate disease control Acts. In a real event this may result in the mismatching of restricted or control areas, and the livestock species covered by a standstill order, allowing animals from the same property to legally move in one jurisdiction and not in the other. This could greatly undermine disease control operations. Another legal issue encountered by some jurisdictions was the potential difficulty in getting protection from legal injunctions when the disease had not been confirmed in that jurisdiction. The use of the Commonwealth *Quarantine Act 1908* would allow all jurisdictions to operate in a timely and consistent way.

7.14

In recognition of the importance of an effective livestock standstill, PIMC has called for a protocol to be developed that will take into account the following issues:

- consistent policies and procedures across states and territories
- associated protocols covering partial or full cancellation of a standstill incorporating a risk-based process for recommencing the movement of animals and product
- consideration of funding arrangements within the cost sharing agreement for consequential losses
- the use of the Quarantine Act (where applicable), and
- a communications strategy (public and operational).

This would enable relevant issues to be included as part of an EADRP in a real emergency.

Recommendation 19 – high priority. Jurisdictions and industry cooperate in the development of an agreement that allows for the rapid implementation of a national livestock standstill and, where relevant, inclusion as part of an EADRP.

Destruction and Disposal

7.15

Due to the nature of the simulation, destruction and disposal policies were not specifically tested. Prior to the simulation a number of agricultural agencies worked closely with environmental agencies to develop protocols for the identification and use of disposal sites. To facilitate interaction between agricultural and environment agencies during the simulation, Victoria was required to address an issue of a disposal site being placed in an area with a high water table. Post simulation, Victoria reported it believed this problem would have been avoided through the use of its whole-of-government consultative arrangement, confirming the importance of a whole-of-government approach in preventing and resolving problems of this nature. Additionally, pork industry participants in Queensland identified a need for close interaction between Environmental Protection Agencies (EPA), agricultural agencies and industry in determining appropriate disposal sites. It is recognised that jurisdictions would need to have available logistical capacity to support any destruction and disposal activities, including ready access to technical experts to advise on optimal disposal options.

7.16

A draft of the AUSVETPLAN carcase disposal manual has been produced and is awaiting consideration by the Animal Health Committee.

Animal Identification and Tracing

7.17

There was limited requirement to trace animals during the simulation. However, it is clear from SDCHQ and NDCHQ operations, as well as reports by simulation participants, that Australia's ability to implement an effective response would be severely jeopardised by any inadequacies in a nationally consistent and compatible livestock identification system that covers all FMD susceptible species.

7.18

All jurisdictions have an animal identification system. However, these will only be of use in a multi-jurisdictional incident if these systems are able to trace animals beyond individual jurisdictional boundaries. The speed with which Australia identifies, tracks and assesses dangerous traces will determine the length and the cost of the outbreak. Therefore, the development of an identification system that can rapidly and accurately trace animals must be seen in a long term cost benefit perspective. Failure could cost the country billions in the future. A national livestock identification scheme for cattle has been developed in recent years to guarantee access to the European market. This system has been actively implemented by Victoria and provides a benchmark for a national system for all susceptible species. This matter must be advanced urgently, particularly by industry.

7.19

During the simulation, international participants acted as a European Union (EU) delegation visiting to assess Australia's disease response and examine plans for possible re-entry into the EU market. One of the key issues identified by the international observers was the apparent inability of Australian authorities to identify and trace potentially infected animals. It was considered that the lack of a nationally consistent and compatible livestock identification system would limit Australia's ability to maintain export market confidence. Such a system would not only underwrite the re-entry to most markets, but also greatly assist in the management of domestic animal health issues beyond FMD.

Recommendation 20 – high priority. Jurisdictions cooperate in the development of a nationally compatible livestock identification system for all FMD susceptible species that can rapidly and accurately trace animals.

7.20

Animal welfare was reaffirmed as a significant issue during *Exercise Minotaur*, including for over 325,000 live animals 'on the water' to overseas markets. A plan needs to be developed for the management of such animals. Further, there are animal welfare issues associated with livestock standstill and in relation to inability to get livestock to market due to quarantine restrictions. Large-scale slaughter of animals will emerge as a major issue should an outbreak occur. These plans would build on, and be consistent with, existing standards that have been developed by the National Consultative Committee on Animal Welfare.

Recommendation 21 – medium priority. Plans be developed to manage animal welfare issues arising from an FMD outbreak and that they be consistent with existing standards.

Cost Sharing and Disease Response

7.21

Although the simulation was not designed to test "on the ground" response capabilities, it was clear that a number of jurisdictions were concerned about the potential impact the cost sharing agreement could have on jurisdictions' willingness to implement some disease control measures. Currently the agreement does not provide for the recovery of costs associated with the destruction of animals due to welfare concerns, pre-emptive slaughter of potentially infected animals and costs associated with monitoring and surveillance in non-infected jurisdictions. Uncertainty in an emergency situation causes delays and friction. To minimise this possibility it is proposed that the scope of the cost sharing agreement be reviewed specifically in relation to FMD due to special and separate characteristics (refer recommendation 1).

Disease Control Policies and Strategies Risk 2

Disease response strategies are implemented without consideration of the broader impacts or sufficient understanding of possible future scenarios resulting in a costly or ineffective response in the longer term.

Rating

7.22

Due to the relatively localised nature of animal disease emergencies in the past, there has been limited call for large scale forward planning and risk assessment during an outbreak and it is possible forward planning and risk assessment would not be as rigorous as it could be. In an FMD outbreak the consequences of not planning adequately would be at least moderate. Therefore, the risk rating would be high.

Risk Treatment (pre-simulation)

7.23

Animal health emergencies experienced in recent years have required only limited forward planning and risk assessment as part of the response. For these smaller scale events, risk management tends to occur informally through discussions in CCEAD and SDCHQ. This is due to the localised nature of the outbreak coupled with a relatively short duration and limited resource demands. In contrast, any outbreak of FMD not quickly contained would demand rapid decision-making based on a risk management approach using the best information at hand combined with the knowledge of technical experts. To delay decisions until complete information is available would have major consequences for Australia's ability to combat the disease. Although recognised as a critical element in a prolonged response, this issue was not specifically addressed prior to the simulation.

7.24

A critical lesson from the United Kingdom experience was the importance of forward planning in large-scale emergencies. This would enable the identification of essential resources (human and materiel) before they are required, and timely deployment. It would also permit the balancing of critical resources between competing priorities and the timely integration of overseas and domestic specialist resources. The concept of forward planning is recognised in the operations of an LDCC, but the type of planning required for FMD would need to be implemented as a core function at the SDCHQ and NDCHQ levels and linked to whole-of-government planning.

7.25

As described above, Australia's experience with emergency animal diseases has been to manage relatively small-scale, localised events. As one of the world's major exporters of livestock products, these emergencies have significant trade implications. However, the scale and timeline of these responses have not required disease forecasting to assist resource planning and development of disease control options. With FMD, decision makers and forward planners would be limited in their ability to act if this information is not provided routinely and in a timely manner. It should be noted that Australia has a world-respected FMD disease spread model that has been developed over a number of years and used by overseas governments to assist them in decision-making.

Simulation Outcomes, Further Risk Treatments and Recommendations

Risk Management

7.26

During the simulation, a large number of decisions covering a vast array of topics were required from all levels of the response. For the most part these decisions were made in a timely manner, taking into consideration current information. Most decision makers demonstrated a particular strength in reacting to continuously changing circumstances. This was despite the complication of time jumps within the simulation. Although this is seen as a positive outcome of the simulation, decision-making could have been further enhanced through the application of a formally structured risk management approach, particularly at SDCHQ level.

7.27

Risk management requires a full assessment of the current and likely circumstances to identify risks and prioritise them, identification and evaluation of options to treat those risks and implementation of treatments. This applies to disease management as well as social and environmental issues arising from a disease outbreak. High-level decision-makers will be required to make key decisions based on only limited information, particularly in the early days of an outbreak. To delay decisions would run the risk of allowing the virus to spread unnecessarily. Lessons from Europe for both BSE and FMD demonstrate the importance of decisions being based on a sound risk management assessment that takes account of the need for rapid action.

7.28

It would be difficult for Australia's disease managers to maintain public and market confidence in the national response without clearly explaining, at each stage, the rationale for decisions. Maintaining public and stakeholder confidence is fundamental to ensuring the effectiveness of a response. To achieve this, decision-makers from LDCC through to the high level groups must be able to demonstrate and communicate the rationale for decisions, including the context in which they were made. This points to the need to be "on the front foot" in providing scientific evidence and advice so that judgements can be made and publicly justified. Citing lessons learned from both BSE and FMD responses in Europe, an overseas observer highlighted the benefits of adopting a greater level of transparency in relation to the rationale for decisions about disease control measures. These benefits include maintenance of public confidence and, significantly, a better understanding of why measures need to be taken and to what extent.

7.29

If Australia were to experience an FMD outbreak, it is inevitable that there would be a number of public inquiries both during and following the event. This would necessitate the provision of fully explained and documented rationale for decisions. A short-term reactive approach, even one that is well documented, would not necessarily meet the standard test of "reasonableness". Assessment of the documentation produced from the high level groups in the national framework demonstrated that this test would not have been met. There was no obvious analytical framework to demonstrate the rigour of decision-making, including the context and evaluation of options, and thereby demonstrate reasonableness of action.

7.30

By contrast, people who manage more frequent physical emergencies such as floods and fires are often required to justify the rationale for their decisions and actions to coroners courts and the like. This has resulted in the implementation of a more conscious risk management approach to decision-making to ensure there is accountability as well as communication with stakeholders.

7.31

To a significant extent, many of the decisions that will need to be made at the operational level can be anticipated. As such, risk assessments can be made during peacetime and incorporated in AUSVETPLAN. Examples include assessments of restocking of slaughtered-out farms, the imposition and lifting of livestock standstills and the operation of particular types of enterprises during an outbreak. At the strategic level, some disease-control options, such as the use of vaccination, can also be assessed prior to an outbreak providing guidance as to the most appropriate conditions for its use. These priorities are being addressed as part of the PIMC work program.

Recommendation 22 – medium priority. A risk management approach be adopted for all animal health emergency responses.

Forward Planning and Forecasting

7.32

Due to the design of the simulation, (in particular the lack of specific (e.g. ANEMIS) data, the time jumps between disease days, and the expectation that the control team would provide information on disease developments) there was limited opportunity to undertake epidemiological analyses, disease forecast modelling or forward planning. However, a number of evaluators reported on the importance of this information in a real situation. Disease forecasting will be fundamental in formulating medium to long-term response strategies and associated resource allocations.

7.33

Responding to an animal health emergency is similar to fighting bushfires - both require proactive management for control and containment. In order to get ahead of the fire, managers need to consider a complex cocktail of factors, including fuel levels, geographic and meteorological data and resource limitations. While this information is used to shape the immediate response, it is also used to model the possible course of a fire and then to plan. This provides the context in which proper risk management can occur. Without this forward planning, bushfires would be difficult to contain. Similarly, forecasting and forward planning for animal health emergencies, that are fast-moving multi-focal events such as FMD, would be essential for disease control operations. In general, factors to be taken into consideration in disease forward planning include infectivity of the virus; location, movement and numbers of susceptible animals; geography; meteorological data; and limited human resources and materiel.

7.34

During the simulation, jurisdictions were asked to consider issues relating to planning. In particular, infected jurisdictions were required to prepare position rosters for the months following the initial outbreak. Other states and territories were asked to develop contingency plans for the possibility of each of them becoming infected. No SDCHQ adequately completed the task. While some emergency services agencies attempted to undertake this forward planning based on epidemiological predictions, this information was not available from the LDCC, SDCHQ or NDCHQ. Additionally, there was no evidence of consideration of planning for operational requirements (chemicals, machinery, etc.). Neither of these aspects can be effectively managed without consideration of the likely disease spread.

7.35

The simulation demonstrated that there was some confusion as to who should provide disease-forecasting information to decision-makers at all levels of the response. The current LDCC structure includes forecasting as part of the epidemiological function. At the SDCHQ it is recognised that in a multi-focal event, it would be appropriate to appoint an epidemiologist to collate and analyse data. The role of the NDCHQ in regard to epidemiology and forecasting remains unclear. In the simulation, NDCHQ performed an epidemiological role, but a national forecasting function was not undertaken. SDCHQs in developing EADRP's would have to plan on the basis of disease forecasts in order to provide a realistic proposal for CCEAD and the NMG consideration.

7.36

AFFA has recognised the need to clarify epidemiological advice and analyses including but not limited to predictive modelling to support decision-making in an animal health emergency. This includes:

- the availability of appropriate decision support tools and skills within the respective jurisdictions
- the need to clarify roles and responsibilities (LDCC, SDCHQ and NDCHQ);
- the ability to perform a range of simple descriptive and analytical epidemiological and statistical analyses
- the applicability of different tools, including models, at various stages (pre-, during and post-emergency)
- the limitations of various tools especially within the context of informing decision makers.

Recommendation 23 – medium priority. Forward planning, linked to epidemiological modelling, be adopted as part of animal disease emergency management culture, and roles and responsibilities for such planning and modelling be clarified under AUSVETPLAN.

Trade Management Arrangements

8.1

As one of the largest exporters of livestock and livestock products in the world, FMD is primarily a trade management issue for Australia. Most of Australia's key markets will not accept live animals or livestock products from FMD infected countries and this may flow on to other agricultural products not directly related to livestock. The Productivity Commission estimates that the cumulative losses of export revenue would range from more than \$3 billion for a short outbreak to over \$9 billion for a 12-month outbreak.

Key Points

- All major markets for livestock products would immediately close if Australia were to experience an FMD outbreak as there would be no differentiation overseas between infected and non-infected areas.
- The use of zoning applications to permit trade from non-infected areas will require further consideration based on a full national cost-benefit analysis, which would take into account the months these applications take to prepare and prove, jurisdictional resource constraints on surveillance activity and the impact on disease control activities.
- There may be scope for bilateral trade with non-traditional, lower value markets during an FMD outbreak and this should be investigated in advance by AFFA and DFAT in consultation with industry.

Definition

8.2

Trade management arrangements are the measures taken by Australia, in the face of an FMD outbreak, to limit the adverse impact on the export of Australian live animals or livestock products and to restore trade normality as soon as possible.

Risks

8.3

In the development of the simulation a number of risks associated with Australia's trade management arrangements were identified and treatments developed. These were tested during the simulation.

Trade Management Risk 1

Alternative marketing strategies are not available.

Rating

8.4

Prior to the development of appropriate consultative mechanisms, it was likely that government and industry expectations would not be aligned. The consequence of this occurring was considered moderate in impact, causing dysfunctional trade strategies to be adopted. In risk management terms this resulted in a risk rating of high.

Risk Treatment (pre-simulation)

8.5

In November 2001, industry, AFFA and DFAT cooperated in the development of industry specific trade management strategies. It was recognised by all parties that there was a need for a consultative mechanism to ensure a consistent government–industry approach on trade and market access issues. During a trade mini-simulation held in May 2002, participants (industry, AFFA and DFAT) agreed the Trade Market Access Group (TMAG) should be an integral part of the national framework, providing industry–government advice to the CSPTF on trade issues. This advice and interaction would complement existing industry involvement in disease control decision-making through the NMG and CCEAD.

8.6

TMAG membership comprises senior officers of AFFA, DFAT and affected industry bodies. Its role is to carry out the following functions:

- provide the main linkage and ensure effective communication occurs between government and affected agricultural industries on trade matters
- ensure appropriate and effective coordination of sectoral trade objectives occurs between the industry groups represented on TMAG
- identify and discuss issues, with particular focus on those impacting on Australian trade interests
- ensure a preferred position is agreed prior (wherever possible) to meetings of national decision making groups
- ensure the implementation of an effective and coordinated public communications arrangement on behalf of affected industries.

Simulation Outcomes, Further Risk Treatments and Recommendations

TMAG

8.7

A positive outcome of the simulation was the recognition of the importance of TMAG. The group proved to be a valuable advisory body for the CSPTF and provided well-

considered, balanced and focused recommendations. This was due to the high level of participation and cooperation displayed by all members, as well as the evident pre-planning undertaken by industry groups.

8.8

At the initial meeting of TMAG there was some confusion as to the status of the group within the national framework, particularly in relation to decision-making powers. It was the intent that TMAG would be a consultative group whose primary role was one of providing advice to agencies responsible for implementing government policies. To ensure confusion does not occur, the roles and responsibilities of TMAG need to be more clearly articulated. To make this role more apparent to all members, participants suggested that the group be renamed the 'Trade Market Access Advisory Group'.

8.9

The simulation demonstrated the membership of TMAG catered well for the major producer groups, but it proved less adequate for smaller producer groups and the processing sector. Whilst TMAG provides a conduit for the flow of information from government to industry and back, there was some evidence that improvements can be made in the linkages between the producer peak bodies and their constituents. This would be a critical communications tool during an FMD outbreak.

8.10

The timetable of key meetings scheduled for the simulation did not include a TMAG meeting until disease day seven (third day of the simulation), which appeared to have resulted in the activation of SAFEMEAT. This body is a government and red meat industry group responsible for the oversight and promotion of sound management systems to deliver safe and hygienic product to the market place. Participants considered that the activation of SAFEMEAT was not appropriate, as it does not represent all industry sectors affected by FMD or other government agencies such as DFAT. To prevent such a situation occurring during an emergency, TMAG should be activated immediately on notification of a suspected outbreak of FMD.

8.11

Current arrangements for TMAG stipulate it be chaired by the Manager of AFFA's NDCHQ International and Industry Team. Evaluation of the simulation suggested that as this officer has a sizeable task in his/her own right and does not participate in the CSPTF, this arrangement was not optimal. Industry observers suggested the chair for TMAG be drawn from industry rather than government to alleviate the perceived pressure on AFFA and to increase the degree of industry ownership. However, given the Commonwealth's constitutional trade responsibilities, participants felt that the AFFA representative on the CSPTF should chair TMAG as they would have the means to communicate TMAG advice directly to the high level committees. Additionally, while it was envisaged TMAG would only be activated in the event of an FMD emergency, there may be scope to utilise the group in other more routine responses that have significant trade implications.

Recommendation 24 – medium priority. TMAG roles and responsibilities, modus operandi and membership be updated.

Trade Management Arrangements Risk 2

Non-infected areas of the country being unable to export will exacerbate the trade impacts of the outbreak.

Rating

8.12

It is almost certain that non-infected parts of the country will be unable to trade with export markets during an outbreak of FMD. The consequences of this are major, causing a severe impact on exporters and the broader community. This results in a risk rating of extreme.

Risk Treatment (pre-simulation)

8.13

All major markets for livestock products would close immediately if Australia was to experience an outbreak of FMD. There would be no differentiation between infected and non-infected areas of the country. It was considered that the optimal strategy to counter this risk would be the pursuit of recognition by trading partners and the OIE of the disease-free status of geographic zones within Australia.

8.14

As defined in the OIE Animal Health Code, zoning is a procedure implemented by a country with a view to defining geographical areas or regions of different animal health status within the territory of a country for the purpose of international trade and as a means of controlling a disease outbreak. Australia, as a member of the OIE, has supported and influenced the development and use of the principles of zoning and regionalisation in the code. Australia has used these principles to control and eradicate animal diseases including bovine tuberculosis, bovine brucellosis, virulent Newcastle disease and avian influenza as one of a number of disease control measures incorporated in AUSVETPLAN.

8.15

To ensure that the technical aspects of a zoning application had been adequately considered, an application was developed (in parallel with the simulation) for assessment by New Zealand and the United States. The application was prepared in line with OIE guidelines. The development of the simulated FMD zoning application was a lengthy, resource intensive process due to the scientific rigour needed to satisfy the requirements of overseas trading partners. The work that has now been completed in relation to the zoning application will permit Australia to more rapidly prepare any future (FMD or other) applications. Assessment of this application and its acceptability will be the subject of a separate report.

8.16

During the development of the simulation, it was recognised that there were no clear arrangements for the management of domestic product issues should they arise. Given this, a number of control team simulation messages were developed to stimulate the consideration of managing the domestic trade in potentially infective product.

Simulation Outcomes, Further Risk Treatments and Recommendations

Zoning

8.17

The simulation included consideration of zoning issues by all of the high level committees within the national framework. CCEAD and the NMG considered the disease response impacts and the technical viability of the proposal. The CSPTF and the HLG considered the socio-economic and trade implications. Western Australia, South Australia and Tasmania were the subject of a case for zonal freedom.

8.18

The simulation highlighted the inter-relationship between the socio-economic and technical aspects of a zoning proposal and confirmed that neither aspect can be considered in isolation. The debate on FMD zoning focussed on a cost-benefit assessment by the Commonwealth Department of the Treasury and more generally highlighted tensions between infected and free zones over the use of scarce disease control resources.

8.19

There are important issues requiring further debate and a higher level of understanding and definition before Australia would be able to use zoning in a real FMD emergency. These include the point in time in a long emergency at which zoning should be considered, the potentially limited practical use of zoning (due to the time taken for development and for trading partners to process the submission), jurisdictional resource commitments to undertake surveillance and, as a result, the impacts on disease control activities.

8.20

To meet the rigorous standards of OIE for zoning, noting that individual country requirements may be more onerous, an application must provide scientifically based evidence of disease status, disease control measures and surveillance activities. Given the differences in information systems used in each jurisdiction, the lack of an adequate national livestock tracing system and the limited technical resources available, these will take some months to prepare and prove. This was evidenced through the drafting of the simulated application for New Zealand and United States consideration. Recent experience has demonstrated that most countries will take considerable time to assess applications, many requiring additional information or explanation. For example, an

application to the United States could take 12-months or more to process and other countries are likely to require at least a similar timeframe. Political concerns in a number of key countries may exacerbate clearance processes. Although continued efforts should be made to reduce the time taken, zoning must not be seen as a "quick fix" option and governments must be prepared to fully explain to stakeholders any decisions not to pursue zoning.

8.21

The simulation demonstrated the significant resources required to respond to an FMD outbreak. The surveillance requirements for proving a zonal freedom case would also be significant, demanding the deployment of a large number of key technical and animal health personnel. An additional factor would be the relative value of export trade from non-infected areas. The simulation demonstrated the value of the national framework in considering the balance between regional and national concerns. Such considerations may result in a conflict between containing and eradicating the disease and non-infected areas regaining market access. The decision to proceed or not with a zoning application needs to be made in the context of national cost–benefits, weighing up the competing issues of rapid eradication versus the value of some, but limited, market access. Given these conflicting resource priorities, it is evident that zoning would be more likely to work in a situation where FMD has occurred in a localised, well-contained outbreak. However, if the disease has spread to a number of jurisdictions, Australia would not appear to have the resources, nor the systems, to successfully pursue the zoning option. This assessment applies to major export markets.

8.22

Some participants (industry and government) had unrealistic expectations of the acceptability of zoning by trading partners. It can be anticipated that trading partners would be conservative in their response to any application by Australia and their considerations may be subject to local political pressures. To ensure that all stakeholders have a realistic understanding of the role that zoning may play in an FMD emergency, AFFA (in conjunction with DFAT as required) should undertake an ongoing program of awareness raising activities.

8.23

It is understandable that at the beginning of an outbreak of FMD some jurisdictions will prohibit the movement of potentially infective material across their borders. A positive outcome of the simulation was that the national framework provided a forum for discussion of sensitive issues of this nature and no major disruption occurred during the simulation.

Recommendation 25 – high priority. Stakeholders be made fully aware of issues relating to a zoning application and decisions to pursue zoning applications should only be considered in the context of the full national cost–benefit analysis.

Bilateral Trade Arrangements

8.24

Given the timeframes involved in developing and gaining approval for an application for zoning (estimated to be at least 12 months) and the substantial surplus of product that would be available, a further option identified during the simulation was to pursue non-traditional, lower value markets through bilateral agreements. While this option is primarily one to be pursued during an emergency, it should be investigated in advance of an outbreak to ensure its viability. Again, this option would have to be considered within a cost-benefit framework. This should not preclude pursuit of zoning applications to traditional markets, especially if any FMD outbreak can be confined to a specific area within Australia.

8.25

As disease status will be the governing factor in trade negotiations, the first point of contact will be between the veterinary public health authorities of Australia and other countries. AFFA will be the responsible agency in this regard and will be represented by the Australian Chief Veterinary Officer. This role will have to be supported by veterinary and scientific capacity to collate and analyse the diverse disease response information in order to form cohesive trade proposals that are responsive to trading partner demands.

Recommendation 26 – low priority. The option of bilateral arrangements with non-traditional markets be pursued by AFFA and DFAT in consultation with industry.

8.26

It was noted that during the simulation some jurisdictions commenced simulated trade negotiations with overseas governments independently of the Commonwealth. Under the Constitution, the Commonwealth has responsibility for overseas trade and for the certification of livestock products being exported from Australia. For these reasons, states and territories must accept that the Commonwealth has the lead role in all trade-related negotiations.

Socio-economic Relief and Recovery Strategies and Processes

9.1

The socio-economic impacts of an FMD outbreak would potentially be of a scale much greater than for the natural disasters that regularly occur in Australia. Due to the immediate closure of markets to all Australian livestock and livestock products, the emergency will quickly become a national problem. Even uninfected states and territories will be severely affected. Recovery measures will be required for many years following the eradication of the virus due to the time taken to regain market access and market share, rebuild fragile communities, and restructure industries. All jurisdictions will require comprehensive relief and recovery strategies focussed on individuals, communities and industries. Noting these issues, COAG agreed in April 2002 that a report would be prepared on managing relief and recovery arrangements.

9.2

Relief and recovery strategies would include, but are not limited to, financial assistance, psychological and social counselling, business advice, and economic and social community rebuilding measures. They should be linked closely to disease control activities to form part of a whole-of-government response and not be seen as separate activities.

Key Points

- There will be significant social costs associated with an FMD outbreak in Australia felt well beyond rural and regional areas and impacting on many industries including tourism, transport and sport.
- The relief and recovery issues associated with an FMD outbreak would be far more protracted and significantly larger than any other natural disaster including a prolonged drought.
- The integration of emergency services, relief and recovery agencies, disease control and other interested agencies under a single whole-of-government arrangement is fundamental to the success of a response, particularly in relation to broader social and economic issues.
- It is important to include local communities, affected industries, non-government organisations and local government in the development process for relief and recovery policies and programs because of their local understanding and insight.
- The speed of delivery of relief and recovery measures will be a key success factor for the maintenance of public confidence in the government's handling of an emergency.

Definition

9.3

Socio-economic relief and recovery strategies, processes and measures relate to providing immediate assistance to affected individuals and then dealing with the consequences of an event for the purpose of restoring the community to "normal" and managing restructuring processes should they be required.

Risks

9.4

In the development of the simulation, the following risk associated with relief and recovery arrangements was identified and treatments developed. These were tested during the simulation.

Relief and Recovery Risk

The adverse impacts of an FMD outbreak on the social and economic viability of individuals, communities and industries are exacerbated by inadequate consideration or activation of relief and recovery measures.

Rating

9.5

Given that the full extent of the potential socio-economic consequences of FMD were not known prior to the simulation, it is possible that relief and recovery measures would be inadequate. The consequences of this occurring are considered to have a major long-term impact on individuals, the community and industry. The resulting risk rating is extreme.

Risk Treatment (pre-simulation)

9.6

For some time, states and territories have successfully managed the localised relief and recovery aspects of natural disasters. These arrangements incorporate linkages between government and non-government organisations in the delivery of relief and recovery measures. The integration between relief and recovery and agricultural agencies in animal health emergencies has been variable in nature and less formalised due to the limited localised impacts of previous disease outbreaks. The FMD outbreak in the United Kingdom demonstrated the need for formal linkages between disease control and relief and recovery arms of government in order to manage the far-reaching consequences of an FMD outbreak. The adverse short and long-term socio-economic impacts in the United Kingdom included:

- mental illness and suicide
- physical health problems such as stress-related illness
- closure of up-stream and down-stream livestock businesses such as feedlots suppliers, transporters and abattoirs

- loss of skills from affected communities
- business failure due to reduced spending in affected communities
- significant downturn in rural tourism
- unemployment
- community disruption and unrest.

9.7

As exports of livestock and livestock products represent a relatively large component of Australia's Gross Domestic Product (GDP), the economic effects of an FMD outbreak in Australia would be even more substantial than that experienced in the United Kingdom.

9.8

In December 2001, the Commonwealth Government requested the Productivity Commission (PC) to assess the full extent of the consequences of an FMD outbreak in Australia to assist with planning and preparedness for such an event. The Terms of Reference required the PC to evaluate the full economic, social and environmental impact of an outbreak, including on the agricultural sector, regional Australia, the national economy and in any other collateral manner using three different durations for an outbreak. Key socio-economic messages from the PC report include:

- cumulative losses of export revenue would range from over \$3 billion for a short outbreak to over \$9 billion for a 12 month outbreak
- the cumulative decline in revenue from domestic sales would range from over \$2 billion (short outbreak) to over \$3 billion (12 month outbreak)
- control and compensation costs are estimated to be between \$30 million (short outbreak) and \$450 million (12 month outbreak)
- overall, cumulative loss to the national economy is estimated to be between \$2-3 billion (short outbreak) and \$8 -13 billion (12 month outbreak).

9.9

There will be significant flow-on social costs associated with any FMD outbreak. In addition to the disruption and distress caused by the eradication and control measures in infected areas, the widespread financial losses arising from the trade costs of an outbreak would result in significant social costs to individuals and communities throughout rural Australia. The socio-economic impacts will also be felt well beyond rural and regional areas. Industries such as tourism, transport and sport are likely to be affected. The PC was unable to quantify the costs of these flow-on consequences.

9.10

The PC report provided a valuable resource for all relief and recovery agencies to assist in the planning for an outbreak of FMD. It confirmed the necessity for a whole-of-government approach to the management of the far-reaching consequences of such an outbreak.

9.11

All jurisdictions have in place whole-of-government arrangements for the management of relief and recovery aspects of natural disasters. Those jurisdictions that did not have clear linkages between agriculture and whole-of-government and emergency services arrangements took steps to ensure that these were put in place before the simulation. Most jurisdictions tested their plans through the conduct of targeted mini-simulations.

9.12

A national FMD coordination framework agreed by COAG in July 2001 was described in Chapter 2. The high-level committees established in the framework provide a mechanism by which the broader socio-economic impacts can be identified, assessed and managed to encourage national consistency in both disease and relief and recovery responses. To ensure that a national picture of the emerging impacts of an outbreak could be readily presented to the high-level committees, a pro forma report known as the "jurisdictional impact statement" was developed. Amongst other broader issues, relief and recovery matters were specifically included in the pro forma report.

9.13

To encourage awareness amongst relief and recovery agencies in all jurisdictions about the unique and large scale impacts of an FMD outbreak, a national workshop was held in November 2001. The workshop:

- considered the socio-economic consequences of an FMD outbreak
- identified existing relief and recovery measures
- identified potential areas where assistance may be required and no measures are currently available
- considered processes for quickly developing and implementing additional assistance measures
- identified how consistent, timely and effective national coordination and communication can be ensured
- documented relief and recovery arrangements for managing the consequences of an FMD outbreak.

9.14

A national relief and recovery mini-simulation was held on 24-25 July 2002 in Canberra. All states and the ACT, relevant Commonwealth agencies, industry peak bodies and non-government welfare organisations were represented at the simulation. It was designed to assess the social and economic impacts arising from an FMD outbreak, and test the integration of jurisdictional decision-making and communication in developing an effective response. This simulation confirmed that early engagement of the affected communities in the recovery process and a coordinated and comprehensive information and communication plan would be critical for an effective recovery strategy.

9.15

Running in parallel to the development of improved FMD preparedness and *Exercise Minotaur*, COAG commissioned a review of natural disaster relief and mitigation arrangements to determine whether current arrangements provide an effective framework to meet the needs of those affected by natural disasters. While the review did not incorporate an examination of FMD specific relief and recovery issues, it nonetheless gave some guidance on the viability of measures used for other emergencies.

Simulation Outcomes, Further Risk Treatments and Recommendations

9.16

To complement the disease scenario in the simulation, a socio-economic scenario described issues such as unemployment, industry dysfunction and community unrest. While it was not possible to fully explore relief and recovery issues during the simulation, it is clear from the activities that did occur that these issues would be far more costly and protracted for FMD than any other natural disaster.

Whole-of-government Arrangements

9.17

The simulation tested all jurisdictional whole-of-government arrangements. Each jurisdiction was required to identify and consider the socio-economic impacts flowing from the scenario. Issues that were identified included:

- transport
- horse racing (spring carnival)
- domestic and international trade
- agricultural shows
- closure of industries
- pressure on interest rates and the value of the dollar
- Q-fever
- animal welfare
- inconsistencies in compensation
- availability of livestock products including milk
- industrial unrest
- relief for non-infected farmers
- tourism
- unemployment
- community divides
- community resentment
- small business cash flow

- mental illness – grief, anger, stress and suicide
- road closures
- a fall in domestic consumption of red meat
- environmental impacts
- disruption to normal community social networks and committees
- industrial accidents
- impacts on the retail and wholesale distribution systems.

9.18

All jurisdictions reported that the integration of emergency services, relief and recovery agencies, disease control and other interested agencies under a whole-of-government response arrangement was fundamental to the success of their response, particularly in relation to the broader social issues.

9.19

The simulation highlighted the socio-economic consequences of an FMD outbreak. In particular, the tourism and small business sectors would have been severely impacted. Beyond the immediate and practical impacts of disease control activities including movement restrictions, the public perception of the possible effect on tourist locations in or near infected areas would have significantly added to a downturn in this industry. Additionally, sensitivities in key tourism markets were recognised as a factor that could also result in a decline in tourist activities. To address these concerns, responsible agencies developed communications strategies designed to ameliorate possible public concerns and restore consumer confidence.

9.20

Similarly, small business, both within the infected and non-infected areas, would have experienced severe cash flow problems. The types of businesses impacted include the local grocer, newsagents, petrol stations, stock and station agents, car dealers, farm machinery service agents, local social clubs as well as retail and wholesale distribution systems. These businesses rely heavily on day-to-day cash flow and would not have the resources to sustain a prolonged period of doing business on goodwill and credit. As a result, rural and regional employment would be severely undermined. All jurisdictions addressed issues of this nature drawing on cooperation between relevant social policy and support delivery agencies. This interaction within and across jurisdictions was seen as a positive outcome of the simulation.

National Framework

9.21

For the first time, the framework provided a mechanism by which jurisdictions could consider relief and recovery matters on a national scale. It was seen as one of the fundamental success factors of the simulation. Due to the time constraints of the simulation (jumping from Day 1 to Day 84 in four days), there was limited opportunity

for the framework to fully consider the sorts of wide-ranging national recovery issues that would emerge during a national emergency. However, the simulation was designed for jurisdictions to individually consider relief and recovery management issues, to develop jurisdictional strategies and to highlight to the national committees (through the use of agreed jurisdictional impact statement templates) the socio-economic impacts being "experienced".

9.22

Additionally, because of the time constraints, the peak national decision-making body was restricted to consider only one substantial issue – zoning. This focus on a single major issue recognised that the primary objective of this part of the simulation was ensuring that all elements in the framework interacted effectively. Zoning was chosen because it had major implications for disease control, trade and regional recovery and would therefore require relief and recovery agencies to work closely with disease control agencies in each jurisdiction prior to the consideration of the issue in national committees.

9.23

A lesson learned from the simulation was the importance of including local communities, affected industries, non-government organisations and local government in the development process for relief and recovery policies and programs. Their local understanding of the situation and impacts may be different from those more removed from the immediate effects and will provide useful insight that can be drawn on by government decision makers and program delivery agencies.

Enhancing relief and recovery plans and preparedness

9.24

In parallel to the development of the simulation, COAG initiated a review of Australia's approach to natural disaster relief, recovery and mitigation against disasters. The objective of the review was to determine whether current arrangements provided an effective framework to meet the needs of those affected by natural disasters. Simulation participants reported similarities between relief and recovery issues that emerged during the simulation and those that arose during the NDRA review. It was noted that the practicalities of implementing relief arrangements would be substantially the same (eligibility criteria, administrative responsibilities, waiver of waiting periods etc) for either large-scale animal health incidents or natural disasters.

9.25

The speed of delivery of relief and recovery response measures will be a key success factor for the maintenance of public confidence in governments' handling of the emergency. With this in mind, following the simulation, relief and recovery agencies noted that it would be advantageous to maintain a capacity to quickly implement appropriate relief measures. This could be achieved by the maintenance of an accurate register of current jurisdictional programs of relevance to an FMD situation, including an indication of any adjustments that might be needed to fit FMD circumstances, and through the

development of an "off-the-shelf" suite of community recovery modules. Success in this area will require the continued involvement of, and interaction between, relief and recovery agencies in FMD preparedness. It is recognised that flexibility would be required to tailor particular measures to meet the needs of the FMD emergency as it unfolded.

9.26

The findings of the Productivity Commission's report and other relevant papers such as the impact statements prepared during *Exercise Minotaur* and reports on the 2001 UK outbreak could be used to review and revise national relief and recovery plans.

9.27

Relief and recovery preparedness should also be part of individual jurisdiction reports on progress on improving prevention, preparedness and response capacity as requested by COAG's April 2002 communique (see Annex B).

Recommendation 27 – high priority. Jurisdictions agree to assess the potential social and economic impacts of an FMD outbreak, review FMD relief and recovery plans, identify best practice guiding principles and implement improvement where warranted. In this context jurisdictions commit to share information with other jurisdictions.

Annex A – Organisation and Conduct of Exercise Minotaur

This Annex discusses how *Exercise Minotaur* was developed, conducted and reviewed. It incorporates reports from the national and observers' debriefs.

Review of Preparedness

The COAG decision of 8 June 2001 required the upgrading and testing of emergency plans and the development by states/territories and the Commonwealth of complementary whole-of-government frameworks for their respective jurisdictions.

All jurisdictional emergency animal disease plans were reviewed and tested. *The Government and Livestock Industry Costing Sharing Deed, AUSVETPLAN Summary Document, AUSVETPLAN Control Centres Management Manual and AUSVETPLAN FMD Strategy* were all reviewed and reissued prior to *Exercise Minotaur*. The new Commonwealth FMD plan and the Memorandum of Understanding (National Response to an FMD Outbreak) between Commonwealth and state/territory governments were developed and tested during the simulation.

Training was conducted in all jurisdictions and within industries including for personnel operating in Local Disease Control Centres (LDCC), State Disease Control Headquarters (SDCHQ), the Consultative Committee on Emergency Animal Diseases (CCEAD) and the National Emergency Animal Disease Management Group (NMG).

A series of exercises were planned and conducted by all jurisdictions and within many industries prior to *Exercise Minotaur* (see Attachment 1 to this Annex for a list of exercises held from June 2001-August 2002).

By August 2002, Australia was undoubtedly better prepared for an emergency animal disease outbreak than it had ever been.

Developing the Simulation

Commonwealth and state/territory governments and industry supported the development of *Exercise Minotaur*.

The Simulation Steering Committee was established and met every month to:

- oversee the development, conduct and follow-up of the simulation
- fulfil the communications roles as per the communications strategy
- report on the simulation to governments and industry.

The Simulation Working Group reported to the above committee and met every month to:

- support the development of the *Simulation Project Plan*
- fulfil the communications roles as per the communications strategy
- support the development of the *Simulation Plan*.

A Simulation Control Team was formed to develop, in detail, the simulation plan, and to conduct and evaluate the simulation. Members of the Simulation Control Team, representing all jurisdictions and industry, developed:

- the aim, objectives and scope of the simulation
- the disease and socioeconomic scenarios that formed the background to the simulation
- the concept of operations and rules of engagement
- the briefing package for simulation facilitators, evaluators and assistants
- briefings for jurisdictions and industries;
- the simulation control messages that would form part of the script for *Exercise Minotaur*
- the communication plan for the simulation.

A risk management approach was adopted for risks to the development and conduct of the national foot-and-mouth disease simulation. Risk treatment options were considered, and risk treatment strategies developed and implemented. The following risks were identified and addressed:

- risks to the development of simulation:-
 - adverse reaction to simulation following misreporting
 - unexpected media and community response
 - simulation informs or inspires terrorists or hoaxers
 - senior participants not committed to being prepared
 - simulation is inadequately linked with other FMD activities
 - unable to obtain sufficient human and other resources for a realistic simulation
 - essential policies and strategies not finalised, key inputs and systems not developed.
- risks to the conduct of simulation:-
 - deliberate sabotage of simulation
 - change of government during simulation
 - communications system breakdown
 - another emergency occurs requiring withdrawal of an agency or jurisdiction
 - a major animal disease occurs in another country
 - a real major emergency animal disease outbreak occurs
 - unforeseen circumstances make it inappropriate to conduct the simulation
 - simulation participants do not follow plans and procedures
 - a breakdown of cross-jurisdictional cooperation occurs
 - legal liability due to infringement of public rights, damage to property or economic harm.

Aim, Objectives and Scope of the Simulation

The **aim** was to hold a full-scale simulation under third party oversight to test Australia's national arrangements for managing post-border aspects (preparedness, response and recovery) of an FMD outbreak as a part of continuous improvement.

The **objective** was to test the integration and functional capacity of national arrangements. The sub-objectives of the integration and functional capacity of the national arrangements that were to be tested included:

- the integration of national arrangements (both intra- and inter-jurisdictional)
- administrative arrangements in support of operations
- the capacity and capability of resources for managing an FMD outbreak and its consequences
- the logistics arrangements
- communication
- disease control policies and strategies as described in AUSVETPLAN
- trade management arrangements
- socioeconomic relief and recovery strategies and processes.

The simulation **scope** encompassed integration across State/Territory and Commonwealth jurisdictions, industry and the community.

The simulation scenario and action incorporated the following:

- at least 3 States/Territories were to have a simulated FMD outbreak to test cross-border arrangements and to operate in a range of physical and industry environments
- the other States and Territories were to be 'disease free' but were required to undertake necessary disease surveillance and socioeconomic recovery activities, and participate in national decision-making and resource allocation
- impacts on the dairy, beef, pork and sheep industries, feed lots, live animal export and feral animals
- impacts on other rural industries such as those concerned with wool and grain
- impacts on rural communities
- impacts on the Australian economy and non-rural communities and industries
- activation of up to 3 Local Disease Control Centres (LDCC's), at least 3 State Disease Control Headquarters (SDCHQ's), the Consultative Committee on Emergency Animal Disease (CCEAD), the National Disease Control Headquarters (NDCHQ), the National Emergency Animal Disease Management Group (NMG), the High Level FMD Management and Recovery Group, COAG, PIMC and other taskforces
- simulated trade management strategies with overseas posts, OIE and trading partners (eg. USA, EU, Japan and Egypt).

The simulation did not incorporate:

- physical field operations
- actual communication with other countries
- a national information management system
- a national resource management system
- the tracing of animal movements

Conducting the Simulation

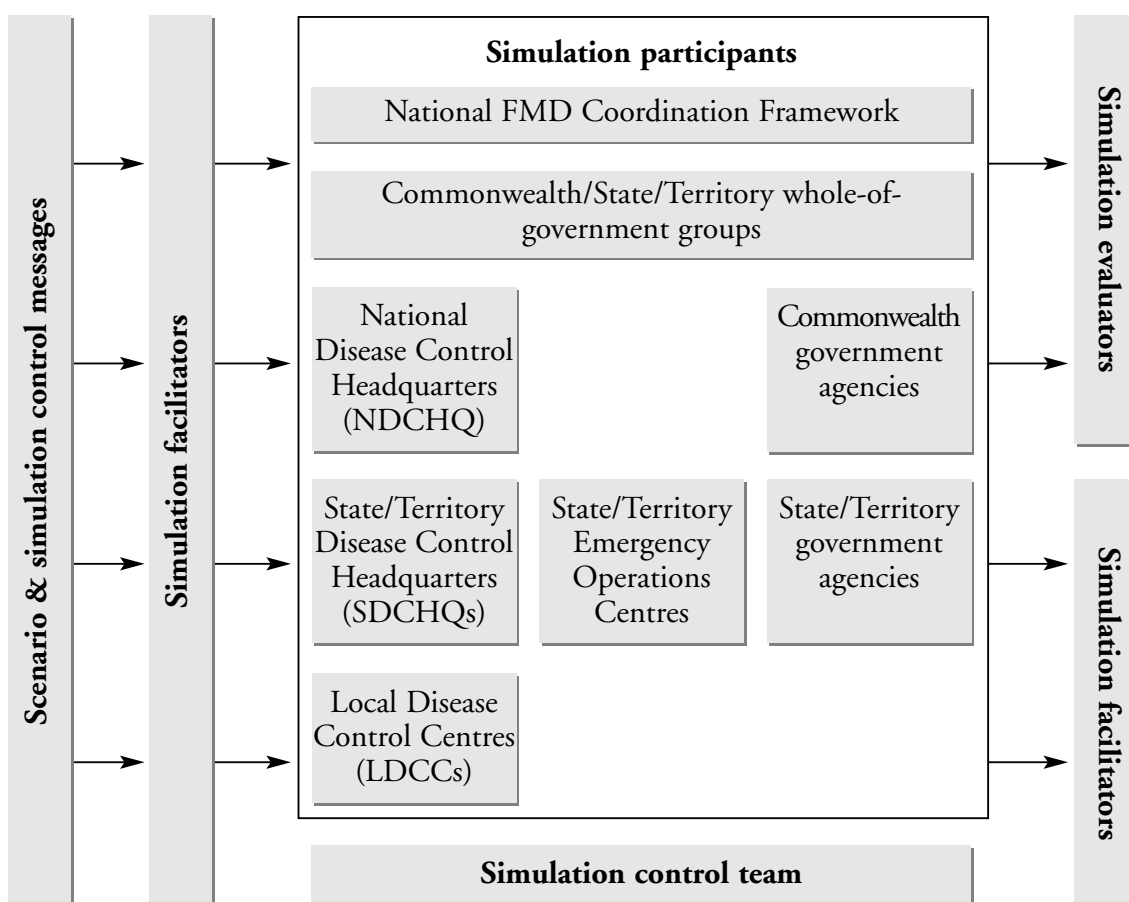
The simulation tested national processes and capabilities, took place in an operational environment and required participants to perform their roles. Emergency operations centres were established and management groups were required to meet and make decisions.

The simulation consisted of a number of elements, including:

- the scenario
- simulation control messages
- simulation control staff
- simulation participants (see the diagram below).

The scenario was not revealed in its entirety until after the simulation, but information on what was ‘happening’ in the scenario was conveyed to simulation participants through simulation control messages. The simulation control messages were prepared prior to the simulation and passed by simulation control staff to simulation participants at pre-arranged times. The simulation control messages had attached, for the eyes of simulation control staff only, the expected actions of participants.

Figure 1: Overview of the simulation



The simulation control staff were located in Canberra and at each operations centre and management group location. These staff and their roles were:

- simulation control team – provided overall direction and control of the simulation
- simulation facilitators – provided briefings and debriefings for simulation participants, provided input into the simulation of events and information, monitored the progress of the simulation, reported to the control team and solved problems when the simulation went off-track
- simulation evaluators – worked in a jurisdiction other than their own, observed simulation participants, noted actions taken against expected actions, and evaluated arrangements based on these actions
- simulation assistants – assisted simulation facilitators and evaluators and fulfilled their roles as required.

There were 18 people in the simulation control team and 80 simulation facilitators, evaluators and assistants, selected from Commonwealth and state/territory governments and industry. All simulation facilitators, evaluators and assistants were provided with a 1-day briefing session.

A select group of observers, both international and domestic, were asked to review the simulation and through visits, interviews and debriefs provide an overall assessment of the efficiency, effectiveness and relevance of the simulation to FMD management.

The simulation required the actual deployment of personnel in each state/territory, in Commonwealth organisations, in national organisations, and in industry, at each level of the response structure. Simulation participants worked from their designated operations centre or normal work areas. There were no field deployments. The role of simulation participants was primarily decision-making and undertaking activities to support the decision-making. The roles were as described in the relevant plans and manuals such as AUSVETPLAN, the Government and Industry Cost Sharing Deed in Respect to Emergency Animal Disease Responses and the Memorandum of Understanding – National Response to a Foot and Mouth Disease (FMD) Outbreak.

Communication within and between organisations participating in the simulation was in accordance with existing organisational and jurisdictional communications plans. Requests for information relating to the conduct of the simulation were referred to the AFFA communication staff, Canberra. Requests for information relating to the performance of individual organisations or jurisdictions were referred to the communications staff of those organisations or jurisdictions. Media and public inquiries were simulated within the simulation by the simulation control team.

The scenario time periods were played out in real time by the simulation participants as shown in the table below:

Real time	Simulation time period	Action	Day #
Thursday 5 – Friday 6 September 2002	Suspected disease	Pre-reading provided to simulation participants	D-3 – D-4
Monday 9 September 2002	Confirmation of FMD outbreak	Simulation from 9:00am to 5:00pm	DO
Tuesday 10 September 2002	2nd day of the outbreak	Simulation from 9:00am to 5:00pm	D+1
Wednesday 11 September 2002	7th day of the outbreak	Simulation from 9:00am to 5:00pm	D+7
Thursday 12 September 2002	End of 3rd month of outbreak	Simulation from 9:00am to 5:00pm Debriefs for management groups	D+84
Friday 13 September 2002	—	Debriefs for emergency centres	—

The dates and times ("timetable of engagement") at which it was expected that emergency centres would be set up and management groups would meet were pre-determined and communicated to simulation participants prior to the simulation. This was an unusual move in the conduct of a simulation, but was taken to ensure that people would be available, as the simulation was not designed to test activation, alerting and the setting up of control centres.

The rules of engagement were provided to all simulation participants on Thursday 5 September at 9:00am by email. The purpose of the rules was to explain how the simulation would operate to enable simulation participants to participate fully. The rules of engagement covered:

- simulation objectives
- commencement
- how is the simulation to be conducted
- security
- information limitations
- timeframe
- recovery
- task completion
- media information
- debriefing
- termination.

Reviewing the Simulation

Simulation review and reporting were undertaken to:

- learn and communicate lessons from the decisions made, actions taken and communication within the simulation to improve the integration of national arrangements and animal disease emergency preparedness as part of the process of continual improvement
- learn and communicate lessons from the management of the simulation for future simulations.

The review of *Exercise Minotaur* ensured that:

- the validity of the simulation was assured
- the process of evaluation would stand up to scrutiny, i.e. be a process that produces valid results
- the evaluation framework was used consistently at all levels of the simulation, and in each part of the evaluation process
- the evaluation was inclusive and all simulation participants were allowed to express opinions regarding emergency animal disease preparedness and the efficacy of the simulation
- perceived individual agency/jurisdictional strengths and weaknesses were handled sensitively
- consensus could be achieved on the recommendations for continual improvement from key decision makers in each jurisdiction and in industry
- the resulting recommendations were evidence-based, reasonable, practical, achievable and measurable.

The review consisted of two major parts:

- validating the simulation as a realistic and thorough test (performed prior to and during the simulation)
- evaluating decisions made, actions taken and communication (activity) within the simulation (performed during and after the simulation).

The review criteria were:

- a) for the validity of the simulation - the simulation is judged to be an achievable, realistic, thorough and measurable test in relation to the objectives
- b) for evaluating simulation activity - achievement (including preparedness, responsiveness and problem solving) in all areas of the objectives of the simulation.

Validity of the Simulation

To ensure the validity of the simulation:

- the simulation outline was endorsed by the Simulation Working Group and Steering Committee
- the simulation was developed by a multidisciplinary team with internal checks;
- a pilot simulation was conducted to ensure internal consistency and efficacy of the simulation scenario and messages

- independent reviewers were asked to validate the simulation as an appropriate test of Australia's national arrangements for managing post border aspects (preparedness, response and recovery) of an FMD outbreak and to identify key risks and vulnerabilities associated with the simulation (see Attachment 2 to this Annex for their report)
- simulation observers were asked to comment on the value of the simulation after its conduct.

Evaluating Activity within the Simulation

Activity within the simulation was evaluated using the following material:

- participants' daily evaluations—participants were requested to provide both written and verbal comment on each day's activities
- daily debrief reports—simulation facilitators and evaluators conducted daily debriefs of participants at each emergency operations centre
- simulation evaluators' reports—simulation evaluators worked at each emergency operation centre and with each management group and produced reports assessing how well processes and arrangements worked under each of the simulation objectives (and providing evidence for these assessments)
- industry/agency/jurisdictional debrief reports—each industry, agency and/or jurisdiction was expected to conduct a debrief of their participation in the simulation—a number of these were received and analysed by the Simulation Control Team
- international and domestic observers' reports and debrief reports—these people were invited to provide recommendations on the potential improvement of Australia's FMD preparedness, particularly the integration and communication aspects, and to validate the simulation as a realistic and thorough test of such preparedness (see Attachment 3 to this Annex for the report on the observers' debrief)
- the national debrief—this was conducted on 9 October and involved invited, key jurisdictional and industry decision makers (see Attachment 4 to this Annex for the report on the national debrief)
- the NMG debrief—this was conducted on 4 October and involved representatives from each jurisdictions agricultural agency and relevant national industry groups
- the control team report—a description of how to improve the planning and conduct of future simulations developed by the Simulation Control Team (see Attachment 5 to this Annex for the report).
- reports from jurisdictional communications managers who were part of the inter-jurisdictional communications network that was formed for the purposes of *Exercise Minotaur*.

There was a remarkable amount of agreement between the various debriefs and reports as to simulation findings and recommendations.

Communication

a. Pre-Exercise Minotaur

A key objective of the pre-*Exercise Minotaur* communication strategy was to ensure domestic and international audiences understood that the exercise from 9-13 September 2002 and during any of the smaller simulations in the lead up to the simulation were not real outbreaks of FMD.

Another key objective was to create an understanding of the structure of the national FMD coordination framework and how it would be tested during the simulation. Particular emphasis was placed on communicating the role of industry and local government in the high-level group meetings.

Key media messages were: Australia has been free of FMD since 1872, the simulation would be a desktop or paper-based exercise only and there would be no testing of field operations to combat disease.

The communications campaign targeted domestic and international media, foreign embassies based in Australia, overseas posts, the tourism industry, producers, the processed food industry, major supermarkets, internal staff of various Commonwealth, state and territory government departments involved in the exercise, rural women's networks, local government, Federal and State Parliamentary Members, Australian and international veterinarians, importers, exporters, and rural and regional communities.

Information was disseminated through the overseas cable network, the world organisation for animal health (Office International des Epizooties – OIE), websites, face-to-face briefings, press conferences, press releases, simulation newsletters, fact sheets, and direct correspondence. *Exercise Minotaur* Simulation Working Group members were also responsible for informing their organisations and stakeholders about the simulation.

The campaign proved successful. There were no incidents of misreporting or reports of industry or public fears of a real outbreak of FMD in Australia or overseas throughout the week. The Australian media reported accurately on the exercise with nationwide coverage of the simulation, particularly on the first day, Monday 9 September.

Domestic communication activities

Public communications about the simulation targeting domestic audiences commenced in some jurisdictions up to a year in advance of the exercise. It was essential that all public messages were coordinated nationally to ensure consistency of messages. New South Wales, for example, used Animal Health Australia's Protect Australian Livestock Awareness Week in 2001 to first communicate about the exercise. This was followed by regular articles in its publication, *Agriculture Today*, which went to farmers.

Victoria also commenced its communication activities 12 months in advance by holding an all political parties Parliamentary briefing followed by regular updates from its project team in the lead-up to the simulation that targeted key groups.

Formal domestic public communications at the Federal Government level began in April 2002 marked by the establishment of a small communications team within Agriculture, Fisheries and Forestry - Australia's (AFFA) FMD Taskforce. At the same time, the Federal Minister for Agriculture, Fisheries and Forestry issued a media release announcing *Exercise Minotaur* followed by subsequent announcements in May, June, July, August and September 2002.

All jurisdictions issued press releases from either their agriculture ministers or First Ministers in the weeks immediately preceding, or to mark the start, of the simulation. Commonwealth, state and territory agriculture departments briefed local media, industry and other stakeholders in the run-up to the simulation about their own particular engagement in the exercise. Various trade, primary industry, veterinary and scientific journals were targeted and supplied with articles on the exercise.

A briefing of key national rural media was conducted by the Secretary of AFFA, Michael Taylor, the Australian Chief Veterinary Officer, (ACVO) Dr Gardner Murray, and the Head of the AFFA FMD Taskforce, Tim Roseby, in May 2002.

An information kit was sent in May 2002 to 130 key media groups in Australia including major metropolitan newspapers, television networks and radio stations, regional daily newspapers as well as rural newspapers and rural radio stations across Australia.

The Federal Minister for Agriculture, Fisheries and Forestry provided a briefing to the Federal Press Gallery in late August and an article from Dr Murray was distributed to the media in early September 2002.

Several other jurisdictions conducted media briefings with key state journalists. Queensland sent a specialised package of information to all media outlets in the state and conducted a number of pre-Minotaur interviews specifically with regional and rural media. Victoria targeted the Herald and Weekly Times along with ABC National Country Hour and other media groups. The Victorian Chief Veterinary Officer did some media interviews ahead of the simulation. The Northern Territory undertook regular radio interviews on the ABC's National Country Hour along with interviews with other media. Western Australia emailed all rural media and regional media outlets in the state including radio, TV and print in July explaining why the simulation was being undertaken. Amongst other activities, Western Australia also hosted a media briefing on its crisis communications plans, state emergency plan and the AUSVETPLAN.

Editions of a simulation newsletter, The NatSim Herald, were issued in February, March, May, July and September 2002, distributed to some 237 stakeholders (including all Australian overseas posts) and made available on AFFA's *Exercise Minotaur* website.

The majority of jurisdictions generated websites that provided basic information for the community.

Another important target audience was the staff of the various government departments and organisations directly involved in the exercise. The Director-General Agriculture in NSW sent a circular to all officers explaining why *Exercise Minotaur* was being held and Victoria provided regular briefings and articles for its staff. Western Australia generated an

internal newsletter for staff and used email to inform all employees in the Department of Agriculture about its role in the simulation. Queensland sent regular emails to those staff involved and conducted briefings with internal sections.

AFFA staff in Canberra were briefed about the simulation through a presentation from the FMD Taskforce in July, as well as regular articles in a staff bulletin, all-staff emails from the Secretary, and advice posted on the AFFA Intranet site AFFALINK. FMD Taskforce staff also conducted a series of face-to-face briefings with various Divisions.

All AFFA staff were advised of the simulation through a fact sheet inserted in pay slips across the country on 18 July. Articles were also placed in the Northern Australia Quarantine Strategy News, the AQIS Bulletin, and the Levies Bulletin.

It was vital to ensure that AQIS were aware of the simulation and able to answer any queries as it is in regular contact with importers, exporters and producers. Regional AQIS public relations officers and border control managers were briefed by teleconference and email. A PowerPoint presentation about the simulation was distributed to allow regional managers to brief their staff.

All jurisdictions conducted mini-simulations in the lead-up to *Exercise Minotaur* to test their individual preparedness for a major animal disease outbreak. These mini-simulations were used to highlight the national simulation and each jurisdiction's engagement.

Other activities were also used to heighten awareness about the simulation. For example, NSW used visits by its Agriculture Minister to sale-yards to publicise *Exercise Minotaur*. Western Australia held an industry communication day to explain the CCEAD process, communication in a crisis, *Exercise Minotaur* and media management. Queensland's Primary Industries Minister went to the LDCC in Toowoomba and invited the media to attend.

A key source of information for primary producers is the Commonwealth Regional Information Service hotline and website operated by the Department of Transport and Regional Services (DOTARS). AFFA supplied DOTARS with a script for its hotline call centre and text for its website. DOTARS Public Relations also developed and implemented an internal communications campaign to inform its staff of the nature and purpose of the simulation.

DOTARS distributed information about the simulation to 730 councils around the country through its National Office of Local Government. FMD taskforce members briefed the national executive of the Australian Local Government Association (ALGA) and provided an article about *Exercise Minotaur* that appeared in the ALGA newsletter.

The Australian tourism industry was made aware of the timing and nature of the simulation through a letter distributed by the Federal Department of Industry, Tourism and Resources. Advice was also provided to the Australian Food and Grocery Council, Supermarket to Asia, and Meat and Livestock Australia for dissemination to retailers and processors.

To ensure consistency in public and media messages about the simulation, draft media releases and talking points were circulated through a newly created national agricultural communications network. This network was established to share information about

emergency animal disease outbreaks to ensure comments to the public were consistent. All jurisdictions alerted the network of forthcoming public announcements about the simulation. This was important for enabling the Commonwealth to be aware of any state-based reports that could be picked up and misinterpreted as a real outbreak by international audiences. With a range of agencies from each jurisdiction involved in the simulation, the network provided a focal point for the dissemination of key messages and provided a key point of contact for media enquiries.

At a grassroots level, members of the FMD Taskforce spoke at various conferences in regional Australia.

International communication activities

Foreign press based in Australia were briefed on the nature and purpose of the simulation through the Department of Foreign Affairs and Trade's (DFAT) International Media Centre in Sydney.

Australia's overseas posts were supplied with a set of talking points on the simulation so they would be able to respond immediately to any misreporting about the exercise without the need to refer to Canberra for advice. A number of cables were sent to posts regarding the simulation. Posts were also asked to monitor domestic media in their country for any signs of misunderstanding of the nature of the simulation.

A briefing for the diplomatic corps in Australia was conducted by Dr Murray in Canberra on Wednesday 21 August at which representatives from 38 embassies attended.

Advice on the simulation was provided to the OIE which placed an official alert on its website.

Articles were also published in international veterinary newsletters and an alert advising of the simulation was also placed on the AQIS ICON import conditions database website, regularly used as a source of information by Australia's overseas trading partners.

b. During Exercise Minotaur

There was virtually saturation media coverage of the exercise throughout Australia, particularly on the first day and especially from radio stations and rural newspapers. Coverage tapered off during the course of the week as the media focus turned to commemorating the first anniversary of the terrorist attack on New York. Interest picked up again at the conclusion of the week with the media focusing on outcomes and lessons learnt.

Each jurisdiction marked the beginning of *Exercise Minotaur* with the issuing of a press release. During the course of the week, media were invited to the various national, state/territory and local disease control headquarters to generate coverage about the simulation.

Three press conferences were held at AFFA during the week that generated nationwide television, newspaper and radio coverage in the rural, regional and metropolitan media.

Other media events at the National Disease Control Headquarters (NDCHQ) included a picture opportunity for media (television cameras/stills, etc), ad hoc media interviews mostly for radio, and a PICFAC in the emergency management room with the Federal Minister for Agriculture, Fisheries and Forestry.

Journalists from key rural media outlets The Land, Herald and Weekly Times, and ABC Radio National Country Hour were allowed access to the NDCHQ from 12–5pm on Monday 9 September to observe the simulation. Under agreed rules of engagement, they did not approach or seek comment from any participant. They observed but did not report on a simulated press conference with Secretary Michael Taylor at 3pm.

Australian Broadcasting Commission (ABC) Rural Radio provided the most extensive coverage of the simulation, with National Country Hour reporter Julie Doyle filing daily reports and providing updates on an *Exercise Minotaur* website established at the ABC Rural News's homepage. Ms Doyle was later interviewed by British Broadcasting Commission (BBC) World News in London as part of a BBC report on *Exercise Minotaur*. The Weekly Times also provided in-depth coverage with articles appearing before, during and after the simulation.

Photographs of activity at disease control centres around the country were posted on the AFFA's *Exercise Minotaur* website for media use.

c. Post-Exercise Minotaur

Post-*Exercise Minotaur* communications began on Thursday 19 September with an address to the National Press Club by Dr Murray. Media interest has focused on the outcomes and the lessons learnt. National and jurisdictional debriefings have been held with key national and industry bodies.

Prior to *Exercise Minotaur*, more than 100 countries asked if they could observe the simulation. As this was not possible, an undertaking was given to share findings and outcomes. Debriefings with major trading partners and OIE members has commenced.

Further communication with stakeholders, including the media, will take place after COAG consideration of *Exercise Minotaur* outcomes.

Conduct of Future Simulations

The Simulation Control Team was faced with a daunting task in developing, conducting and evaluating a national simulation, the like of which had not been undertaken before in Australia, if not the world. In order to learn and communicate lessons concerning this simulation for the benefit of future simulations, the Simulation Control Team reviewed its own performance (see Attachment 5 to this Annex). The major findings of this review were:

- it is essential that all stakeholders are represented on the team that develops the simulation
- the team should comprise people from a range of backgrounds with a suitable mix of skills
- members of the team should receive training and assessment in exercise management and project management.

Attachment 1 to Annex A – List of Exercises

National

- Trade Management Workshop–November 2001
- Relief and Recovery Simulation–November 2001
- Trade Management Mini-simulation Exercise Trojan Horse–17 May 2002
- Relief and Recovery Mini-Simulation–24-25 July 2002

Commonwealth

- Commonwealth Agency FMD Sensitisation Exercise–13 July 2001
- AFFA Major Animal Disease Incident Simulation –17 December 2001
- Quarantine Act Simulation Exercise Labyrinth–31 May 2002
- AFFA Major Animal Disease Incident Simulation Exercise Jigsaw–23 July 2002
- Commonwealth FMD Simulation Exercise Synchronicity–26 July 2002

New South Wales

- FMD Exercise One – Exotic Disease Operational Plans for Saleyards and Abattoirs–four major workshops from December 2001 to April 2002
- FMD Exercise Two – Disposal of Animals and Animal Products–14 March 2002
- FMD Exercise Three – State Emergency Management Committee FMD Exercise–30 June 2002
- FMD Exercise Four – Destruction of Animals during an FMD Outbreak–31 August 2002
- FMD Exercise Five – Exercise on Sourcing of Resources for FMD Control Program–30 June 2002
- FMD Exercise Six – Location of Local Disease Control Centres–30 June 2002

Victoria

- Regional Emergency Response Awareness Workshops – Hamilton (July 2001) and South Gippsland (November 2001)
- Dairy Industry FMD Workshop – December 2001
- Government Awareness – Ongoing from mid 2001
- Site Supervisors Training Course – December 2001
- Control Centre Information Management – June 2002
- Whole-of-government Response – July 2002

Queensland

- Exercise Wild Thing – Late October 2001
- FMD Debrief of UK Participants – 17 September 2001
- Control Centre Exercise
- Disaster District Exercise

- Industry Presentations
- Local Government Presentations
- Infected Premises Site Supervisor Workshops
- Exercise Sensee – March 2002
- Control Centre Workshops – Three similar workshops in 2002

Western Australia

- Whole-of-government FMD Awareness Seminar – 9th October 2001
- Industry Media Spokespersons Workshop – March 2002
- Control Centre Communications Workshop – May/June 2002
- Control Centre Workshops – Two exercises during 2002

South Australia

- Call-out Exercise – December 2001
- Relationship between Response Plans (State and National) and State Disaster Plan – 1 May 2002
- Role/Function of the State Operations Centre (SEOC) and District Emergency Operations Centre (DEOC) – 24-25 July 2002
- Coordination by South Australian EMC Committee of an FMD Incident – May 2002

Tasmania

- Diagnostic Team Exercise
- Whole-of-government FMD Workshop

Northern Territory

- FMD Workshop –21-22 May 2001
- FMD Awareness Workshops – Four workshops November/December 2001 in Darwin, Alice Springs and Katherine and Tenant Creek

Australian Capital Territory

- ACT Animal Disease Emergency Plan Exercise Exercise Outbreak–16 November 2001
- ACT-NSW Animal Disease Emergency Cross Border Workshop–28 May 2002

Attachment 2 to Annex A – Review of Simulation Planning

Background

The Director of the National FMD Simulation invited a number of people (the 'Review Team') to review the structure and progress of planning for the simulation at a meeting in Canberra on 8 August 2002. The purpose of the review was twofold:

- to ensure that the simulation would perform a robust test of Australia's national arrangements for managing post border aspects (preparedness, response and recovery) of an FMD outbreak as part of continuous improvement, that is - the proposed scenario was realistic, the proposed methodology was adequate, robust and flexible, continuity between events and time was comprehensible, and the proposed methodology and strategic content would facilitate achievement of the objectives
- to identify key risks and vulnerabilities associated with the simulation.

Participants

The members of the Review Team were Mr Roly Nieper (AHA), Wing Commander Tom Cowan (Dept of Defence), Mr Barry McPhee (relief and recovery consultant) and Mr Dudley McArdle (EMA). Mr Bruce Esplin (Emergency Services Commissioner, Victoria) was unable to attend, but evaluated the simulation plan independently. He was mindful of the challenge set for writers and believes the team had done an excellent job turning a massively complex issue into a credible exercise. He believed that the exercise should bring to a head whole-of-Government issues at a State/Territory and national level.

Process

The review adopted the following process:

- analyse provided package of information
- review additional information via presentations by members of the Simulation Control Team - simulation plan, scenarios, master event schedule, message inputs and expected actions, additional material as requested
- conduct review
- report.

Results

The Review Team, besides addressing the purpose outlined above, paid particular attention to the agreed objectives of the simulation. The team spent considerable time quizzing various members of the Simulation Control Team to follow themes, to expand on various topics and to explain aspects of the process. At the end of their deliberations, the Review Team agreed a number of points:

- A huge amount of first class work had been done in the design and preparation of the simulation. The Review Team complimented the Simulation Director on the thoroughness of the process that had been adopted and on the comprehensive and professional nature of the documentation prepared.
- The Review Team was convinced that the proposed scenario was realistic, although they noted that there were some risks and vulnerabilities that the Simulation Director may have wished to address. (See under 'risks and vulnerabilities' below).
- The simulation methodology was sound, robust and flexible.
- The continuity between events and time was comprehensible, given the actual time constraints of, in essence, a four-day exercise.
- The conduct of the simulation as planned would result in achievement of the eight simulation objectives.

Risks and Vulnerabilities

One of the key risks is the "creation of reality". Because of the strategic level of the simulation, much of the 'technical' detail concerning the site(s) of disease infection was either false or non-existent. This may have caused participants at various levels to not 'play it for real', thus reducing or destroying the process. Similarly, at all levels, there was the potential for participants to argue with the setting. The Review Team was convinced that these situations could be managed by appropriate intervention by the facilitators at each site. Nevertheless, steps should be taken to ensure that facilitators are equipped to handle those situations.

Another "reality" problem would occur because of the accelerated time periods. Disease control people, in particular, have had considerable experience at exercising the initial outbreak procedures, but have had little exposure to the results of an outbreak at the later time periods. Once again, facilitators would need to be sensitive to the need for close monitoring and, where appropriate, remedial action, to help all players adapt to the "reality" of the new time periods.

Further, it was felt that the Simulation Control Team should endeavour to engage the commitment of the chairs of the various committees and groups to ensure that they see their role in terms of ensuring the success of the simulation, rather than as critics. This would substantially eliminate much of the pressure that could be placed on the facilitators.

The role of the facilitators was seen as a significant strength of the simulation, but it was the opinion of the Review Team that it also represents a vulnerability. They would be under significant pressure, as the agents of the Simulation Control Team, to ensure the simulation goes according to plan. At the same time, they may experience conflicting pressure from their work colleagues, given that facilitators have been selected to act within their own work environment.

While the Review Team was convinced that the Simulation Control Team recognises the special role played by the facilitators, it was suggested that strategies related to stress recognition (perhaps by other team members), stress relief, debriefing and support be considered by the Simulation Control Team in relation to the facilitators. Again,

although the Review Team was convinced that redundancy and fallback measures had been considered for all exigencies, it was recommended that special thought be given to such arrangements for facilitators. Care should be taken to ensure that participants at all levels are reminded of the potential psychological issues that may confront some participants as a result of their involvement in what would be a relatively realistic and stressful situation. Opportunities for debriefing etc. were included in arrangements for the simulation.

Although it was recognised that the role of the High Level Group in the simulation would be, in essence, one of receiving briefs on the situation as it develops, the Review Team wondered if the overseas observers, in particular, might have expectations of a greater participatory role by that Group.

The Review Team identified vulnerabilities presented in the multiple communication strands within the simulation. In general the Simulation Control Team had also identified them, but it was thought useful to highlight them for special consideration.

- The continuing risk that overseas markets in particular, but also domestic sectors, may infer from the simulation activities that there was a real FMD outbreak in Australia.
- The importance of identifying early who would be "the face of FMD" for media purposes.
- As a general rule, all communications with industry were routed through government agencies (State Emergency Management Committees, State Agriculture agencies, etc). There might be mileage in considering more direct communication with trade and industry sectors through specific messages or as "info" addressees on some of the communications. The potential then exists for direct (and thus more timely?) communications from those sectors.
- Cognisance should also be taken of the potential vulnerabilities (and useful tools) created through industry-to-industry communication that would take place (particularly internationally).
- While the Review Team recognised the decision to limit the consideration of relief and recovery matters, it would appear that a unique opportunity to maximise the learning and awareness of the scale and complexity of such issues might be lost. Consideration should be given to inclusion of maximum opportunities in the scenarios presented at all levels, particularly in the "indirect", non-agricultural industries areas, to present decision makers with realistic situations.

Conclusion

In summary, the Review Team was impressed by the planning and preparation efforts that went into the creation of the FMD Simulation. In identifying some risks and vulnerabilities, they were nonetheless confident that the methodology and content of the simulation could effectively test the national arrangements and would achieve the stated objectives.

Attachment 3 to Annex A – Report on Observers' Debrief

Overview

The observers' debrief (held on 13 September 2002 from 8:30am – 11:30am) concluded that, within the limitations of simulations, *Exercise Minotaur* was an effective test of Australian FMD preparedness, and has shown the way for continuous improvement of our planning, training and resourcing.

The major recommendations of the debrief were that it is necessary to:

- clarify roles and responsibilities and decision making processes of key bodies in the National FMD Coordination Framework to allow rapid decision making
- continue training of personnel at all levels of government and in industry
- develop a national information management system for decision support
- improve communication between jurisdictions, between government and industry and with the public
- develop vaccination, zoning and livestock standstill policies and strategies with pre-planned options
- develop pre-determined, long-term socio-economic relief and recovery strategies and processes
- develop a capacity to "think ahead of the game" during an emergency operation
- achieve COAG acceptance of key findings of *Exercise Minotaur* and develop a strong strategy to manage the implementation of actions arising from the simulation
- develop and conduct a program of simulations with an oversight committee to follow up the testing of key areas of animal disease preparedness.

The next steps following *Exercise Minotaur* are to report to PIMC and COAG on the overall outcomes of the simulation, develop a detailed evaluation report with a limited number of key recommendations, and develop a national action plan to guide implementation of these recommendations.

Background

A select group of invitees were asked to observe the conduct of *Exercise Minotaur* to review the simulation and through visits, interviews and debriefs provide an overall assessment of the efficient, effectiveness and relevance of the simulation to FMD management. The observers were:

- Ms Jenny Bacon (UK)
- Dr Dorothy Geale (Canada)
- Dr Mohd Nordin Mohd Nor (Malaysia)
- Dr Mark Teachman (USA);
- Dr Derek Belton (NZ)

- Mr Murray Rogers
- Mr Dennis Mutton
- Mr Dudley McArdle (EMA)
- Dr Martyn Jeggo (AAHL)

The observers monitored simulated disease control activities in Queensland, NSW, and Victoria and at the National Disease Control Headquarters, and whole-of-government activities through meetings and teleconferences in Canberra. They completed short reports for each location or meeting they attended, and provided overall reports in the weeks following the simulation. The debrief drew on their first-hand experience and developed ideas for improving Australia's FMD preparedness.

Attendees

The observers plus:

- Mr Geoff File (NSW Dept of Agriculture)
- Mr Bruce Esplin (Victorian Dept of Justice)
- Mr Mike Taylor (AFFA)(attended part)
- Mr Gardner Murray (AFFA)
- Ms Leanne Shea (AFFA)
- Mr Peter Koob (EMA)

Method of the debrief

The purposes of the observers' debrief were to validate the simulation as a realistic test of such preparedness and summarise recommendations on the improvement of Australia's FMD preparedness.

The following method was used during the debrief.

- A. Questions to elicit comments on the validity of the simulation as a realistic and thorough test of Australia's FMD preparedness –
 - To what extent did the simulation test the national integration of Australia's FMD preparedness arrangements?
 - Did the simulated environment, as compared to a real emergency, unduly influence the actions and decisions of simulation participants?
- B. Questions to elicit recommendations for the improvement of Australia's FMD preparedness (looking at simulation objectives, and established structures, processes and training) –
 - What response and recovery activities went well during the simulation? (evidence)
 - How would you improve Australia's FMD preparedness?
- C. Consideration of the next steps.

Findings of the debrief

A. Validity of the simulation

- The simulation was, obviously, not a real emergency event, and it is necessary to separate out decisions and actions taken that were 'artefacts' of a simulation from those decisions and actions that would have been taken in a real event.
- The artificiality of jumping from day 2 to day 7 to day 84 caused some problems. This could mean that decisions made may have been different during the simulation as to real emergency.
- A missing component of the simulation was the media/politics issue that could severely affect how the disease is managed.
- During the simulation the paperwork did not spell out the issues and the options with background information and advice on options. The simulation committee meetings had more of a general chat. An example of how the simulation was different to real life was CCEAD, which is used to making decisions all the time but this time seemed to be "waltzing around".
- Although the simulation tested the framework we had in place, there are other aspects not tested. We tested the "highway" and now need to test the back roads and laneways.
- Observations showed that processes during the simulation were often nothing like a real life situation. There would have been a lot of informal discussion. We need to formalise the idea of "informal discussion". People often didn't know exactly how to behave when communicating during the simulation. In a real emergency people would be on the phone to each other all the time.
- Clearly the fact that this was a simulation did have an impact on how people operated but the simulation itself still achieved its objectives and identified major issues.

B. Recommendation for improvement

The recommendations are organised in sections based on the objectives of *Exercise Minotaur*.

1. Integration of national arrangements

- clarify roles and responsibilities and decision making processes of key bodies in the National FMD Coordination Framework to allow rapid decision making
- there is no clear protocol on who makes actual decision on issues such as vaccination.
- maintain engagement and confidence of political decision makers
- integrate emergency management practises at the national level
- maintain a whole-of-government approach at the Commonwealth level
- reconsider the wisdom of consensus decision-making during emergencies
- people should be across the subject matter prior to a meeting so short, sharp dot points for decision is all that is needed

- clearer understanding on:
 - who (government and industry) is to be consulted before making decisions on scientific issues
 - who is to be informed of the basis of these decisions
 - how the scientific basis of decisions is communicated to Ministers
 - the increased understanding of the importance of national integration is a real plus.
2. Administrative arrangements in support of operations
- This area was not addressed in the debrief.
3. Capacity & capability of resources
- There is a need to ensure that training of personnel at all levels of government and in industry is ongoing and to maintain existing response capacities.
 - Recognition of importance between vets and emergency management people. Recognising of each other's expertise. Start of a new program.
4. Logistics arrangements
- This area was not addressed in the debrief.
5. Communication
- communication networks
 - improve communication between jurisdictions and between government and industry
 - information management
 - develop a national information management system for decision support that incorporates:
 - nationally-compatible data management protocols
 - geographic information system (GIS) capability
 - the integration of electronic and paper transactions
 - pre-determined situation report structures and content type to suit the many different information users.
 - public communication
 - ensure communication with the public and industry is open, accurate and authoritative and includes information on risks and the hard decisions that have to be made
 - forecasting
 - develop a capacity to "think ahead of the game" during an emergency operation

6. Disease control policies & strategies

- vaccination policy
 - Develop an agreed (between governments and with industry) vaccination policy and associated strategies with pre-planned options based on scenarios, the characteristics of geographic regions and zoning implications. This policy needs to be balanced with the prevailing culture of slaughter out, given that vaccination is a new policy.
- livestock standstill
 - Develop a national livestock standstill agreement with associated protocols regarding cancelling standstill and risk-based decision-making to allow the movement of animals and product within infected states/Territories
 - Response was identification that standstill order means different things in different states/Territories. Need national coordination within states/Territories.
- zoning
 - Develop an agreed zoning policy which is integrated with vaccination options, takes into account the recovery of markets, contains pre-determined principles of acceptance with major trading partners
- surveillance
 - develop individual animal identification and tracing capability
- planning
 - plans such as AUSVETPLAN should be used as guidance only and are not prescriptive

7. Trade management arrangements

- Need to determine how to re-establish trade within infected states/Territories and other with states/Territories
- Need to determine how to establish confidence with trading partners
- the Zoning document is a key first step – using that strategy as a key first step in establishing trade. This will be a stepping stone for many countries to examine.

8. Socio-economic relief & recovery strategies & processes

- Developing long-term policies and strategies for the welfare of farmers and affected persons should be pre-determined
- In lead up to simulation at state level, the relief and recovery aspects have firmed up. People are really concentrating on this now from the beginning.

C. Next steps

- Get COAG acceptance of key findings of *Exercise Minotaur* and develop a strong strategy to manage the implementation of actions arising from the simulation
- Build on the national awareness of FMD preparedness that has been created
- Develop and conduct a program of simulations with an oversight committee to follow up testing key areas of animal disease preparedness
- Develop a handful of key recommendations focusing on the major learnings using national consultation
- Develop a national action plan through consultation between all jurisdictions and with industry, and share the load in terms of implementing recommendations.

Attachment 4 to Annex A – Report on National Debrief

Overview

The debrief (held on 9 October 2002 from 8:30am – 1:30pm) concluded that the simulation was a success, with a recognition that the building blocks essential to effective national FMD response were in place, but that there are some significant vulnerabilities which will need to be addressed by respective jurisdictions and industries. The more that can be pre-determined prior to an outbreak of FMD, the better off Australia will be.

Dr Murray summed up the debrief by saying:

- that we were able to conduct the simulation at all was significant, but it demonstrated some areas for improvement
- it was the first time that whole-of-government support for such a simulation had ever been achieved
- engagement in the simulation was enthusiastic, with participation up to and including ministerial and first ministers' levels
- the simulation demonstrated that the basic management frameworks worked
- industry participation in controlling animal disease outbreaks is essential from the point of view of their communication networks and resource bases
- local government participation was not tested, but they are another area of untapped resources
- the responsiveness of AAHL to the demands for laboratory resources was encouraging
- Australia's international reputation has been enhanced by conducting the simulation – if we can answer some of the outstanding questions, we will not only be assisting ourselves but doing good for other countries
- the fact that we had joint government-industry evaluation demonstrates the honesty and transparency of the simulation
- the simulation concentrated on FMD, but the results have positive spin-offs for any other disease, and have heightened awareness of animal disease emergencies.

Attendees

Those present at the National Debrief included representatives from industry, all government jurisdictions, and local government.

Present

- Mike Taylor (AFFA) (part attendance)
- Gardner Murray (AFFA) (chair)
- Tim Roseby (AFFA)
- Peter Koob (EMA)

- Trevor Roche (EMA)
- Dudley McArdle (EMA)
- Murray Rogers (consultant)
- Kerri Kellett (PM&C) (part attendance)
- Rod Andrewartha (Tasmania–Primary Industries)
- Kevin de Witte (Northern territory–Primary Industries)
- Charlie Thorn (Western Australia–Primary Industries)
- Bala Murali (Western Australia–Premiers)
- Alan Brunner (Queensland–Emergency Management)
- Wayne Ripper (Queensland–Emergency Management)
- Kevin Dunn (Queensland–Primary Industries)
- Bruce Stewart (Queensland–Premiers)
- Mandy Wallace (South Australia–Premiers)
- Ian Denney (NSW–Primary Industries)
- John Galvin (Victoria–Primary Industries)
- Kimberley Dripps (Victoria–Premiers)
- Gary Croston (ACT–Primary Industries)
- Martyn Jeggo (Australian Animal Health Laboratory)
- Ian Chalmers (ALGA)
- Geoff Neumann (Animal Health Australia)
- Karen Krist (National Meat Association of Australia)
- Michael Hartman (Cattle Council of Australia)
- Chris Ambler (Australian Pork Limited)
- Helen Dornam (Australian Dairy Industry Committee)
- Trevor Robbins (Australian Dairy Industry Committee)
- Dougal Gordon (NSW Farmers Federation)
- Chris Parker (Wool Producers)

Apologies

- Charles Willoughby (Grains Council of Australia)
- Roly Nieper (Animal Health Australia)
- George Tomlins (Australian Capital territory–Chief Ministers Dept)
- Peter Yuile (Commonwealth Dept of Transport and Regional Services)
- Bruce Esplin (VIC–Emergency Management)
- Ross Brown (NSW–Emergency Management)
- Barry Windle (SA–Primary Industries)

Method of the debrief

Each industry and jurisdiction was asked to provide comment on positive results arising from *Exercise Minotaur* and on areas in Australia's FMD preparedness that need improvement. Participants were also asked to prepare a one-page report to help inform this debrief report.

Findings of the debrief

1. Integration of national arrangements

- whole-of-government emergency management committees were engaged and participants are better aware of animal disease emergencies
- high-level support for the simulation was evident from the participation of Ministers and First Ministers in many states/territories and heads of industry bodies
- the simulation demonstrated the need for cooperation between agriculture, first ministers' and emergency management agencies, and this collegiate work should be maintained
- decision making processes and the roles of the various high level groups in the National FMD Coordination Framework need to be clarified, as there was some confusion over relative roles
- CCEAD remains as a fulcrum in the national framework – if advice or decisions from CCEAD is poor, the overall management of an FMD outbreak is jeopardised
- consensus on decision making is in principle desirable, but in an emergency decisions must be made swiftly and surely
- industry participation is an essential ingredient to the control of animal disease outbreaks
- the relationship between the Australian Animal Health Laboratory and state laboratories needs to be clarified
- local government should participate in jurisdictional whole-of-government arrangements, where they don't already

2. Administrative arrangements in support of operations

- representatives on high level groups in the National FMD Coordination Framework need to have deputies
- papers provided prior to teleconferences of the high level groups were too long and complex
- SDCHQ's require a centre manager
- work areas during the simulation were often inadequate in terms of size, amenity and communications technology

3. Capacity & capability of resources

- people are more aware of the length of response required by an FMD outbreak and the depth of resources required
- people
 - more staff should be trained for LDCCs/SDCHQs to enable shift changes
 - induction training is required for new people entering LDCCs/SDCHQs during an outbreak
 - training should be maintained as a part of succession planning
 - training should include industry as well as government personnel
 - need to ensure that people working during an outbreak are working under similar pay and conditions
 - emergency management needs to be included in the profile of all agricultural personnel
 - there should be on-going exercises
 - technical personnel and emergency management personnel need to work together to provide a mix of skills and attitudes
- resource allocation for the various animal health laboratories should be predetermined
- there needs to be a better use of industry resources

4. Logistics arrangements

- Australia has limited resources to manage an FMD outbreak and its consequences, and we do not have processes for harnessing and prioritising all of the available resources

5. Communication

- communication networks
 - there needs to be a better use of industry networks
 - there needs to be better cross-sector industry liaison
 - need to identify and document who is responsible for informing each industry body
- information management
 - information must be sent to deputies of representatives on high level groups as well as the representatives themselves
 - a computerised information system is required to handle data collection and provide up-to-date information to the wide variety of users
 - GIS in states and Territories need to be compatible
 - need a national livestock information system
 - there needs to be a standardised national situation report format
 - situation reports were very technical and need to be tailored to suit non-technical audiences
 - non-technical agencies and personnel need information sheets on animal disease and disease control technicalities
 - the jurisdictional impact statements were a worthwhile innovation

- public communication
 - industry looks to government for the issuing of media releases
 - call centres need to be established so operational areas are not swamped with public inquiries
- communications technology
 - it can't be assumed that email and mobile phones will work during an emergency
 - a dedicated website could be established for the posting of operational information
- forecasting
 - there is a need to predict what may happen (including disease behaviour and socio-economic consequences) during an outbreak

6. Disease control policies & strategies

- destruction and disposal
 - disposal site pre-selection is required
 - destruction teams needing identifying and resourcing
- vaccination policy
 - the policy needs refining
 - decision making protocols must be pre-determined
 - there is a general lack of understanding of what vaccination can achieve and how it can be implemented
- Government and Industry Cost Sharing Deed in Respect of Emergency Animal Disease Responses ("cost sharing agreement")
 - the agreement should be reviewed for FMD in regard to the 1% GVP 'Agreed Limit' for expenditure
 - discussion of funding mechanisms often over-shadowed real decision making about disease control strategies during the simulation
 - the costs of animal welfare, standstill and pre-emptive destruction should be considered
 - a system is required to develop a robust estimation of current and future costs
 - there needs to be more training in the use of the cost sharing agreement
- livestock standstill
 - need consistent policies and procedures across states and Territories
 - funding for consequential losses of standstill and of animal welfare needs to be considered
- zoning
 - there is a general lack of understanding of what zoning can achieve and how it can be implemented
 - there is a resource tension between disease control and zoning (keeping market access)
 - an alternative to zoning is bilateral trading arrangements
- surveillance
 - up-to-date surveillance information should be used in day-to-day disease control decisions

- planning
 - more detailed procedures are required to enable policies and strategies to be implemented effectively
 - AUSVETPLAN worked well, but it could be rationalised and simplified
 - industry response plans were activated but they were overlooked in the general AUSVETPLAN arrangements – there needs to be clearer linkages between these plans
- zoonoses
 - policy and procedures on the protection of personnel from Q-fever need refining

7. Trade management arrangements

- there should be a risk/cost/benefit approach to decision making on zoning and market access
- the Trade Market Access Group should be activated immediately there is an outbreak
- the role of the Trade Market Access group should be more clearly defined
- we need to enter into discussions with trading partners now regarding market access

8. Socio-economic relief & recovery strategies & processes

- socio-economic relief and recovery policies and strategies need further development and testing
- need recovery policies for non-infected farms, industries, and communities
- responsibility for socio-economic recovery needs to be determined
- industries and communities should participate in decision making on relief and recovery

9. Overall comments

- there was general agreement that the simulation was a very worthwhile activity
- state-based exercises involving local government should occur
- the engagement of industry evaluators was essential to the validity and success of the simulation

Next steps

- Participants were asked to prepare a one-page report to help inform this debrief report.
- This debrief report is to be circulated to attendees of the debrief for confirmation or alteration.
- The National Debrief will provide further information for the Evaluation Report on *Exercise Minotaur*, to add to information provided by other debriefs, by simulation evaluators and by simulation observers
- The Evaluation Report will include a risk analysis to prioritise future action and a draft national action plan.
- The Evaluation Report will be presented to COAG in December 2002.

Attachment 5 to Annex A – Control Team Report

Exercise Minotaur was a success on any measure. A national whole-of-government simulation of its scope is an achievement just in itself. More importantly, it actively engaged senior management across the private and public sectors as well as government ministers and industry body presidents.

All who participated are now better prepared for an emergency animal disease outbreak and have a clearer understanding of what their roles and responsibilities would be in a real event.

Its success was also due to a number of very basic factors that included excellent planning, teamwork, and the commitment of individuals and organisations.

Many lessons were learned about how to improve future national simulations. Some were:

- the need to clarify what is not being tested as well as what is
- the need for all members of the Simulation Control Team to receive training in exercise management and project management
- more detailed planning as to how the simulation will be developed
- a more thoughtful approach to evaluation.

This report analyses how well *Exercise Minotaur* was developed, conducted and evaluated, and provides recommendations on a preferred approach for the benefit of those who will conduct future national simulations.

The Planning Environment

Exercise Minotaur was planned, developed and conducted in an extremely dynamic environment. The national whole-of-government framework that underpins Australia's management of an FMD outbreak underwent continuous development from December 2001 until its finalisation in March 2002. Although the national framework was finalised at that time, the supporting mechanisms including the roles and responsibilities, modus operandi and standard operating procedures of the high-level management groups continued to be developed and negotiated up to the conduct of the simulation.

Additionally, as the development of the simulation progressed, the Control Team identified gaps in, or in some cases lack of management plans. In many instances it became the responsibility of the Control Team to resolve the gaps and develop management plans and procedures while also developing a complementary simulation to test the structures.

Some stakeholders, both in industry and government made significant and strong commitment to the simulation from early in the planning phase. Commitment by others was very late in the planning phase and resulted in the Control Team having to make adjustments to the overall script and supporting messages.

Another level of uncertainty and instability for the simulation planning process was the number and level of stakeholder engagement. Many key stakeholders including

government at all levels and across jurisdictions and industry had varying levels of engagement and influence over the direction of the simulation.

Prior to the COAG decision to run the simulation, well-developed plans within each state/territory and in some industry sectors were present. The development of national plans and procedures in concert with the development of the simulation was an ideal approach for the simulation development. It did however provide the stimulus for high-level government and industry engagement. Also, the Department of Agriculture, Fisheries and Forestry's (AFFA) senior management championed the simulation and engaged state/territory agricultural counterparts as well as heads of Commonwealth/state/territory First Ministers, emergency management and industry organisations. This engagement and commitment at the highest level of government and industry contributed significantly to the achievement of the simulation objectives.

This particular stimulus for high-level engagement used in the planning for *Exercise Minotaur* may not be relevant for future simulations as the plans and processes are now well developed. A new mechanism for engagement may be needed in the first stages of simulation planning.

Highlighting the "world-first" and "biggest ever" aspects of the simulation created an interest in the simulation which coupled with high level support and a COAG imprimatur provided the stimulus required to engage involvement all over the country. We would recommend a high-level multi jurisdictional/agency taskforce (with appropriate representation from First Minister's, agriculture and emergency services agencies) be utilised as the national driver.

Management Structure

Steering Committee

A Steering Committee who was responsible for overseeing the development, conduct and follow-up of the simulation, and reporting on the simulation to governments and industry. This Committee was 5-6 people.

Working Group

To ensure the successful conduct of the simulation it was recognised that each stakeholder group must be consulted and engaged. To facilitate this, in October 2001 a simulation Working Group was formed with a membership of approximately 35. At that time, the purpose of the Working Group was to develop and conduct the simulation. *Exercise Minotaur* stakeholders included each states', territories' and the Commonwealth's First Ministers, agriculture and emergency services Departments, and all affected industry associations.

Control Team

In December the Simulation Control team was established from within and endorsed by the Working Group. The terms of reference of the Control Team were to plan, write and

conduct the simulation – the Working Group became the consultative mechanism between the Control Team and simulation stakeholders. The Control Team was self-selected and included experts in animal health (technical/veterinary and emergency animal disease response), emergency management, planning, economics and policy. The Control Team had a nucleus of 9-10 people. These people did the bulk of the simulation planning, scripting, messages etc. When necessary they recruited specialist advice.

Preferred Approach:

Steering Group to represent primary stakeholder groups and planning experts with a view to the provision of guidance, review and validation to the Control Team.

Working Group to be a consultative group representing participating organisations both government and industry.

Control Team to be responsible for the planning, writing and conduct of the simulation. Membership to be consciously selected with the following skills:

- technical (animal health/veterinary)
- emergency management (animal disease response and
- multi-agency)
- economic, planning, policy and whole-of-government.
- social
- project management
- communications (public relations/media)
- industry

Simulation Planning

Objectives and Scope

The COAG decision required the conduct of a national FMD simulation that focused on high-level decision-making and communication. The first and most critical task of the Working Group was the identification of the aspects of the national FMD response arrangements and infrastructure that are to be tested as agreed by government and the extent to which it would be tested. It was important, albeit time consuming, to develop a realistic set of objectives that would provide a reasonable test of Australia's national arrangements.

Exercise Minotaur had seven objectives which was perhaps a couple too many.

Equally important, was the identification and communication of what and who was not being tested. For example, the simulation would not involve field activities and not test the national disease database.

Project Plan and Simulation Plan

The Project Plan described the objectives of the simulation, how the simulation was to be developed, the lead-up activities prior to the simulation, and the follow-up activities. The conduct of the simulation was described in the Simulation Plan – one of the outputs of the project plan.

The Simulation Plan described what, how, who and when the simulation would be developed, conducted and evaluated. It became the key simulation reference document and included all relevant planning documents:-

- the scenarios
- facilitators and evaluators
- operations and simulation participation

and was an important communication tool for participants, facilitators, evaluators and stakeholders as well as the primary working document for the Control Team.

From its inception, the simulation was not allocated a formal budget at the Commonwealth level – this was seen as both a positive and a negative. Without an indicative budget, the focus was on achieving objectives. If given a budget however, the focus would have been on achieving objectives within a resource constraint.

Preferred Approach:

A comprehensive project plan containing all key documentation must be developed. This should be complemented with:

- simulation scope and objectives being developed early. This includes what and who will not be tested
- a summary of the plan for the Steering Group that outlines the key activities/outcomes
- an action list with timelines and milestones for use by the Control Team and other directly involved stakeholders.

Future simulations should be allocated a realistic budget to ensure the most cost effective delivery of the project.

Guidance and review

A simulation with the scope of *Exercise Minotaur* had never before been undertaken in Australia. Given this, representatives from the North American team that had developed and conducted a large-scale FMD simulation in 1999/2000 were asked to review the planning methodology documentation and to provide guidance to the Control Team. This process proved invaluable and added to the rigour of the planning process.

Control Team "Lock Ups"

The Control Team included people who were geographically widespread and from different agencies.

In an ideal environment, the Control Team would have worked together in a single location during the development and conduct of the simulation. However, due to resource constraints this was not possible for *Exercise Minotaur*. Given this, to enable the Control Team to achieve milestones and objectives, on a number of occasions they got together away from their normal workplaces for up to 4 days – these were known as "lock ups".

The purpose of "lock ups" was to :

- develop teamwork
- scenario and script writing (sequence of events)
- validation of players
- develop messages (as well as review and audit)
- develop facilitator and evaluator training packages.

Disease and socio-economic scenarios

As all simulation participants needed to have confidence in the technical robustness of the simulation disease scenario the Control Team developed a technically viable scenario. The scenario was based on epidemiological modelling including the use of real livestock data.

A large-scale outbreak of FMD would result in national socio-economic consequences not realised before in Australia as a result of an animal health incident. A scenario outlining the socio-economic impacts of the FMD outbreak that complemented the disease scenario was constructed. This scenario would underpin the impetus to test the national whole-of-government "non-disease" decision-making arrangements.

The Simulation Script

The Control Team developed a set of issues that would be used to test the infrastructure and emergency arrangements against each of the simulation objectives. Given the objectives and scope of the simulation, the simulation would run over four days and would require participants to move through three months of an FMD outbreak by way of time jumps.

- Monday was day 0 of an outbreak (the day of disease confirmation)
- Tuesday was day 1 of an outbreak
- Wednesday was day 7 and
- Thursday was day 84.

An iterative process between the scenario and script development took place as issues to be tested were negotiated between the Control team and the Steering Group and other key stakeholders.

Mini-Simulations

During the planning process, it was agreed that it would not be possible to test all aspects of response arrangements. Given this, mini-simulations were developed by state/territories and industry during the lead up to *Exercise Minotaur*. These were to test either local arrangements or specific issues identified by the Control Team that required separate or additional testing to validate newly drafted arrangements (plan, committee etc) and to make recommendations to senior management about developments that could be made prior to the national simulation.

Members of the Control Team were involved in developing and facilitating five national mini-simulations and several state-based simulations in the lead-up to *Exercise Minotaur*. The simulations were valuable in terms of engaging a huge range of organisations and individuals however did take a significant amount of time and resources to manage simultaneously with *Exercise Minotaur* development.

Simulation Documentation

Databases

To enable full document control and simulation management, two databases were established and maintained by the Control Team. A Gant chart using Microsoft Project was developed to manage and track the timetabling of events, activities, messages and actions that would occur during the conduct of the simulation. A Microsoft Access database was developed to manage simulation messages.

Preferred Approach

The Gantt chart and Access databases were essential document/activity management tools. They could have been better utilised through the activity linking tools available with Microsoft software.

Messages

For each issue a range of simulation inputs, or messages, were developed that would stimulate activity at one or more locations around the country to meet simulation objectives. The messages were within the overall simulation timetable as per the Gant Chart. To facilitate this, each message required a level of detail including:

- a unique message number generated from the Gant Chart
- identification of the primary objective the message was testing
- the activity that was expected from participants
- the authority for which the actions were undertaken.

An iterative process of drafting, redrafting and re-timetabling of messages took place to ensure that messages were inserted into the simulation at the most appropriate time and were as meaningful as possible to participants. This was undertaken during the control Team "lock-ups".

The same approach was used for messages developed as free-play during the conduct of the simulation.

Senior Committee Meetings

The simulation tested eight multi-disciplinary/agency/jurisdictional committees across the states/territories, Commonwealth and industry . Timetabling these meetings so that senior officials and executives were available was crucial to ensuring appropriate representation at meetings during the simulation. However this meant the simulation lacked a certain element of realism both in terms of the prior notice players received and in the order meetings were conducted. For most of these meetings, the Control Team prepared agendas with targeted items/issues.

Rules of Engagement

Following the development of the script and supporting messages, the Control Team established participant's rules of engagement for participants. The rules of engagement included:-

- simulation objectives,
- commencement dates
- how the simulation would be conducted
- information security
- information limitations
- timeframe
- task completion
- media information
- debriefing and termination.

It outlined how the simulation was to operate to enable simulation participants to participate fully. It was essential to establish expectations and assist in alleviating likely concerns.

As the messages and timetabling were finalised, there was an iterative process of updating the rules of engagements as the Control Team checked them against the Control Teams' expectations of the participants.

Preferred Approach

Rules of engagements should be developed as the scenario is developed thereby validating Control Team expectations on action/outcomes. Clear joining instruction be developed to ensure clarity of who will be part of the simulation.

Peer Review

Following the completion of the script and messages, a team of planning experts were asked to review and validate the simulation in its entirety. This team was known as the Simulation Review Team. It focussed particularly on risks to the success of the simulation.

Preferred Approach:

The role of reviewing and validating should be undertaken by the Steering Group and commence from the beginning of the development of the simulation.

Simulation Conduct

Control Team

During the conduct of the simulation, the Control Team were situated in a single location. This ensured the Control Team was able to coordinate the simulation nationally.

The Control Team location was also the normal workplace for several in the team. This resulted in some of the Control Team members also undertaking a hands-on role of facilitating some of the response arrangements.

Preferred Approach:

The Control Team should be totally isolated from all participants. The role of the Control Team during the conduct of the simulation should be clearly documented in the simulation plan to avoid confusion of responsibilities.

Facilitators and Evaluators

The conduct of the simulation relied significantly on facilitators and evaluators. Facilitators worked in their location of origin in operations centres or with management groups. Working closely with their Control Team contact, they provided briefings/debriefings for simulation participants, provided input into the simulation of events and information, monitored the progress of the simulation, reported to Control Team, and solved problems when the simulation went off-track.

Evaluators worked in a location other than their location of origin, eg. another jurisdiction, in operations centres or with management groups. They observed simulation participants, noted actions taken against expected actions, and evaluated processes and arrangements based on these actions. Both facilitators and evaluators underwent training for their roles.

Whilst competencies were identified for facilitators and evaluators, some were selected on their availability rather than competence. Those that were chosen based on competency were very effective in their role. At each site facilitators and evaluators were provided with:-

- a list of all messages
- copy of each message for their area
- other supporting documents such as situation reports etc.

Each facilitator and evaluator was assigned to a designated Control Team member for all contact, etc during the simulation. During the simulation there was frequent contact between the Control Team and the facilitators and evaluators.

Preferred Approach

- Facilitators and evaluators to be selected based on set competencies
- Control team contact to attend training with their respective facilitators and evaluators with a view to forming a good working relationship
- Evaluators to receive specific training on what to look for in specific jurisdictions/forums
- Training to include role-play to validate message methodology
- Simulation plan to include de-briefing of facilitators and evaluators
- Facilitators/evaluators at each site include a skills mix of emergency management, animal health management, political awareness.

Action/Outcome Tracking

The main objective of the simulation was the integration of national arrangements. To assess whether this was being achieved throughout the simulation continuous monitoring of participant's actions/outcomes was required. Although each message identified expected actions/outcomes, the Control Team experienced some difficulty in tracking these during the conduct of the simulation – having to rely heavily on continuous contact with facilitators and evaluators.

Preferred Approach:

Use of Internet technology to monitor achievement of expected actions/outcomes by simulation participants.

International Observers

International visitors attended the simulation and fulfilled a role commensurate with their expertise providing a valuable independent analysis of the conduct and outcomes of the simulation. Significant effort was required in the planning and management of the international visitors programmes to ensure best use of their skills and expertise.

Preferred Approach

Protocols and management of international visitors expectations needs to be formally documented prior to their arrival.

Messages

The management of the messages to initiate actions was complex. The injection of some messages caused some confusion by participants. This resulted in some messages not being appropriately actioned or understood. Additionally, Australia's time zone differences also caused some confusion, messages were being acted upon or information sought in one state/territory before the message had been injected in another state/territory.

Preferred Approach

Message protocols need to be clearly documented and understood.

Control messages should be given to the "sender" (not recipient) and they must send to the "recipient".

For the purposes of the simulation, one time zone should be used as the message inject time guide – not local time.

Hoax Management

A small number of hoax messages were reported during the simulation. A hoax management protocol had not been developed.

Preferred Approach

A hoax management protocol should be developed and communicated to simulation participants, facilitators and evaluators.

Summary

The planning, development and conduct of the *Exercise Minotaur* was managed successfully by a team of professional individuals and was done in an environment of continuous change and uncertainty. The steps taken, as described above, resulted in a successful simulation that met its objectives and has helped Australia be better prepared for an outbreak of FMD.

Annex B – COAG Decisions

8 June 2001¹

The Council noted that if a significant outbreak of FMD occurred in Australia, the technical, logistical, social and financial response needed to manage the situation would be on a whole-of-government level not experienced before in peacetime.

Appropriate plans therefore need to be upgraded and tested. The Council agreed to the continued high priority review and revision of national whole-of-government frameworks for the prevention, preparedness for and management of a major emergency disease outbreak, such as FMD. COAG agreed to establish a Foot-and-mouth Disease Taskforce under the oversight of COAG Senior Officials to coordinate the development of these frameworks. The Taskforce will be chaired by the Commonwealth and comprise two officials from each jurisdiction – one from First Minister's departments and one from the lead line agency. A representative from ALGA will attend the Taskforce.

The Council also agreed to:

- the development by states/Territories and the Commonwealth of complementary whole-of-government frameworks, for their respective jurisdictions, in enhancing:
 - peak level arrangements across and within jurisdictions (beyond the well-tested agricultural arrangements)
 - emergency roles and linkages across Commonwealth agencies
 - emergency roles and linkages across and within state/territory agencies including the use of all their relevant powers to control emergency outbreaks
- the need to adequately support, implement and test these frameworks
- the Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ), or its successor, reporting after its August 2001 meeting to members of COAG out-of-session on the outcomes of its review of emergency animal disease prevention, preparedness and response arrangements
- the provision to members of COAG out-of-session, by mid-October 2001, of a report by COAG senior officials outlining the whole-of-government frameworks
- the holding as soon as possible of a full-scale simulation under third party oversight to test the arrangements."

5 April 2002²

The Council considered a report from its Foot and Mouth Disease (FMD) Taskforce that had been commissioned in June 2001. The report noted that Australia is free from major exotic animal diseases such as FMD and bovine spongiform encephalopathy (BSE or "mad cow disease") but that, if there was an outbreak of one of these diseases in Australia, there would be a major impact on the agricultural sector, rural and regional Australia and the national economy.

¹ Extract from the Communiqué arising from the Council of Australian Governments' Meeting of 8 June 2001

² Extract from the Communiqué arising from the Council of Australian Governments' Meeting of 5 April 2002

The Council agreed that major animal disease emergencies, and their consequences, must be tackled on a national basis. COAG agreed a national coordination framework to ensure close integration of responsibilities and actions within and across jurisdictions which builds on existing animal disease and emergency management plans. The detailed arrangements would be settled in a Memorandum of Understanding between Heads of Government by mid 2002.

COAG agreed that further work is required to improve national prevention, preparedness and response capability. This high priority activity is being coordinated through the Primary Industries Ministerial Council.

COAG considers it important for industry to continue to develop and implement as soon as possible industry-wide and farm-level measures which would reduce the likelihood of disease establishment, the rate and extent of spread and impact.

A full-scale national simulation will be held in September 2002 to test peak-level arrangements across and within jurisdictions and emergency roles and linkages across all relevant agencies. The simulation will not involve any substantial field operations.

COAG also agreed that a further report be submitted to COAG by December 2002, which draws together the key matters arising from the national simulation, progress on improving prevention, preparedness and response capacity, an assessment by each jurisdiction of its preparedness status against agreed performance criteria, and an assessment of funding implications for each level of government. A report would also be prepared on managing relief and recovery arrangements.

6 December 2002¹

INTERGOVERNMENTAL AGREEMENTS

Memorandum of Understanding - Foot and Mouth Disease

Heads of Government today agreed to sign a Memorandum of Understanding which will underpin the national coordination framework for addressing an outbreak of Foot and Mouth Disease (FMD) in Australia. This follows the FMD simulation, *Exercise Minotaur*, which was held from 8-13 September 2002. *Exercise Minotaur* successfully tested peak-level arrangements across and within jurisdictions, as well as emergency roles and linkages across Commonwealth and state/territory agencies.

A detailed report evaluating *Exercise Minotaur* will be submitted to COAG in 2003. The report will also outline progress by jurisdictions on improving prevention, preparedness and response capacity, an assessment of jurisdictions' preparedness against agreed performance criteria and funding implications for each level of government"

¹ Extract from the Communiqué arising from the Council of Australian Governments' Meeting of 6 December 2002

Annex C – Risk Analysis Framework

The risk analysis follows the principles and processes described in AS/NZS4360–Risk management. The definition of risk is "the chance of something happening that will have an impact upon objectives". In this case, the objectives are Australia's ability to respond to an FMD outbreak and its consequences. Thus the risk analysis only looks at post-border issues. The risk analysis used the following method:

1. each potentially unfulfilled recommendation was rated in terms of the likelihood of impacting on objectives and the consequences of the impact (see Tables C.1 and C.2 for a description of the qualitative measures of consequence and likelihood);
2. the risk level was determined using a qualitative risk analysis matrix based on the ratings in terms of likelihood and consequence made in step 1 (see Table C.3).

Table C.1: Qualitative measures of consequence

Descriptor	Description (in terms of ability to respond to an FMD outbreak and its consequences)
insignificant	No impact on ability to respond
minor	Some impact on ability to respond
moderate	Major impact on ability to respond
major	Severe impact on ability to respond
catastrophic	Inability to respond

Table C.2: Qualitative measures of likelihood

Descriptor	Description
almost certain	Is expected to occur in most circumstances
likely	Will probably occur in most circumstances
possible	Might occur at some time
unlikely	Could occur at some time
rare	May occur only in exceptional circumstances

Table C.3: Qualitative risk analysis matrix

Likelihood	Consequence			
	Insignificant	Minor	Moderate	Major
Almost certain	high risk	high risk	extreme risk	extreme risk
Likely	moderate risk	high risk	high risk	extreme risk
Possible	low risk	moderate risk	high risk	extreme risk
Unlikely	low risk	low risk	moderate risk	high risk
Rare	low risk	low risk	moderate risk	high risk

Annex D – Draft National FMD Action Plan

This Annex lists national actions arising from this Report. It is assumed that the Commonwealth and State/Territory governments, and industries and will have their own action plans for matters falling within their individual responsibilities.

Issue (what)	Coordination responsibility (who)	Timing (when)
<p>Integration of National Arrangements</p> <ul style="list-style-type: none"> • CCEAD (particularly industry) members participate in future routine • Revise animal disease cost sharing agreement to cover issues raised in Minotaur, including GVP threshold, claimable costs, secretariat support for the NMG, and develop an explanatory memorandum 	<p>CCEAD</p> <p>AHA</p>	<p>Immediate</p> <p>December 2003</p>
<p>Administrative Support Arrangements</p> <ul style="list-style-type: none"> • Incorporate whole-of-government aspects into the rolling plan of exercises agreed by PIMC • Secretariats of high level committees in national framework to include a policy advice capability • jurisdictions to develop agreements with their neighbouring jurisdictions covering the practicalities of cross-border operations • Enhance familiarity of states/territories with <i>Quarantine Act 1908</i> 	<ul style="list-style-type: none"> • PISC/PIMC • AFFA/PM&C • States/territories • AFFA 	<p>December 2003</p> <p>On establishment of committee June 2004</p> <p>June 2004</p>
<p>Capacity and Capability of Resources</p> <ul style="list-style-type: none"> • ensure an adequate level of trained emergency response personnel • develop and implement national performance standards for training • develop a policy on the respective roles of AAHL and state/territory laboratories during an emergency • examine opportunities to use non-registered veterinary staff 	<ul style="list-style-type: none"> • All relevant agencies • AHA • SCAHLS • AFFA/states/territories 	<p>Ongoing</p> <p>June 2004</p> <p>June 2004</p> <p>December 2003</p>

Issue (what)	Coordination responsibility (who)	Timing (when)
<p>Capacity and Capability of Resources cont.</p> <ul style="list-style-type: none"> • complete the international animal health agreement and associated administrative arrangements • develop proposals for training of private sector, communities, and response agencies to assist in the management of animal disease emergencies. • training programs nationally coordinated and include a mix of cross jurisdictional personnel 	<ul style="list-style-type: none"> • AFFA • States/territories • EMA/PISC 	<p>June 2004</p> <p>June 2004</p> <p>June 2004</p>
<p>Logistical Arrangements</p> <ul style="list-style-type: none"> • Develop system to facilitate national coordination of resources • review and upgrade control centre facilities, capabilities and procedures 	<ul style="list-style-type: none"> • PISC/PIMC • All jurisdictions 	<p>December 2003</p> <p>June 2004</p>
<p>Communications</p> <ul style="list-style-type: none"> • Upgrade MOU and AUSVETPLAN to ensure <ul style="list-style-type: none"> - the communications role is fully recognised and adequately resourced; - technical disease and emergency management information are incorporated in response arrangements; - the national communications network roles, responsibilities, processes and procedures are documented; - the number of potential national spokespersons is minimised. • The national communications network be used in more routine animal health emergency responses • Investigate establishment of national emergency animal disease website • Examine options for a fully coordinated national call centre • refine national communication arrangements including staffing resources • identification and briefing of key opinion leaders • overseas posts be given all relevant response information in advance of public release and this policy be incorporated in AFFA and DFAT plans • Provision of 'round the clock' communications teams for overseas media and translation services 	<ul style="list-style-type: none"> • AHA (for AUSVETPLAN) and AFFA/states/territories for the MOU • All jurisdictions • PISC/NSW • AFFA/Centrelink • AFFA/states/territories • AFFA • AFFA/DFAT • DFAT 	<p>December 2003</p> <p>Ongoing</p> <p>December 2003</p> <p>December 2003</p> <p>December 2003</p> <p>December 2003</p> <p>December 2003</p> <p>Ongoing</p>

Issue (what)	Coordination responsibility (who)	Timing (when)
<p>Communications cont.</p> <ul style="list-style-type: none"> • Once upgraded, ANEMIS be adopted by each jurisdiction • a national information management system be developed • exchange of liaison officers between combat agencies and with industry groups 	<ul style="list-style-type: none"> • States/territories • PISC • All jurisdictions 	<p>December 2003 December 2004 Ongoing</p>
<p>Disease Control Policies and Strategies</p> <ul style="list-style-type: none"> • Completion of work on <ul style="list-style-type: none"> - Vaccination policy and supply - Livestock standstill - Livestock identification scheme - Animal welfare policy • Adoption of a risk management approach for all animal health emergency responses • Adoption of forward planning, linked to epidemiological modelling, as part of animal disease emergency management culture. Clarify associated roles and responsibilities under AUSVETPLAN 	<ul style="list-style-type: none"> • PISC • PISC • PISC (and AHA for AUSVETPLAN) 	<p>December 2003</p> <p>Immediate Immediate</p>
<p>Trade Management Arrangements</p> <ul style="list-style-type: none"> • Update TMAG roles and responsibilities, modus operandi and membership. • Inform stakeholders of issues relating to a zoning application and that decisions to pursue zoning applications should only be considered in the context of a full national cost-benefit analysis. • Identify markets that might more quickly consider a zoning application, and potential non-traditional/lower value markets that might take product in an FMD emergency 	<ul style="list-style-type: none"> • AFFA • AFFA • AFFA/DFAT/industry 	<p>December 2003 Ongoing</p> <p>June 2004</p>
<p>Socio-economic Relief and Recovery Strategies and Processes</p> <ul style="list-style-type: none"> • Examine PC report and other available material to enhance, where necessary, jurisdictional relief and recovery plans 	<ul style="list-style-type: none"> • All jurisdictions 	<p>June 2004</p>

Annex E – Acronyms

AAHL	Australian Animal Health Laboratory
ABC	Australian Broadcasting Corporation
ACVO	Chief Veterinary Officer of Australia
AFFA	Department of Agriculture, Fisheries and Forestry – Australia
AGs	Attorney-General’s Department
AHA	Animal Health Australia
ALGA	Australian Local Government Association
ANEMIS	Animal Health Emergency Information System
AQIS	Australian Quarantine and Inspection Service
ARMCANZ	Agricultural and Resource Management Council for Australia and New Zealand
BBC	British Broadcasting Corporation
BTEC	Brucellosis and Tuberculosis Eradication Campaign
BSE	Bovine Spongiform Encephalopathy
CCEAD	Consultative Committee on Emergency Animal Disease
COAG	Council of Australian Governments
CSIRO	Commonwealth Scientific and Industrial Research Organization
CSPTF	Commonwealth–State Policy Taskforce
CVO	Chief Veterinary Officer
DFAT	Department of Foreign Affairs and Trade
DOFA	Department of Finance and Administration
DOTARS	Department of Transport and Regional Services
EADRP	Emergency Animal Disease Response Plan
EMA	Emergency Management Australia
EPA	Environmental Protection Agency
EU	European Union
EXANDIS	Exotic Animal Disease Preparedness Consultative Council
FACS	Department of Family and Community Services
FMD	Food and Mouth Disease
GDP	Gross Domestic Product
GVP	Gross Value of Production
HLG	High Level FMD Management and Recovery Group
ITR	Department of Industry Tourism and Resources
IVB	International Vaccine Bank
LDCC	Local Disease Control Centre
MLA	Meat and Livestock Australia
MOU	Memorandum of Understanding
NDCHQ	National Disease Control Headquarters
NDRA	Natural Disaster Relief Arrangements
NMG	National Emergency Animal Disease Management Group
OIE	Office Internationale des Epizooties
PC	Productivity Commission
PIMC	Primary Industries Ministerial Council
PISC	Primary Industries Standing Committee
PM&C	Department of the Prime Minister and Cabinet
SCAHLs	Subcommittee on Animal Health Laboratory Standards
SCARM	Standing Committee for Agriculture and Resource Management
SDCHQ	State/Territory Disease Control Headquarters
TMAG	Trade Market Access Group