Overview

The Department of Agriculture, Fisheries and Forestry manages the risks associated with pest and disease outbreaks in the animal, aquatic animal and plant sectors, as well as risks related to marine pests, food safety and bioterrorism. The Department's role is to provide national coordination and leadership for industry and government in the event of a major disease or pest emergency. The Australian Government's exposure to risk in this context is its commitment to an industry/government cost-sharing agreement, which would cover the cost of such an outbreak, possibly general and professional liability, and the risk of damage to Australia's economy and balance of trade through losses in agricultural production and exports.

Risks are managed pre-border (overseas), at the border (airports and seaports) and post-border. Pre-border and border risk management reduces the likelihood of emergencies, while post-border risk management reduces the consequences of emergencies. This application focuses on the Department's activities, in partnership with State and Territory governments and industry, to address post-border risk through a major simulation of a Foot-and-Mouth Disease (FMD) outbreak. Exercise Minotaur: the National FMD Simulation, was held from 9-13 September 2002.

The importance of pest and disease emergency preparedness in Australia's primary industries sector cannot be understated. Agriculture and fisheries comprise a major part of Australia's economy, with exports in 2001-2002 alone estimated at $23.7 billion. A particular risk to Australia's livestock and processed food industry is the threat of an FMD outbreak, which would see an immediate halt for at least 6 months to all live animal exports and exports of animal products, from meat to processed milk powder. The FMD outbreak in the United Kingdom in 2001 is estimated to have cost the public sector over £3 billion, and the private sector over £5 billion. A 2002 Productivity Commission report found that a large FMD outbreak in Australia would cost over $9 billion in lost export earnings and up to $450 million in control and compensation, and cause significant harm to rural and regional Australia.

In response to the FMD outbreak in the UK the Australian Government conducted Exercise Minotaur, to test and enhance the nation's capacity to respond to a major pest or disease outbreak. More than 1,100 people from industry and government participated in the four-day exercise – the largest ever held in Australia. The key risk management structures developed for and tested by Exercise Minotaur were the national industry/government cost sharing agreement and the national FMD coordination framework, as well as individual government and industry emergency management plans. Lessons learnt from Exercise Minotaur are being incorporated into the continuous improvement of national pest and disease emergency preparedness.

1. Risk management framework

The national decision-making and risk management frameworks tested by Exercise Minotaur were developed in direct response to the impact of both FMD and Bovine Spongiform Encephalopathy (BSE or 'mad cow disease') outbreaks in the UK. In 2001 Australia’s Primary Industries Ministers agreed to develop high-level management arrangements and strategies to minimise the risk of similar disease outbreaks in this country. A national working group, comprising representatives from government, industry and academia, was charged with managing this work. The risk analysis and resultant strategies were based on the pre-border, border and post-border continuum.

1 Such as the Emergency Animal Disease Response Agreement, where the Australian government is liable for up to 50% of disease control and compensation costs
3 Productivity Commission 2002, Impact of a Foot and Mouth Disease Outbreak on Australia, Research Report, AusInfo, Canberra
4 Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ), 9 March 2001
The major findings of the national working group’s report to ARMCANZ were:  

- “there can be no such thing as ‘no risk’ .. [but] adopting a risk management approach and investing additional resources in areas identified as higher risk, will enable Australia to reduce substantially the probability of entry and establishment of major diseases;
- Commonwealth and State and Territory governments, in partnership with industry, must work together to establish and maintain an appropriate preparedness and response infrastructure;
- the scale of FMD and BSE are well beyond the tested capability of Australia’s animal health emergency system;
- given the FMD experience in the UK, it is apparent that an event of such a scale could not be managed efficiently and effectively with current approaches and resources.”

These findings were taken to the Council of Australian Governments (COAG), which requested:

- “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 disease outbreaks; and
  - the holding as soon as possible of a full-scale simulation under third party oversight to test the arrangements.”

_Exercise Minotaur_ was the “full-scale simulation”.

### 2. Implementation of risk management plan

The COAG decision to hold a full-scale simulation to test the nation’s arrangements for a major disease emergency resulted in the following risk management activities during 2001 and 2002 in the lead-up to _Exercise Minotaur_:

- an inter-government agreement for cooperation in managing the disease control and socio-economic effects of an FMD outbreak;
- enhanced linkages between State and Territory government primary industry and emergency management agencies;
- an Australian government FMD emergency plan;
- a review of animal disease control legislation in all jurisdictions;
- a review of all relevant emergency plans and procedures; and,
- targeted training and a series of pre-cursor exercises.

_Exercise Minotaur_ provided both a risk and opportunity for Australian government and industry.

The threat of a false report of an _actual_ foot and mouth disease outbreak in Australia posed a risk to Australia’s international trade, while any demonstrated weaknesses in the Australian animal health emergency system could lead to a loss of international confidence in our produce.

The steps in the management of _Exercise Minotaur_ were:

1. confirm adequate emergency response and recovery strategies are in place;
2. provide information on exercise;
3. evaluate and treat risks to the exercise and risks caused by the exercise;
4. develop exercise plan and conduct pilot exercise;
5. conduct exercise and evaluate results; and,
6. follow-up risk treatments.

Under the scenario for _Exercise Minotaur_ three States were hypothetically ‘infected’ with the disease, while other jurisdictions considered disease surveillance and relief and recovery measures for rural communities.

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5 National Management Group on TSEs and FMD, Report to ARMCANZ on Measures required to Maximise Australia’s Defences against BSE and FMD, April 2001
6 Council of Australian Governments communiqué, 8 June 2001 – see attachment 1
7 Memorandum of Understanding: National Response to a Foot and Mouth Disease (FMD) Outbreak, 6 December 2002 – see attachment 2
8 National Foot-and-Mouth Disease Simulation Project Plan, 26 February 2002 – see attachment 3
The exercise covered a three-month period in four days—from the initial confirmation of an outbreak to the end of the first week then the end of the first month. Each exercise day simulated a critical time period in a disease response – day 1 tested the initial notifications, coordination set-up, and initial disease response activities; day 2 tested reactions to the further spread of the disease, and trade implications; day 3 was the 8th day of the outbreak, where resources are becoming stretched and public communications is essential; day 4 was the 84th day of an outbreak where relief and recovery and re-establishment of trade was tested.

The exercise tested national processes and capabilities and took place in an operational environment requiring participants to perform the functions of their roles. Emergency operations centres in all States and Territories, and at the Australian Government level, were established and high-level management groups were required to meet and make decisions. Agricultural Ministers and First Ministers became involved in decision making in many jurisdictions.

Each jurisdiction evaluated its own exercise actions and decisions following the exercise, and a national evaluation has been completed (see section 10 for more details on evaluation). The evaluations have resulted in the ongoing development of risk treatments. The national evaluation is to be released when the final report is approved by COAG.

### 3. Non-insurance risk transfer

To diminish the overall level of risk to Australian society and industry, the Department ensures that the responsibilities for agricultural emergency risks are allocated to and accepted by the parties best able to control them. The two primary means for this risk transfer are joint emergency planning, and national agreements on the sharing of decision-making and operational costs in agricultural emergencies.

Emergency planning is conducted at national, Australian government, State and Territory government, and industry levels (see section 5 for more details on emergency planning).

The Memorandum of Understanding: National Response to a Foot and Mouth (FMD) Outbreak is “the result of an agreement by the Council of Australian Governments (COAG) that an outbreak of FMD and its consequences must be managed on a national basis. COAG agreed to 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] MOU outlines the arrangements agreed between governments for the national coordination framework, recognising that livestock industries have an important contribution to make to the national response. It also recognises the closely related Government and Livestock Industry Cost-sharing Deed in Respect to Emergency Animal Disease Response (EAD Response Agreement) under which government and signatory industries are committed to a range of matters including cost sharing and the use of the AUSVETPLAN.”

“The EAD Response Agreement is a world first and includes mechanisms for formal government/industry consultation on resource allocation, funding, training and risk mitigation. The Agreement provides certainty of funding for the initial response to a disease incursion or outbreak through a partnership of the Commonwealth, State and Territory governments and major livestock industry organisations. It specifies 63 diseases classified into four categories with the share of costs between governments and industries depending on the beneficiary of control as measured against the impact on human health and socioeconomic concerns, the environment and livestock production.”

These arrangements were tested in Exercise Minotaur by simulating decision making on socioeconomic and disease control issues arising from an FMD outbreak. The result was the confirmation of the MOU by COAG, and the ongoing revision of the EAD Response Agreement.

### 4. Insurance risk transfer

The Department’s approach to insurance risk transfer is to identify and manage risks that are manageable, and either share less manageable risks with other responsible organisations, or insure those risks that are beyond the Department’s control.

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9 See attachment 4 for maps showing the simulated disease spread
10 Memorandum of Understanding: National Response to a Foot and Mouth Disease (FMD) Outbreak, 6 December 2002
11 Animal Health Australia website
The likelihood of third party claims under general or professional liability, for both of which the Department is insured, will be reduced by the planned requirement for all personnel carrying out disease control activities to be assessed competent under the National Emergency Animal Disease Competency Standards.

5. Business continuity plan

In the case of agricultural emergencies, where the risks are mostly external to the Department, business continuity planning is not key – cooperative emergency planning is more appropriate.

As the responsibility for managing the risk of agricultural emergencies is shared, there exists a network of contingency and emergency plans across all governments and industry. The Department has its own emergency management framework and plan\textsuperscript{12}, which is linked to the overall planning network. The emergency planning is based on an assessment of post-border risks, and is key to the successful management of response to an agricultural emergency. In order to ensure that pests and diseases do not become established, a very efficient and rapid response is required. Poor decision-making and control actions in the first few days and weeks will make eradication of the pest or disease either very expensive or impossible. Emergency plans ensure that initial decisions and action are appropriate and effective. The planning is supported by the assessment and training of personnel, based on nationally agreed competency standards. Exercises of many kinds are used to test the provisions of emergency plans, and to ensure competence and awareness.

An example of a planning network is AUSVETPLAN\textsuperscript{13}. AUSVETPLAN is a series of technical response plans that describe the proposed Australian approach to an emergency animal disease incursion. The documents provide guidance based on sound analysis, linking policy, strategies, implementation, coordination and emergency management plans. AUSVETPLAN arrangements are reflected in the emergency plans of State and Territory governments and industry.

Exercise Minotaur caused a review of all animal health emergency arrangements, including emergency plans, and enhanced levels of training and exercising over the 12 months prior to Minotaur.

Initiatives arising from Exercise Minotaur include:

- the development of a national 5-year exercise program;
- the development of local government guidelines to allow this level of government to fully participate in pests and disease emergency management; and,
- the creation of a trained rapid response team.

There is also a need to ensure that other Department business continues during an agricultural emergency. In the UK during FMD outbreak, the regular bovine tuberculosis control program lapsed leading to a significant change in disease status. Other programs not related to animal health, such as the provision of advice on farm business and financial matters and drought relief could possibly suffer. As a consequence, the Department requires adequate continuity planning, linked to Departmental risk management and corporate governance strategies. The Department is currently embarking on a review of existing business continuity management with a view to developing a consistent and coordinated agency-wide approach.

6. Communication

Risk communication, from the Department’s point of view, must occur amongst agency personnel, with agency stakeholders such as other jurisdictions and industry, and with the community and international trading partners. A comprehensive communication strategy was designed to ensure that all parties, both domestic and international, were aware of the purpose of Exercise Minotaur. The strategy included:

- a close definition of the communication responsibilities of stakeholders;
- meetings of the exercise steering and working group with the responsibility of members to report back to their constituents;
- the development of a monthly newsletter for distribution to the stakeholders in the lead up to the exercise;
- the establishment of a web-site with both publicly-available information and password-protected section for those responsible for developing the exercise;

\textsuperscript{12} AFFAEMPLAN, a departmental emergency response plan
\textsuperscript{13} the Australian Veterinary Emergency Plan (www.aahc.com.au)
• the development of an information package that was mailed to over 160 domestic media outlets and provided to overseas posts;
• the establishment of a network of communications managers from all government primary industry agencies and from all Australian government agencies; and,
• media releases to domestic and international media outlets, and a briefing for international media.

Following Exercise Minotaur, further communications initiatives have included:

• an ethnic biosecurity communications campaign;
• FMD advertisements for all forms of media to be held in reserve for an animal disease emergency; and,
• an arrangement with Centrelink for the provision of a national call centre to manage public inquiries in the event of a major emergency.

7. Training and awareness

Training in emergency animal disease response is routinely undertaken. The Department trains its own staff in their roles under AFFAEMPLAN as part of the Departmental emergency preparedness program. Training for State and Territory government and industry personnel is undertaken by individual organisations, and also under the auspices of Animal Health Australia. Assessment and training is based on the National Emergency Animal Disease Competency Standards. Further training is available in emergency management from Emergency Management Australia. A national rapid response team is being developed, requiring the training of a further 36 personnel to national standards.

The Department, State and Territory government, Animal Health Australia and industry associations undertake awareness programs for personnel, primary producers and the public.

8. Resources

The Department’s commitment to risk management requires comprehensive resourcing of its staff and partners.

Internally, the Department has appointed a Project Manager in risk management, have developed risk management guidelines and a tool kit, and has conducted workshops and training.

Externally, the Department established the FMD/BSE Taskforce, which supported development of the FMD/BSE action plan, based on an assessment of risk. Support is also provided to Animal Health Australia, Plant Health Australia, and the Fisheries Research and Development Corporation, each of which is engaged in risk management strategies.

Exercise Minotaur was supported nationally by all governments and industry through a high level steering committee which oversaw the project, a working group which developed more detailed aspects of the exercise and communicated with their constituents, and a control team that developed the exercise in detail. 100 exercise facilitators and evaluators were trained to control and evaluate the exercise over the four days.

As a result of Exercise Minotaur, the Department has established the Emergency Risk Management Unit to support Departmental, Australian Government and national emergency preparedness initiatives.

9. Monitoring and review

Each agricultural emergency response is followed by a formal debrief program, that allows personnel to defuse following emergencies, and to learn lessons from the response. The lessons learnt are part of the continuous improvement program in emergency preparedness, and have been incorporated into existing risk management frameworks.

See section 10 for more specific information on monitoring and review in relation to Exercise Minotaur.

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14 Corporate Governance Group, *Business Risk management in the Department of Agriculture, Fisheries and Forestry*, 10 July 2001
Corporate Governance Group, *AFFA Risk Management Toolkit 2003-2004*
10. Measuring performance

The critical success factors (the criteria for judging the degree of success) of *Exercise Minotaur* were:

- constant communication was maintained with all stakeholders;
- the exercise objectives were met;
- strengths and weaknesses of current arrangements and remedial actions were identified;
- national FMD preparedness was enhanced;
- decision making in the exercise was appropriate and timely;
- integration of National arrangements was effective;
- domestic awareness of FMD response and recovery plans and procedures was increased;
- domestic and international confidence in Australian FMD preparedness was increased;
- no harm or damage was caused by the exercise.

The report on *Exercise Minotaur* is based on a rigorous set of pre-planned evaluations, including:

- participants’ daily evaluations;
- daily debrief reports;
- exercise evaluators’ reports;
- industry/agency/jurisdictional debrief reports;
- international and domestic observers reports and debrief report;
- the national debrief;
- the National Emergency Animal Disease Management Group (NMG) debrief;
- the control team report; and,
- reports from jurisdictional communications managers.

Exercise evaluation and reporting were undertaken to learn and communicate lessons from the exercise to improve the integration of national arrangements as part of the process of continual improvement, and to learn and communicate lessons from the management of the exercise for future exercises.

The evaluation mechanisms of *Exercise Minotaur* ensured that:

- the validity of the exercise was assured, and the process of evaluation would stand up to scrutiny;
- the evaluation framework was used consistently at all levels of the exercise;
- the evaluation was inclusive, in that all exercise participants were allowed to express opinions, and perceived 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; and,
- the resulting recommendations were evidence-based, reasonable, achievable and measurable.

**Conclusion**

*Exercise Minotaur* was a success on any measure. A national whole-of-government and industry exercise 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, and all who participated are now better prepared for an emergency animal disease outbreak. Lessons learnt from the exercise have significantly improved our risk management capabilities. The national report on *Exercise Minotaur* is currently with COAG for final consideration.

The last word on the Department’s performance in post-border risk management of pests and diseases can be left to the professional auditors:

“It is not possible for Australia to adopt a zero risk stance as regards quarantine so there will be from time to time incursions of exotic pests and diseases. The Committee believes Australia is well placed to meet those threats.”

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15 *National Foot-and-Mouth Disease Simulation Project Plan*, 26 February 2002
16 *National Foot-&-Mouth Disease Simulation, Exercise Minotaur, Evaluation Report*
17 see attachment 5 for a report on Exercise Minotaur, one year on
List of attachments

Attachment 1—Council of Australian Governments communiqué, 8 June 2001
Attachment 2—Memorandum of Understanding: National Response to a Foot and Mouth Disease (FMD) Outbreak, 6 December 2002
Attachment 3—National Foot-and-Mouth Disease Simulation Project Plan, 26 February 2002
Attachment 4—Maps showing the simulated disease spread
Attachment 5—Exercise Minotaur, one year on