The Auditor-General

Audit Report No.9 1999–2000
Performance Audit

# Managing Pest and Disease Emergencies

## Agriculture, Fisheries and Forestry—Australia

Australian National Audit Office

ISSN 1036-7632

ISBN 0 644 39122 7

Australian National
Audit Office

Canberra ACT
25 August 1999

Dear Madam President
Dear Mr Speaker

The Australian National Audit Office has undertaken a performance audit of Agriculture, Fisheries and Forestry—Australia in accordance with the authority contained in the *Auditor-General Act 1997.* I present this report of this audit, and the accompanying brochure, to the Parliament. The report is titled *Managing Pest and Disease Emergencies.*

Following its tabling in Parliament, the report will be placed on the Australian National Audit Office's Homepage—http://www.anao.gov.au.

Yours sincerely

P. J. Barrett
Auditor-General

The Honourable the President of the Senate
The Honourable the Speaker of the House of Representatives
Parliament House
Canberra ACT

**AUDITING FOR AUSTRALIA**

The Auditor-General is head of the Australian National Audit Office. The ANAO assists the Auditor-General to carry out his duties under the *Auditor-General Act 1997* to undertake performance audits and financial statement audits of Commonwealth public sector bodies and to provide independent reports and advice for the Parliament, the Government and the community. The aim is to improve Commonwealth public sector administration and accountability.

Auditor-General reports are available from Government Info Shops. Recent titles are shown at the back of this report. For further information contact:

The Publications Manager
Australian National Audit Office
GPO Box 707 Canberra ACT 2601

Telephone (02) 6203 7505
Fax (02) 6203 7798
Email webmaster@anao.gov.au

ANAO audit reports and information about the ANAO are available at our internet address:

http://www.anao.gov.au

## Audit Team

Sue Morton
Peter Hicks
Marie Kawaja
Alan Greenslade

# Contents

# Summary and Recommendations

# Summary

## Importance of emergency management

**1.** One of the many risks faced by Australia's agricultural industries is that of possible incursions of significant exotic pests and diseases, and outbreaks of serious endemic diseases and of previously unknown pests and diseases. Such emergencies pose a potentially serious threat to some industries, human health, flora and fauna, and could result in considerable economic consequences.

**2.** There are potentially significant social or community costs of an outbreak. As well, the potential economic costs can be considerable. For example, an outbreak of Foot and Mouth Disease, which affects cattle, sheep, goats and pigs, could cause a fall of about 3.5 per cent of GDP, a 1 per cent increase in unemployment, and a loss of $2 billion in export earnings in a single year.

**3.** In the last five years there have been 33 emergencies which the Department of Agriculture, Fisheries and Forestry—Australia (AFFA) has considered significant because of their actual or potential impact on trade or industry, human health, or because of direct cost to the Commonwealth.

**4.** While Australia's geographical isolation has provided a degree of natural protection from exotic pests and diseases in the past, increasing trade and international travel heighten the threat of exotic pests and diseases to this country. To address this threat, Australia has adopted a 'managed risk' approach using strategies such as targeted barrier controls; monitoring and surveillance; appropriate training; and preparedness to enable a rapid and effective response to an emergency.

## Commonwealth, State/Territory and industry responsibilities

**5.** Management of emergencies is part of a broader responsibility for animal and plant health matters in Australia. A complex set of arrangements involve the Commonwealth, States and Territories and relevant peak industry bodies. The States and Territories have operational responsibility for emergency responses. The Commonwealth has certain national and international responsibilities in relation to significant elements of the overall response strategy, but has limited direct responsibility for some matters including monitoring and surveillance and diagnostic support.

**6.** AFFA is the Commonwealth Department with primary portfolio responsibility for coordinating the national and international response to an emergency. The role of AFFA in managing emergencies is determined by the Commonwealth's legislative framework, including international responsibilities, government priorities and joint Commonwealth and State/Territory agreements and arrangements.

## Audit objective and approach

**7.** The objective of the audit was to evaluate the administrative effectiveness of the Commonwealth's planning and response strategies to deal with exotic and new endemic disease and pest emergencies with particular reference to:

- emergency response planning and coordinating the Commonwealth's involvement in any such activity; and
- monitoring, surveillance and diagnostic support.

**8.** The audit focused on the Commonwealth's role in preparing for, and managing, pest and disease emergencies requiring a rapid response. The audit did not address preventative measures such as quarantine and border controls; controlled release of exotic diseases or pests; or emergencies associated with previously known endemic diseases, food safety or chemical residue issues.

**9.** In considering the administrative effectiveness of related strategies, the ANAO had regard to their contribution to timely and appropriate actions which minimised the impact on human health; the economy, including international trade; and the environment.

**10.** Four case studies—Newcastle Disease (1998), Equine Morbillivirus (1994), Fireblight (1997) and Papaya Fruit Fly (October 1995)—were included in the audit. They were selected because they reflected both exotic and new emergencies and they were significant in terms of potential impact on human health; the economy and overseas trade; and the environment. In addition, incidents involving deaths in pilchards around the Australian coastline in 1995 and 1998 were also used to test the effectiveness of the administration of the Commonwealth's planning and response strategies.

**11.** An Advisory Panel with expertise in emergency management and animal and plant health matters assisted the ANAO during this audit. The skills and experience of the panel represented different perspectives and sectors. The general view of members of the Advisory Panel engaged for the audit is that the issues addressed in the report, together with the findings and recommendations, will contribute to significantly improving

the effectiveness of the systems and procedures for managing pest and disease emergencies.

## Audit conclusion

**12.** Overall, the Commonwealth's emergency planning and response strategies have enabled it to deal effectively with most aspects of recent exotic and new endemic pest and disease incursions in the animal and plant sectors.

**13.** Planning and coordination by the Commonwealth have generally been effective in facilitating containment, and eradication where appropriate, of emergency disease and pest outbreaks, and minimising the impact of the emergency.

**14.** Diagnostic support is available in all animal and plant sectors. Access to diagnostic support is well developed in the terrestrial animal sector where the number of animals and types of diseases is widely known. Australia's diagnostic capability is more limited for the aquatic animal and plant sectors because of the diversity of diseases and hosts, and the smaller knowledge base about relevant pests and diseases. Overseas expertise may have to be utilised where there are limitations in this respect in Australia.

**15.** It is not possible, or practical, to provide complete protection from exotic pest and disease emergencies because of the nature and location of some threats. The monitoring and surveillance systems therefore could not provide sufficient early warning in all circumstances. Tracking the source of an incursion or outbreak is more effective in the terrestrial animal sector than in the plant or aquatic animal sectors.

**16.** Notwithstanding the outcomes of recent emergencies, aspects of the emergency management framework should be strengthened to provide adequate assurance that the Commonwealth is fully prepared to respond in a timely and appropriate way to future pest and disease emergencies. In particular, planning should be strengthened by ensuring that the planning framework appropriately addresses the various roles of Commonwealth agencies and that the plans are up to date and relevant for all types of emergencies.

**17.** Facilitating coordination with the States/Territories, relevant industry bodies and other Commonwealth agencies could be made more effective by strengthening the operations of some consultative committee mechanisms; developing mechanisms to engage industry more effectively; and developing a strategy to ensure that relevant Commonwealth agencies are effectively engaged during an emergency.

**18.** The effectiveness of current monitoring and surveillance systems and arrangements for accessing diagnostic support should be reviewed, in consultation with States/Territories and other relevant stakeholders, in order to identify improved means of providing early warning of a possible incursion or outbreak and of tracking its source as well as improving Australia's diagnostic capability.

## Recommendations and response

**19.** The ANAO has made nine recommendations aimed at improving the emergency preparedness of the Commonwealth. The majority of recommendations have been directed at better planning for emergencies.

### Summary of AFFA response:

**20.** Disease and pest emergency response preparedness and coordination is a very difficult task, particularly when considered against the background complexities involved. These include the multitude of threats and risks; the different and sometimes overlapping areas of functional and legal responsibility; limited resources and some skills shortages; and the varying interests of the Commonwealth, States, industry and the Australian and international communities.

**21.** Notwithstanding the significant effort going into programs such as barrier control and disease awareness, the number of incidents requiring an emergency response is expected to continue at present or higher levels. This assessment reflects the reality arising from the risks of incursion, ever expanding transport, tourism and trade, new unknown diseases, growing plant and aquatic animal emphasis, development of tropical agriculture and the rate of change generally, which are all expected to accelerate in the coming millennium.

**22.** While there can be no guaranteed solution to all possible threats, Australia has so far been well served by the level of professionalism and cooperation demonstrated by all stakeholders and authorities to date. However, we have yet to deal with a major catastrophic incident and therefore must not be complacent. We should prepare for the worst case scenario. All contributing parties, including States, industry and all relevant Commonwealth agencies must contribute and fully participate, must continue to be prepared, and must have sufficient quality and trained resources available.

**23.** The report has highlighted a number of areas that need reconsideration. That process has commenced, and some changes have already been implemented, but others will require additional concerted effort to be addressed in a sensible and timely manner. This report and set of recommendations have been a most useful process.

# Key Findings

## Planning for emergency management

### National planning for the contribution of the Commonwealth, States and industry

**24.** Appropriate emergency response plans are a key factor in emergency response preparedness. The Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ) and the Standing Committee on Agriculture and Resource Management (SCARM) have endorsed the concept of national emergency management plans and identified a number of generic principles to be covered. These include obtaining advance support of participants, agreeing clear decision-making processes, defining roles and responsibilities and identifying actions to be taken.

**25.** There are agreed national emergency plans in the terrestrial and aquatic animal sectors which set out how Commonwealth and State/Territory Government agencies and relevant industry bodies will coordinate their efforts. They provide a sound basis for emergency management in these sectors. However, there is no such national emergency management plan for the plant sector, reducing assurance to stakeholders that emergency responses will be timely, appropriate and effective. The development of a national plan for plant emergencies will be the responsibility of the Australian Plant Health Council when it is established.

### Commonwealth planning

**26.** The Commonwealth has a well developed planning framework for terrestrial animal emergencies. However, there are some limitations in its components that have the potential to reduce the effectiveness of the Commonwealth's response to an emergency. In particular, COMVETPLAN, the Commonwealth's veterinary emergency plan, is well out of date, not having been updated since it was issued in 1990. Furthermore five Commonwealth agencies have not fully met the requirement to prepare and lodge sub-plans with AFFA as part of the planning framework.

**27.** AFFA has the lead role for the Commonwealth in an emergency. In accordance with COMVETPLAN, AFFA has a sub-plan to address its role in terrestrial animal emergencies. However, AFFA's plans could be substantially strengthened to improve their operational effectiveness.

Areas for improvement include ensuring sub-plans are up to date, appropriately authorised and clearly identified as such; reflecting Emergency Management Australia (EMA) guidelines in sub-plans; including objectives and appropriate indicators to assess performance; and incorporating appropriate aspects of the Department's risk management arrangements to provide adequate assurance to stakeholders that the risks have been identified, prioritised and addressed.

**28.** While the Commonwealth has an integrated emergency planning framework in the terrestrial animal sector, there is no series of linked plans to provide a suitable planning framework for managing aquatic animal or plant emergencies. There is no plan equivalent to COMVETPLAN which identifies the various roles and responsibilities of Commonwealth agencies likely to be involved in an emergency. This increases the risk that Commonwealth agencies will not be effectively engaged during a plant or aquatic animal emergency.

**29.** Furthermore, AFFA has no specific plans outlining its role in responding to aquatic animal and plant emergencies, although there is minor reference to management of aquatic animal emergencies in some of the plans and guidelines for the terrestrial animal sector. This continues the real risk that coordination of the Commonwealth's response to plant and aquatic animal emergencies will not be effective.

**30.** Where plans and associated response strategies were applied in response to the emergencies examined during the audit, they appeared to be effective in facilitating containment (and eradication where appropriate) and in minimising the impact on human health, the economy, international trade and the environment.

## Coordination

### Facilitating coordination with the States/Territories and industry groups

**31.** In accordance with the ARMCANZ/SCARM arrangements for emergency management, consultative committees are responsible for coordinating the national technical response to emergencies. The committees provide the formal structure for the Commonwealth to communicate and work with the States and Territories, with the latter primarily responsible for responding to an emergency in the field.

**32.** The ANAO found the consultative committee mechanisms provide an effective framework within which the Commonwealth is able to work with the States and Territories to coordinate a national response to an emergency. The States, consulted by the ANAO during the audit,

confirmed that the consultative committee mechanisms generally provide an effective framework for responding to emergencies. As discussed at paragraph 3.13, some stakeholders suggested that the size and composition of the plant consultative committees could be streamlined for better performance.

**33.** One of the Commonwealth's roles is to provide secretarial support to the various committees. There have been weaknesses in this area, particularly in relation to record-keeping. As part of good governance, more effective record-keeping would strengthen transparency and overall accountability by enabling tracking of decisions and actions taken.

**34.** Industry groups consulted by the ANAO during the audit were supportive of the opportunity to be involved in the consultative committee process, but the mechanisms by which they are engaged and kept informed during an emergency, especially in the plant sector, should be strengthened to provide a more effective mechanism for their engagement.

### Communication and international reporting

**35.** Commonwealth agencies, other than AFFA, contribute to the Commonwealth's response, with AFFA providing overall leadership. AFFA liaised with most relevant Commonwealth agencies during the emergencies included in the audit. The most notable omissions were the lack of a formal notification to EMA for terrestrial animal emergencies and the lack of a formal mechanism to engage Environment Australia (EA). A more formal approach, as part of a communications strategy, which is tied to the emergency plans, would provide greater assurance that relevant Commonwealth agencies would be engaged in a timely and appropriate way during an emergency.

**36.** AFFA has fulfilled Australia's obligations to report certain emergencies to international organisations in a timely and appropriate manner. Overseas posts have been advised appropriately of incidents so that they could inform and reassure relevant trading partners.

## Diagnostic support

**37.** A critical component of emergency management is the ability to access appropriate diagnostic support to aid decision-making during an emergency. Diagnostic support is available for all animal and plant sectors. Access to diagnostic support is well developed in the terrestrial animal sector, where the number of animals and types of diseases is widely known. Australia's diagnostic capability is more limited for the aquatic animal and plant sectors largely because of the diversity of

diseases and hosts and the smaller knowledge base about relevant pests and diseases. Arrangements for accessing diagnostic support in the terrestrial animal sector are supported by appropriate protocols. There are no formal arrangements for the plant sector, increasing the risk that accurate and timely diagnosis may not be provided during an emergency. Overseas expertise may have to be utilised where there are limitations in this respect within Australia.

**38.** Concerns are emerging from Commonwealth and State authorities dealing with emergencies regarding threats to future diagnostic capability because of a decline in the number of people in Australia with relevant skills. Stakeholders have indicated that there is a limited skills base for aquatic animals, and erosion of the technical skills base nationally for plants and terrestrial animals. This is an important risk for the Commonwealth to address as a matter of priority for improved administrative effectiveness.

## Monitoring and surveillance

**39.** The ANAO recognises the need for achieving an appropriate balance in resource allocation for prevention, detection and control once an incursion or outbreak is detected and that it is not possible or practical to provide complete protection from an exotic pest or disease emergency because of the nature and location of some threats.

**40.** Within these constraints, there are extensive systems to provide early warning of possible emergencies in the terrestrial animal sector. However, these systems were not able to provide sufficient early warning in all circumstances. For example, there was no early warning of either Equine Morbillivirus or Newcastle Disease due to the nature and location of these emergencies.

**41.** Early warning in the aquatic animal sector is particularly difficult in the wild where there are no geographic boundaries to contain the species and where diseases may occur in aquatic animals in remote locations. This is demonstrated by the absence of early warning of high rates of death in pilchards in 1995 and 1998.

**42.** Early warning systems in the plant sector are generally limited to specified exotic pests and diseases and to limited geographic areas. The systems did not provide early warning of either the October 1995 Papaya Fruit Fly or the Fireblight incursions, largely due to the location of the incursions. The Papaya Fruit Fly is one of the specified pests which the Northern Australia Quarantine Strategy (NAQS) aims to detect. However, the location of the actual incursion was an urban area which,

at the time, was not clearly designated to be a NAQS responsibility. There is no equivalent to NAQS for the southern States. It is unlikely that any system would have been sensitive enough to detect Fireblight in the urban location where it occurred.

**43.** Tracking techniques are used by the Commonwealth and States to trace the possible sources of an emergency in the animal and plant sectors. Determining the source of an emergency in the aquatic animal sector is more difficult because of the nature and location of disease emergencies. Tracking systems have been most effective for the terrestrial animal sector, where the source of most major incursions and outbreaks in recent years has been determined. Tracking the source of incursions in the plant and aquatic animal sectors has been less effective because of the diversity of natural entry points for pests and diseases, such as water and air currents and migratory birds, which are not all able to be controlled. The sources of only four of the eleven major plant emergencies in 1993-1998 have been identified.

**44.** There has been some review of specific monitoring and surveillance systems to assess their effectiveness; in particular, a recent review of NAQS. There would be merit in examining the effectiveness of the range of other systems and procedures for monitoring and surveillance to identify improved means of providing early warning of a possible pest or disease emergency and of tracking its source.

# Recommendations

**Recommendation No.1 Para. 2.20**

The ANAO recommends that AFFA assess ways in which it can coordinate and facilitate the development of a planning framework for the Commonwealth, including defining the roles and responsibilities of relevant Commonwealth agencies involved in aspects of emergency management in the plant and aquatic animal sectors.

***AFFA response:*** Agreed

**Recommendation No.2 Para. 2.26**

The ANAO recommends that, in relation to the Commonwealth's veterinary emergency plan (COMVETPLAN), AFFA:

- update the plan to reflect adequately current responsibilities and administrative arrangements;
- ensure relevant Commonwealth agencies are included in the planning arrangements and are aware of their roles and responsibilities in respect of emergency disease management; and
- consolidate a set of Commonwealth agency sub-plans in support of COMVETPLAN.

***AFFA response:*** Agreed

**Recommendation No.3 Para. 2.32**

The ANAO recommends that, in order to facilitate the coordination of the Commonwealth's response to an emergency, AFFA develop a suitable plan for managing and coordinating the national and international response to emergencies in the plant and aquatic animal sectors.

***AFFA response:*** Agreed

**Recommendation No.4 Para. 2.44**

The ANAO recommends that, in developing or refining its plans for managing pest and disease emergencies, AFFA:

- ensure that relevant plans are up to date, appropriately authorised and clearly identified;
- reflect recent Emergency Management Australia guidelines;
- demonstrate the linkages between the various plans (including the national, Commonwealth, Departmental and Office plans);
- incorporate objectives / planned outcomes and appropriate performance indicators; and
- incorporate appropriate risk management arrangements.

***AFFA response:*** Agreed

**Recommendation No.5 Para. 3.19**

The ANAO recommends that AFFA ensure that appropriate and timely records are made of consultative committee meetings and distributed to participants, and that a consolidated set of minutes of all meetings is maintained for more effective and accountable performance.

***AFFA response:*** Agreed

**Recommendation No.6 Para. 3.34**

The ANAO recommends that, to ensure a timely and appropriate response by the Commonwealth, AFFA develop an appropriate communication strategy with relevant Commonwealth agencies likely to be involved in an emergency.

***AFFA response:*** Agreed

**Recommendation No.7 Para. 4.18**

The ANAO recommends that AFFA, in providing national leadership, consider means of addressing strategic risks associated with the erosion of relevant technical skills nationally.

***AFFA response:*** Agreed

**Recommendation No.8 Para. 4.28**

The ANAO recommends that AFFA, in order to improve Australia's diagnostic capability, consult with States, Territories, CSIRO and other key stakeholders to develop a strategy to improve access to effective diagnostic support during a plant or aquatic animal emergency.

***AFFA response:*** Agreed

**Recommendation No.9 Para. 5.29**

The ANAO recommends that AFFA, in consultation with the States and Territories, examine the effectiveness of current systems and procedures for monitoring and surveillance of possible pest and disease emergencies, in order to identify improved means of providing early warning and tracking the source.

***AFFA response:*** Agreed

# Audit Findings and Conclusions

# 1. Introduction

*This chapter provides background information about the importance of managing pest and disease emergencies in agricultural and fish industries. It also describes the role of AFFA in coordinating the Commonwealth's response to an emergency. The audit objective and methodology are also described.*

## Managing emergencies is important[1]

**1.1** Primary industries have long been a key contributor to Australia's export sector. In 1997-98 the value of rural exports totaled $25.3 billion, representing 22 per cent of total exports.[2] In the same period there were 378 000 persons employed in agriculture, or 4.5 per cent of all employment.

**1.2** One of the many risks faced by Australia's agricultural industries is that of possible incursions of significant exotic pests and diseases, and outbreaks of serious endemic diseases and of previously unknown diseases and pests. Such emergencies pose a potentially serious threat to some industries, human health, and flora and fauna, and could result in considerable economic consequences (including loss of confidence in exports by trading partners). Some indication of the reported and estimated direct economic consequences of pest and disease emergencies is provided in Box 1.

**1.3** In the last five years, there have been 33 emergencies which the Department of Agriculture, Fisheries and Forestry—Australia (AFFA) has categorised as being significant (see Figure 1). These emergencies were categorised as significant because of actual or potential impact on international trade, human health or the affected industry, or because of direct cost to the Commonwealth. Further details are at Appendix 1.

**1.4** In addition to those incidents categorised as significant there were a large number of incidents which required initial investigation but did not result in a full emergency response. For example, there were 64 plant health incidents that were dealt with in consultative committees. However, AFFA advised that caution should be used in any direct comparisons between sectors. Differences in international agreements, pest biology, ecology, human health impact and the industries involved

---

1 'Emergency' is a generic term used in this report. It refers to 'incursions' of pests and diseases into Australia; 'outbreaks' of diseases in Australia; and other significant 'incidents' affecting animal (terrestrial and aquatic) and plant health.

2 ABARE, *Australian Commodities*, vol 6, no 2, June Quarter 1999. Rural exports include farm, fisheries and forest products.

complicate the development of comprehensive guidelines that could apply across all incidents.

**1.5** In response to a parliamentary question, AFFA advised that in the period March 1996 to December 1998 there were 17 disease and/or pest incidents which AFFA considered warranted international notification because of their implications for international trade or reporting obligations. Not all of these were included in the 'significant' category above. The majority of these were in the plant sector. In three of these cases there was a suspension in Australia's exports of the affected produce.

**1.6** During the course of the audit, there were two outbreaks of Newcastle Disease, an incursion of sugar cane smut, another incident involving deaths in pilchards, and an incursion of the black striped mussel. Papaya fruit fly was detected on an island in the Torres Strait. A further case of Equine Morbillivirus in horses also occurred.

## Box 1

**Some reported and estimated economic consequences of emergencies**

***Foot and Mouth Disease*** – affecting cattle, sheep, goats and pigs—projected impact

- fall of 3.5 per cent of GDP
- reduction of 0.6 per cent in aggregate employment in the first year
- 1 per cent increase in unemployment
- lost export earnings of $2 billion in the first year

***Equine Morbillivirus (EMV)***

- the horse racing industry estimates $900 000 in prize money was not paid out (but some was added to future pools) during the 1994 outbreak
- betting turnover was reduced by $15 million

***Avian Influenza***

- reimbursement to industry under the Commonwealth/State Cost-Sharing Agreement for eradication of the 1997 virulent avian influenza outbreak in poultry totalled $4.45 million (of which the Commonwealth share was $2.2 million)

***Newcastle Disease***

- estimated costs to poultry industry of $69 million in the first year
- loss of international trade
- collateral impact on native birds and the environment

***Fireblight***

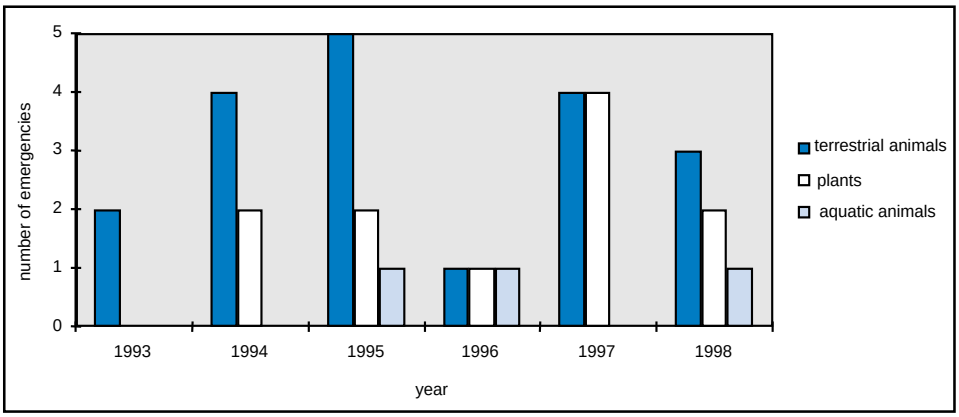
- estimate of loss of trade in apples and pears of $1.5 million as a result of interstate quarantine restrictions for the Goulburn Valley in 1997
- potential to cause $125.7 million losses in total Australian apple and pear product

***Papaya Fruit Fly***

- the cost of eradication of the October 1995 incursion, which affects fruit and vegetables, was some $33 million (of which the Commonwealth share was $16.6 million)
- estimated cost to local industry was around $110 million in lost trade and control, treatment and eradication

Source: Compiled by ANAO from various sources

**Figure 1**
**Number of emergencies in the animal and plant sectors, 1993-98**




Source: Compiled by ANAO from data supplied by AFFA

## Risks to agricultural industries from incursions are increasing

**1.7** Australian agriculture has long benefited from being relatively free of many serious animal and plant pests and diseases. This reflects, in large part, two factors. Firstly, Australia's geographic isolation, and its status as an island nation, is seen as providing a degree of natural protection. Secondly, there is the acknowledged success of quarantine measures in preventing the introduction of unwanted exotic pests and diseases, and of responses to incursions and outbreaks of pests and diseases. However, increasing overseas trade and international travel heighten the threat of exotic terrestrial animal and plant pests and diseases. The number of potential entry routes is also on the increase with, for example, containerisation and refrigeration increasing the risk of survival of exotic species.

**1.8** Complete avoidance of exotic incursions is not practically possible for Australia because of its thousands of kilometers of coastline, much of it very remote; resource constraints; and the nature of some threats such as those spread on air currents or on migratory birds. In practice, a managed risk approach is adopted, using strategies such as targeted barrier controls; monitoring and surveillance; appropriate training; and preparedness for a rapid and effective response.

**1.9** AFFA has identified the basic elements of an effective emergency response as including:

- preparedness and planning: with some flexibility as emergencies differ and confirmatory diagnosis can take time;
- monitoring and surveillance: with emphasis on high risk areas but reliance on a broad base of information sources;

- compensation for loss of remuneration: to encourage early and rapid reporting of unusual incident signs and cooperation during the response;
- rapid response capacity: including cooperative arrangements and access to professional diagnostic support; and
- facilitating rapid response through pre-emergency agreements, agreed cost-sharing arrangements and pre-planned eradication strategies.

## Animal and plant health arrangements in Australia are complex

**1.10** Management of emergencies is part of a broader responsibility for animal and plant health matters in Australia. A complex set of arrangements involve the Commonwealth, States / Territories and relevant peak industry bodies.

### The Commonwealth has national and international responsibilities

**1.11** The Commonwealth has national and international responsibilities including:

- barrier quarantine control;
- import and export inspection;
- export certification;
- international declarations on terrestrial animal, fish and plant health status;
- international intelligence; and
- negotiating international protocols and codes.

**1.12** The *Quarantine Act 1908* and the *Export Control Act 1982* provide the major legislative basis for these activities.

### The States and Territories have operational responsibilities

**1.13** States and Territories have specific operational responsibilities such as:

- control or eradication measures within State boundaries;
- interstate movement controls; and
- lead agency responsibility for emergency responses as delegated to State Departments of Agriculture / Primary Industry within State / Territory Disaster Plans.

**1.14** Various State Acts provide the legislative basis for these activities.

## Some responsibilities are shared between the Commonwealth and States/Territories

**1.15** Agricultural policies of a national concern are jointly administered by the Commonwealth and States/Territories through the relevant peak decision-making bodies. These are the Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ), and the Standing Committee on Agriculture and Resource Management (SCARM).

**1.16** ARMCANZ comprises ministers responsible for agriculture and resource management from all States/Territories, the Commonwealth and New Zealand. SCARM comprises heads of Commonwealth, State/Territory and New Zealand government agencies responsible for agriculture, soil, water and rural adjustment policy. Consultative committees have been created within the ARMCANZ/SCARM framework to coordinate responses to emergencies,[3] including recommending to ARMCANZ whether to invoke the various Commonwealth/States cost sharing arrangements for eradication and compensation.[4]

**1.17** The peak bodies currently responsible for matters of a national concern in respect of aquatic animals are the Ministerial Council of Forestry, Fisheries and Aquaculture (MCFFA) and the Standing Committee on Fisheries and Aquaculture (SCFA). These are the fisheries equivalent of ARMCANZ and SCARM respectively.[5]

**1.18** Figures 2–4 summarise the major administrative arrangements for animal and plant health matters, with the emergency management decision-making structure within these arrangements highlighted.[6] Further details on the role and membership ARMCANZ, SCARM and the various other committees are provided at Appendix 2.

---

[3] In the terrestrial animal and aquatic animal sectors, the committee is the Consultative Committee on Emergency Animal Diseases (CCEAD); in the plant sector a Consultative Committee (CC) is convened for each emergency as required.

[4] The Commonwealth/States cost sharing arrangements are different for each sector—see 5.15-5.17.

[5] AFFA advised that the arrangements for aquatic animal health are undergoing reform, with the proposed integration of the arrangements for aquatic animal health into the ARMCANZ/SCARM structure.

[6] AFFA advised that, depending on the nature and circumstances of the incident, and because Consultative Committees may include SCARM members or other senior participants, communication can be and sometimes is direct to ARMCANZ (in or out of session) if this is warranted. The frameworks depicted, although the best representation possible, are therefore indicative.

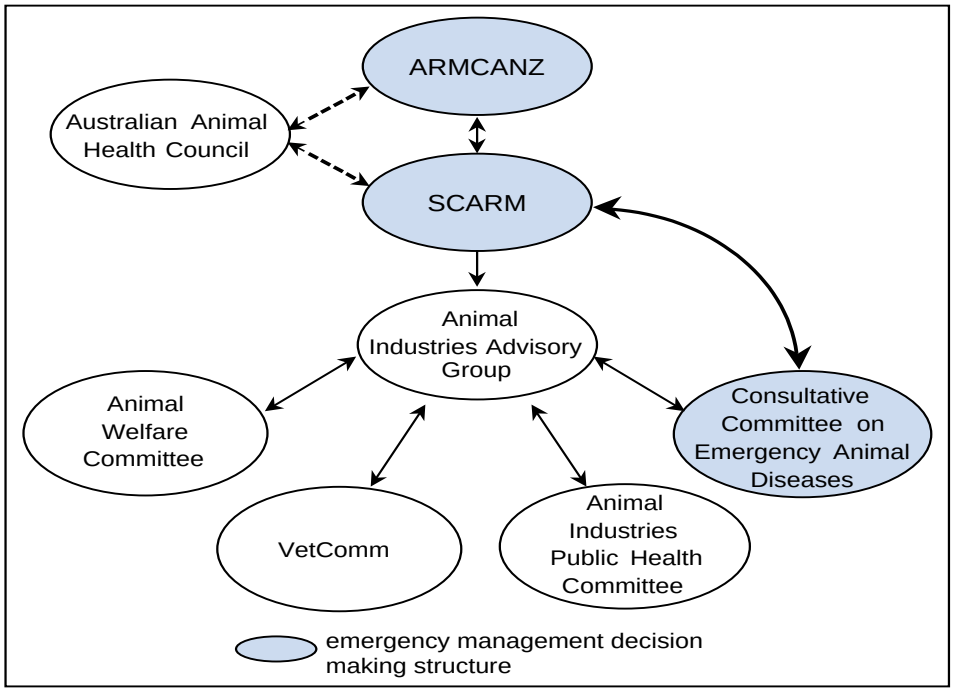
## The involvement of industry varies between the sectors

**1.19** The formal involvement of industry groups in animal and plant health administration and policy varies between the sectors. In the terrestrial animal sector, Australia's peak animal health body, the Australian Animal Health Council (AAHC), coordinates a national approach to animal health issues including emergency management. Its members are primarily Commonwealth and State/Territory Governments and ten industry/professional bodies.

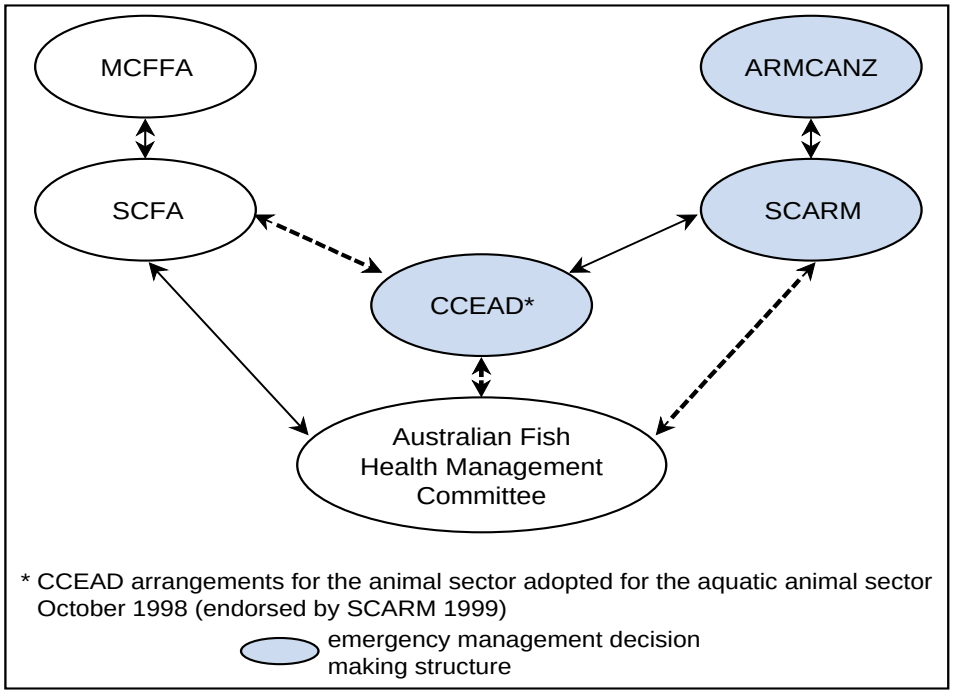
**1.20** Strategic responsibility for aquatic animal health lies with the Australian Fish Health Management Committee (AFHMC) which is developing a comprehensive aquatic animal health framework. The Australian Seafood Industry Council (ASIC) is represented on this committee.

**1.21** There is no formal structure to involve industry groups in coordinating a national approach to plant health issues, although Governments have announced the proposed establishment of the Australian Plant Health Council (APHC) along similar lines to the AAHC. The APHC is due for incorporation by 1999–2000.

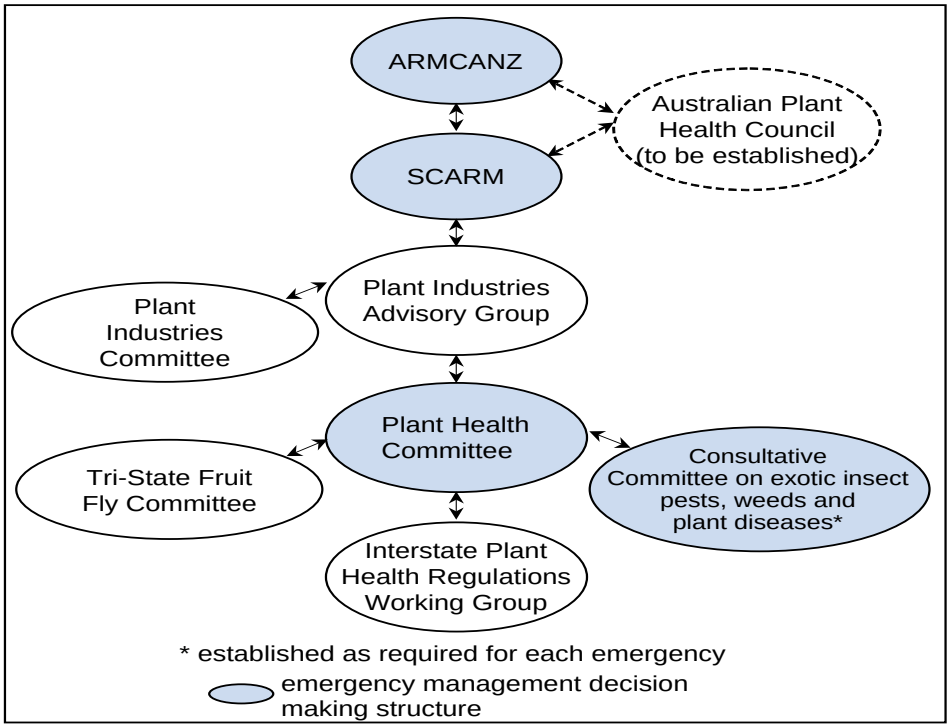
### Figure 2
**Terrestrial animal health administration**



## Figure 3
**Aquatic animal health administration**




## Figure 4
**Plant health administration**



## Recent reviews have highlighted differences in the sectors

**1.22** There have been several important reports in recent years relevant to animal and plant health issues and the management of emergency incidents in the sectors. The most significant of these are the Nairn review of Australia's animal and plant quarantine policies and procedures (1996);[7] the report of the National Task Force on imported fish and fish products (1996);[8] and the Taskforce report to SCARM on *Managing Incursions of Exotic Pests, Weeds and Diseases* (1997).

**1.23** These reports identified, *inter alia,* that emergency response mechanisms were at different stages of development for the different sectors. They found that arrangements in the terrestrial animal sector were well developed, but with issues still requiring attention. In the plant sector arrangements were considered *ad hoc* and inadequate while the aquatic animal sector had the least developed arrangements for dealing with an emergency. In responding to the Nairn Report, the Government concluded that greater emphasis must be given to addressing the issues of preparedness and response to pest and disease incursions.[9]

**1.24** There have been a number of major developments since these reports were issued, including a review of funding of terrestrial animal disease emergencies; establishment of the Office of Chief Plant Protection Officer; moves to establish the Australian Plant Health Council; and the development and adoption of AQUAPLAN, a strategic plan for aquatic animal health.

## The Department of Agriculture, Fisheries and Forestry—Australia (AFFA) has a key role

**1.25** The Commonwealth department with primary portfolio responsibility for animal and plant health matters, including emergency responses, is the Department of Agriculture, Fisheries and Forestry—Australia (AFFA). Under a recently introduced structure, the roles of the Chief Veterinary Officer (CVO) and the Chief Plant Protection Officer (CPPO) have been incorporated into one National Office of Animal and Plant Health (see Appendix 7).

---

7 Nairn, M E, Allen, P G, Inglis A R, and Tanner, C, *Australian Quarantine: A Shared Responsibility*, DPIE, Canberra, 1996 (the Nairn Report).

8 Higgins et al, *Report of the National Task Force on Imported Fish and Fish Products*, 1996.

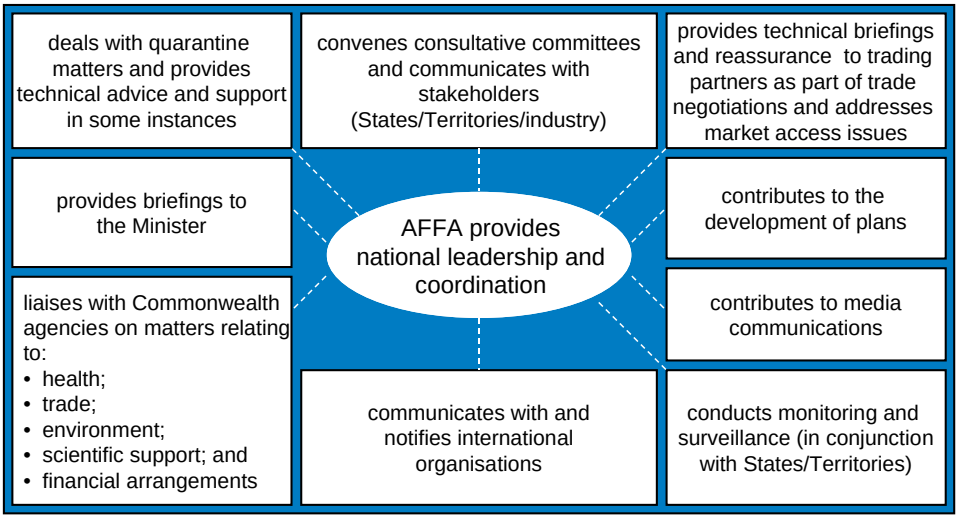
9 *Australian Quarantine - A shared responsibility, The Government Response*, August 1997, p. 11.

## AFFA's role in emergency management is to provide leadership and national coordination

**1.26** AFFA's role in emergency management is determined by the legislative framework, including international responsibilities, government priorities and joint Commonwealth and State/Territory agreements and arrangements. AFFA's role is broadly to provide national leadership and coordination in the management of pest and disease emergencies, although the nature and extent of this role varies between sectors. AFFA's role is set out in Figure 5.

### Figure 5

**Role of AFFA in management of emergencies**




## Resources for emergency management

**1.27** AFFA has estimated that its expenditure on emergency management for 1998–99 will amount to $10.3 million (excluding costs of BRS and AQIS[10]) as summarised in Table 1.

### Table 1

**AFFA—estimated emergency response function costs ($000)**

| | *1997-98 (est)* | *1998-99 (est)* |
|---|---|---|
| Salaries and oncosts | 588 | 717 |
| Consultancies & other | 11 | 44 |
| Commonwealth Eradication Contribution | 7535 | 9551 |
| **Total** | **8134** | **10312** |

Source: AFFA[11]

[10] Bureau of Rural Sciences and Australian Quarantine and Inspection Service.

[11] Based on known full-time staff and levels of response activity. The costs of BRS and AQIS are not included, since, for example, AQIS staff potentially have short term involvement in an emergency, so meaningful attribution of costs is not possible. Also excludes program funds for the Screw Worm Fly facility in Malaysia.

**1.28** The costs of other Commonwealth contributions to emergency management are not readily available.

**1.29** During the course of the audit AFFA emphasised that it considered that adequate resourcing was the key risk factor in emergency pest and disease management. Adequacy of resourcing affected national coordination; quality and security of diagnostic services; compensation to assist early detection; monitoring and targeting of surveillance; pre-response planning (including appropriate training); and, most particularly, the capability for a rapid response to contain, control and, if feasible, eradicate.

## Other Commonwealth agencies also have a role

**1.30** The Commonwealth Scientific and Industrial Research Organisation (CSIRO) is the other Commonwealth agency with major responsibilities in animal, fish and plant health emergencies. Its major contribution is through the Australian Animal Health Laboratory (AAHL) at Geelong, including the Fish Diseases Laboratory (FDL). AFFA and CSIRO each contribute $6 million per annum to maintenance of the AAHL facility. CSIRO's other contributions to emergency management are through the Division of Entomology and a consultancy with AQIS for the identification of specimens intercepted by AQIS border programs, but AFFA advised that most plant pathology is undertaken through State funded facilities.

**1.31** A number of other Commonwealth agencies are also involved in aspects of emergency management, primarily in the terrestrial animal sector, including the Department of Foreign Affairs and Trade (DFAT); the Department of Finance and Administration (DoFA); the Australian Customs Service (ACS), and the Department of Health and Aged Care (DHAC). The roles and responsibilities of these agencies are set out in the Commonwealth's veterinary emergency plan, COMVETPLAN. In summary they relate to monitoring and reporting significant foreign animal disease events, minimising trade disruption, expediting payments to States as part of the Cost Sharing Agreement, arranging customs and immigration clearance at remote air fields, and collaborating with animal health authorities in the control of exotic zoonoses.[12]

**1.32** In addition, Emergency Management Australia (EMA) is the agency responsible for planning and coordinating general support assistance provided by the Commonwealth to the States and Territories when support is not otherwise available through existing specific plans. EMA's plan for such assistance is the Commonwealth Government Disaster Response Plan (COMDISPLAN).

---

[12] Any disease which is communicable to humans from another animal species.

## Audit objective and scope

**1.33** The audit objective was to evaluate the administrative effectiveness of the Commonwealth's planning and response strategies to deal with exotic and new endemic disease and pest emergencies, with particular reference to:

- emergency response planning and coordinating the Commonwealth's involvement in any such activity; and
- monitoring, surveillance and diagnostic support.

**1.34** The audit focussed on the role of AFFA in preparing for, and managing, terrestrial animal, aquatic animal and plant emergencies requiring a rapid response. It excluded vertebrate pests, the forestry sector and weeds, which, though important, are less likely to require a rapid response.

**1.35** The audit did not address border and quarantine arrangements; controlled release of exotic diseases or pests; or emergencies associated with previously known endemic diseases, food safety or chemical residue issues.

**1.36** The scope of the audit addressed the role of the Commonwealth. As discussed above, the Commonwealth has clear responsibilities and roles in relation to significant elements of the overall response strategy, but has limited direct responsibility for some matters including monitoring and surveillance and diagnostic support.

**1.37** In considering the administrative effectiveness of related strategies, the ANAO had regard to their contribution to timely and appropriate actions which minimised the impact on human health; the economy, including international trade; and the environment.

## Audit methodology

**1.38** The methodology used in the audit involved:

- examining files and documents, and interviewing key personnel, primarily at AFFA and, as appropriate, at CSIRO (AAHL and the Division of Entomology) and other Commonwealth agencies;
- case studies to assess the response to specific incidents;
- interviews with State and industry stakeholders involved in the case studies.

**1.39** Appendix 3 lists the Commonwealth agencies, State and industry stakeholders consulted during the audit.

**1.40** The four case studies were Newcastle Disease (1998), Equine Morbillivirus (1994),[13] Fireblight (1997) and Papaya Fruit Fly (October 1995). These were selected because they reflected both exotic and new pest and disease emergencies and because of their significance in terms of impact on human health; the economy and overseas trade; and the environment. In addition, the incidents involving deaths in pilchards around the Australian coastline in 1995 and 1998 were used to test the effectiveness of the administration of the Commonwealth's planning and response strategies. Appendix 6 contains a summary of the case studies and pilchard emergencies and the ANAO's findings with respect to them.

**1.41** An expert Advisory Panel was engaged to advise on emergency management approaches, animal and plant health issues, and to provide a State perspective. The members of the Advisory Panel, chosen because of their backgrounds in the areas of emergency management and animal and plant health, were:

- Mr Albert Catley—Consultant, Plant Quarantine and Inspection; former Senior Assistant Director, Plant Quarantine and Inspection, Department of Primary Industries and Energy;
- Professor David Lindsay—Professor of Animal Science and Head, Animal Science, Faculty of Agriculture, The University of Western Australia;
- Dr Raoul Nieper—Nieper Consultancies Pty Ltd; Chair, Australian Animal Health Council; former Director-General, Queensland Department of Primary Industries; and
- Mr Rod McKinnon and Mr Phil Stenchion—Emergency Management Australia, Department of Defence.

**1.42** The ANAO is grateful for the assistance provided by two parliamentary departments, the Department of the House of Representatives and the Department of the Parliamentary Library, which released officers on secondment to the ANAO to assist with this audit. The officers were Ms Marie Kawaja and Mr Peter Hicks.

**1.43** The audit was conducted in accordance with ANAO Auditing Standards. At the time of tabling the cost of the audit was $270 000.

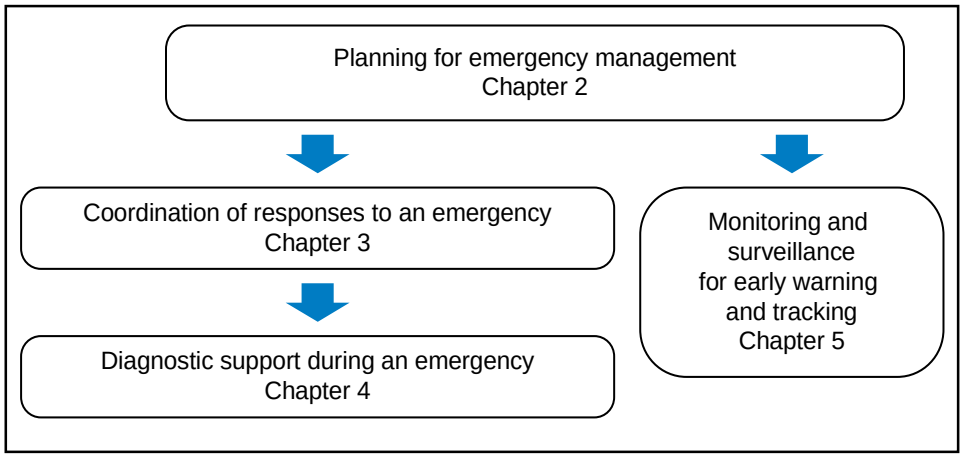
---

[13] Several names are used to refer to the virus/disease which first caused deaths in horses in Brisbane in September 1994. These include Equine Morbillivirus (EMV), Equine Morbillivirus Pneumonia, Hendra virus, megaparamyxovirus and Pteropus paramyxovirus. Equine Morbillivirus is currently the most established name of the virus. Recent specialist publications have referred to the virus as Hendra virus, although it is likely to take some time for this name to be ratified and filter through into more general, medical and lay usage.

## Report structure

**1.44** Figure 6 illustrates the framework for analysis and coverage in the report; it follows the focus of the audit objectives. Appendices 1–7 describe in more detail aspects of emergency management.

### Figure 6
**Framework for analysis**



# 2. Planning for emergency management

*This chapter provides an overview of the planning framework and associated plans which the Commonwealth has in place to prepare for an emergency and evaluates their effectiveness.*

## Planning is an important element of emergency preparedness

**2.1** A key principle of emergency response preparedness is developing appropriate emergency response plans. ARMCANZ and SCARM have endorsed the concept of national emergency management plans and identified a number of generic principles to be covered in such plans.[14] The principles include obtaining advance support of participants, agreeing clear decision-making processes, defining roles and responsibilities and identifying actions to be taken.

**2.2** The Nairn report[15] also emphasised the need for such arrangements to be in place as part of an effective contingency planning framework. In its response to the Nairn report, the Government provided $10.8 million over four years to strengthen the health systems of fish and plants, including facilitating the development of contingency plans.

**2.3** The ANAO examined the effectiveness of the national and Commonwealth planning framework for the animal (terrestrial and aquatic) and plant sectors.

## Emergency management planning framework is different in each sector

**2.4** Although arrangements vary between the sectors, the emergency management planning framework may involve a combination of national, Commonwealth and departmental/agency plans:

- the national planning framework may involve agreed arrangements between the Commonwealth, States/Territories and relevant industry bodies which are set out in specific plans;

---

[14] SCARM Taskforce on Incursion Management, December 1996.

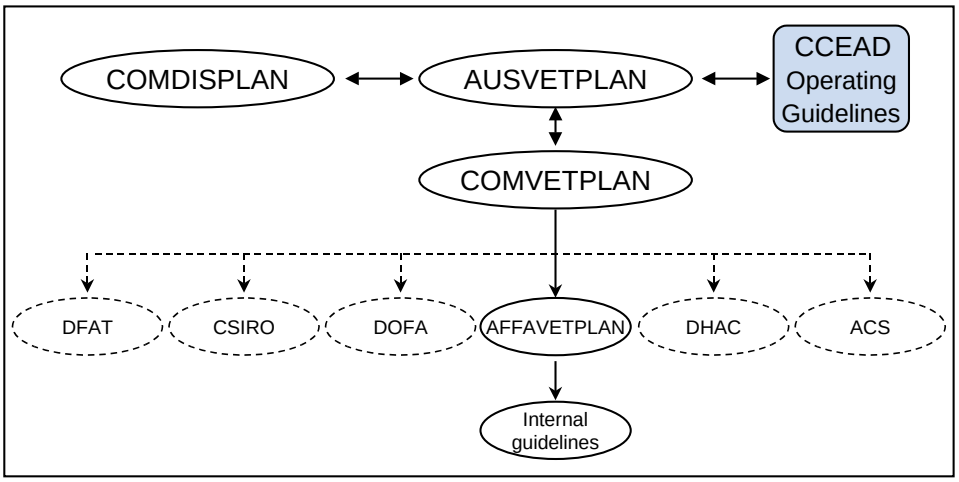
[15] Nairn report, p.179.

- the Commonwealth may have a series of linked plans which identify the roles and responsibilities of Commonwealth agencies;
- departments / agencies may have specific plans or sub-plans to address their contribution to emergency response.

**2.5** The planning frameworks for each sector are described in Figures 7–9.

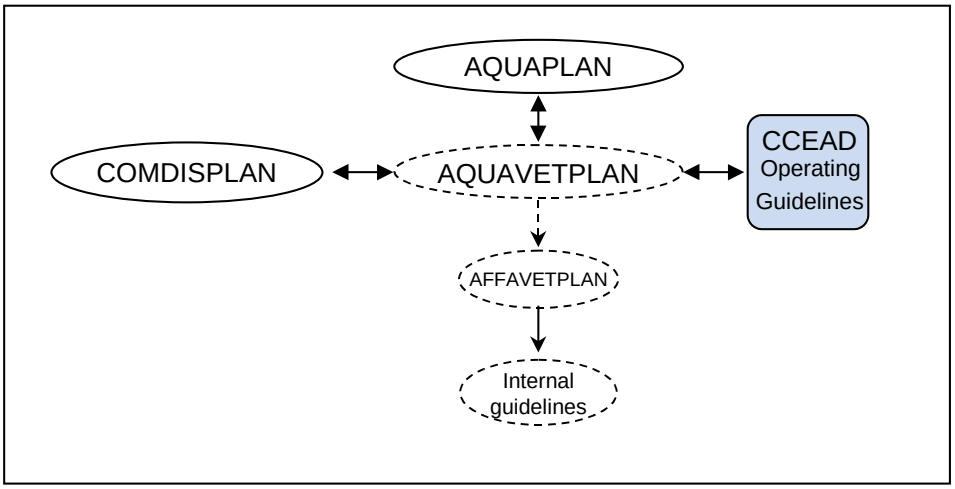
## Figure 7

**Emergency management planning framework—terrestrial animals**[16]




## Figure 8

**Emergency management planning framework—aquatic animals**[17]

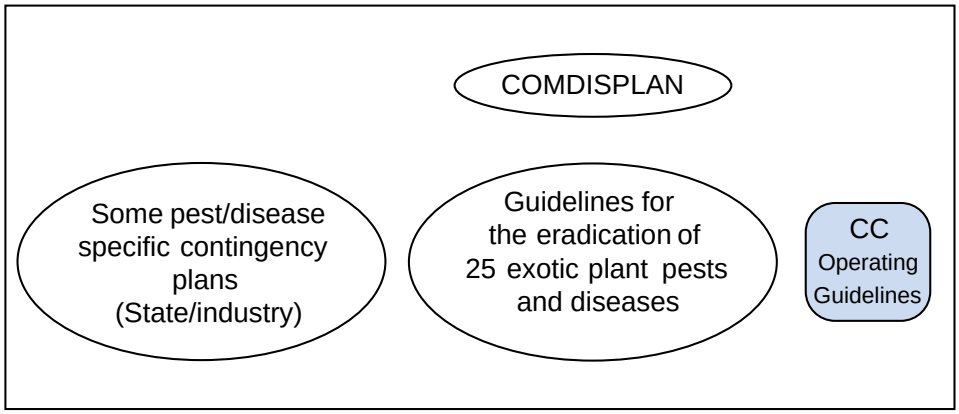



[16] Sub-plans shown with dotted outline are required under COMVETPLAN but have not been lodged with AFFA.

[17] Plans shown with dotted lines are in development.

**Figure 9**

**Emergency management planning framework—plants**[18]




## National plans do not exist in all sectors

**2.6** There is a national plan for terrestrial animal disease emergencies. AUSVETPLAN[19] sets out, in a series of detailed manuals, how the veterinary and emergency agencies of the Commonwealth and State/Territory Governments and relevant industry bodies will coordinate their efforts in responding to a suspected incursion by any one of 24 known exotic and certain endemic animal diseases.[20] Where emergencies have involved previously unknown diseases, the principles of AUSVETPLAN have been used as a guide. The ANAO considers that AUSVETPLAN provides an effective framework for responding to an emergency in the terrestrial animal sector, a view supported by both State and industry stakeholders.

**2.7** The national plan for aquatic animals is evolving with the recent development of AQUAPLAN, a plan for aquatic animal health. AQUAPLAN represents a partnership between the Commonwealth, States/Territories and industry groups and came into effect this year. It is designed to be supported by AQUAVETPLAN manuals which will describe the Australian approach to aquatic animal disease emergencies.[21] Once in effect, the plan will provide a national framework for aquatic animals equivalent to that which applies to terrestrial animals. The ANAO

---

18 There are no clear links between plans in the planning arrangements for plants.

19 AUSVETPLAN was first issued in 1991. A second edition was released in 1996, and a third edition is due soon. The latest edition of AUSVETPLAN is available on the internet.

20 The ANAO understands that a 25th manual, for the eradication of bat lyssavirus, has now been developed.

21 The AQUAVETPLAN manuals are in development and have not yet been endorsed by MCFFA and ARMCANZ.

considers that AQUAPLAN has the potential to provide an effective framework for responding to an emergency in the aquatic animal sector, although issues such as any proposed cost-sharing arrangements are not yet finalised.

**2.8** The plant sector does not have a generic national emergency plan. Instead, the SCARM Incursion Management Strategy (SIMS) sets out some agreed steps to be followed by Commonwealth and State/Territory authorities and includes, in principle, cost sharing arrangements for the eradication of incursions of particular pests (diseases, insects and weeds). Furthermore, although they have not been agreed by all parties, there are guidelines and plans for some pests and diseases.[22] Planning for incursions of exotic plant pests and diseases is difficult due to the large number of possible pests and diseases that could have a significant impact on commercial agriculture.

**2.9** In recognition of the need to strengthen the arrangements for plant health, the Government's response to the Nairn report included an additional $2.5 million over four years to establish the Office of the Chief Plant Protection Officer.[23] The Office was established to provide a leadership and coordinating role in the improvement of Australia's plant health and protection systems by, amongst other things, facilitating the development of contingency plans for major pests and diseases that threaten plants in Australia.

**2.10** A SCARM Taskforce on incursion management recommended the development of a generic incursion management plan which emphasised the prevention, preparedness, response and recovery stages of emergency management and which would be compatible with the national logistical framework used by EMA and with AUSVETPLAN. Responsibility for the implementation of the recommendations applying to the plant sector contained in the Taskforce report were delegated by SCARM/ARMCANZ to the proposed new Australian Plant Health Council, which is yet to be established.

## Conclusion

**2.11** The advantages of a national emergency management plan are that it reduces the risk of inappropriate and ill-coordinated responses to an emergency by providing flexibility and consistency in a partnership

---

[22] *Guidelines for the eradication of some exotic plant pests and diseases,* complied in 1980 by the former Plant Quarantine Branch of the Commonwealth Department of Health, provides information on 25 specific diseases; pest/disease specific plans, largely developed by the States and industry, also exist for such diseases as sugar cane smut, fireblight, dutch elm disease and papaya fruit fly.

[23] This figure is part of the total $10.8 million plant and fish health funding package—see paragraph 2.2.

arrangement, as well as clearly defining the roles and responsibilities of participants during an emergency.[24]

**2.12** There are agreed national emergency plans in the terrestrial and aquatic animal sectors which provide, or have the potential to provide, a sound basis for emergency management. Apart from the SCARM Incursion Management Strategy, there is no generic national emergency management plan for the plant sector. As such there are no pre-agreed procedures and principles which identify functional areas of responsibility, specify criteria for emergencies and cost-sharing arrangements and define control and decision-making responsibilities. This reduces assurance to stakeholders that emergency responses will be timely, appropriate and effective.

**2.13** The ANAO acknowledges that furthering the development of a national contingency plan will be the responsibility of the Australian Plant Health Council, when it is established. However, AFFA is responsible for providing national leadership and coordination in plant health issues, and will therefore undoubtedly have a significant role in any framework established by the APHC. Accordingly, there would be merit in AFFA, in consultation with the States and Territories, developing proposals which outline a framework for a nationally coordinated approach to emergency management of pest and disease incursions in the plant sector. These could then be submitted for the APHC's consideration when it is formed.

## Commonwealth plans do not exist for all sectors

### The Commonwealth only has an agency specific planning framework for the terrestrial animal sector

**2.14** The Commonwealth's disaster plan, COMDISPLAN, issued by the Director-General of EMA, is a contingency plan for the provision of Commonwealth assistance to the States and Territories in an emergency or disaster. EMA, the peak body overseeing the Commonwealth's preparedness to deal with emergencies, has recently developed a series of guidelines to help Commonwealth agencies to develop their own emergency plans in support of the overall Commonwealth disaster plan, COMDISPLAN. The guidelines are at Appendix 4.

**2.15** The Commonwealth's emergency planning framework for the terrestrial animal sector is well developed. In a series of linked plans,

---

[24] Murray, G and McCutcheon, S, 'Model framework and principles of emergency management - management of animal health emergencies', draft paper prepared as a contribution to OIE, *Scientific and Technical Review*, vol 18 (1), April 1999.

COMDISPLAN complements AUSVETPLAN and the Commonwealth's veterinary emergency plan, COMVETPLAN. COMVETPLAN, issued in 1990 by the then Minister for Primary Industries and Energy, and endorsed by other Commonwealth Ministers, details the responsibilities of six[25] Commonwealth agencies involved in planning for and responding to an animal disease emergency. The six agencies are required to prepare their own sub-plans and lodge these with AFFA.

**2.16** Although the planning framework in the terrestrial animal sector is well developed, there are limitations in some of its individual components, as discussed in paragraphs 2.22–2.44. These have the potential to reduce the effectiveness of the Commonwealth's response to an emergency.

**2.17** There is no Commonwealth plan, equivalent to COMVETPLAN, which identifies the roles and responsibilities of Commonwealth agencies likely to be involved in an emergency in the plant or aquatic animal sectors.

### *Conclusion*

**2.18** The ANAO concludes that there is an integrated planning framework for Commonwealth agencies managing emergencies in the terrestrial animal sector, but there is no series of linked plans to provide a suitable planning framework for managing plant or aquatic animal emergencies. This increases the risk that relevant Commonwealth agencies will not be effectively engaged during a plant or aquatic animal emergency and that AFFA will not be able to coordinate effectively the national and international response (at least during the early phases of an emergency).

**2.19** AFFA has the role of providing leadership and coordination in plant and aquatic animal health issues. The ANAO considers that AFFA should assess ways in which it can coordinate and facilitate the development of a planning framework for the Commonwealth agencies with responsibilities in plant and aquatic animal health. Establishing such a planning framework will minimise delays in responding to an emergency and maximise the effectiveness of the response strategies. It also provides assurance that relevant Commonwealth agencies will be effectively engaged during an emergency. The development of a planning framework may include negotiating Memoranda of Understanding with each Commonwealth agency in order to provide greater assurance that agencies are aware of their various roles and responsibilities and that they are effectively and appropriately engaged during an emergency.

---

[25] AFFA, CSIRO, DFAT, DoFA, ACS and DHAC.

## Recommendation No.1

**2.20** The ANAO recommends that AFFA assess ways in which it can coordinate and facilitate the development of a planning framework for the Commonwealth, including defining the roles and responsibilities of relevant Commonwealth agencies involved in aspects of emergency management in the plant and aquatic animal sectors.

*AFFA response:*

**2.21** Agreed. AFFA has commenced the process of developing and implementing improved coordination and a more complete planning framework, including the engagement of other agencies. AFFA notes that resources available for preparedness planning and response within the Department are largely drawn from its normal operational resources, and that often some AFFA funded actions cover responsibilities normally the function of other agencies. Note also relevant comment in the AFFA response to recommendation 2.

### COMVETPLAN is out of date

**2.22** There are some limitations with the content and application of the Commonwealth veterinary emergency plan, COMVETPLAN. COMVETPLAN is well out of date, does not reflect current responsibilities or administrative arrangements, and many agencies lack awareness of the plan and their specified roles and responsibilities. Five Commonwealth agencies have not fully met the requirement to produce a sub-plan in support of COMVETPLAN and have not lodged sub-plans with AFFA. AFFA is therefore unable to fulfil its role of maintaining a consolidated set of agency sub-plans.

**2.23** One of AFFA's roles is to update COMVETPLAN, but this has not been done since the plan was issued in 1990. During the course of the audit, AFFA advised that it has accelerated a review of COMVETPLAN.

**2.24** The ANAO notes that COMVETPLAN does not require Environment Australia (EA) to have a sub-plan, even though environmental considerations are increasingly important in managing emergency disease incidents.

**2.25** The ANAO concludes that limitations in COMVETPLAN have the potential to reduce the effectiveness of the Commonwealth's response to an emergency in the terrestrial animal sector. The ANAO considers that AFFA should undertake, as a matter of priority, a review of COMVETPLAN in order to improve the effectiveness of the Commonwealth's veterinary emergency plan. The review should address the need to reflect adequately current responsibilities and administrative

arrangements and to improve awareness by Commonwealth agencies of their role in terrestrial animal disease emergencies.

## Recommendation No.2

**2.26** The ANAO recommends that, in relation to the Commonwealth's veterinary emergency plan (COMVETPLAN), AFFA:

- update the plan to reflect adequately current responsibilities and administrative arrangements;
- ensure relevant Commonwealth agencies are included in the planning arrangements and are aware of their roles and responsibilities in respect of emergency disease management; and
- consolidate a set of Commonwealth agency sub-plans in support of COMVETPLAN.

*AFFA response:*

**2.27** Agreed. These recommendations have been taken up in the COMVETPLAN update and upcoming consultations with other agencies on the draft. AFFA Executive Board has been briefed on the status of COMVETPLAN in an out-of-session paper in June 1999. The Board was also advised of the proposal for an umbrella plan encompassing the animal, fish, plant, food residues and welfare areas. There is likely to be a significant related training requirement.

### AFFA only has an emergency management plan for the terrestrial animal sector

**2.28** AFFA is the only Commonwealth agency with a specific sub-plan in support of COMVETPLAN. The AFFAVETPLAN outlines the roles and responsibilities of AFFA and its various divisions and bureau in coordinating a national and international response to a terrestrial animal disease emergency. The plan also identifies the actions to be taken by specific AFFA staff during the various phases of an emergency.

**2.29** AFFAVETPLAN is supported by the OCVO's *Internal Operating Arrangements for Emergencies*. These internal guidelines provide an overview of operational procedures and relevant contact details.

**2.30** AFFA has no specific plans outlining the Department's role in responding to plant or aquatic animal emergencies. However, there is minor reference to management of aquatic animal emergencies in AFFAVETPLAN and the associated OCVO internal guidelines.

**2.31** The absence of specific plans for coordinating the departmental response to an emergency in the plant and aquatic animal sector continues the real risk that coordination of the Commonwealth's response to an

emergency will not be effective. It would be good practice for AFFA to develop a suitable emergency plan to manage pest and disease incursions in these sectors. This might involve separate plans; or combined aquatic and terrestrial animal plans; or an integrated National Office approach to emergency management.

## Recommendation No.3

**2.32** The ANAO recommends that, in order to facilitate the coordination of the Commonwealth's response to an emergency, AFFA develop a suitable plan for managing and coordinating the national and international response to emergencies in the plant and aquatic animal sectors.

*AFFA response:*

**2.33** Agreed. AFFA is in the process of developing and implementing improved plans and response mechanisms, but notes the limitations in progress because of the ongoing incident response requirements in these areas and the need to engage industry and the States in this activity. Note also the relevance of AFFA responses to preceding recommendations.

### AFFA's plans could be improved

**2.34** The ANAO examined AFFA's emergency management plans in order to identify whether:

- the status of versions of the plans was clear to those implementing them;
- the plans contained the features recommended by EMA guidelines;[26]
- the plans included objectives and indicators to assess performance; and
- the plans reflected a structured approach to risk management.

**2.35** Since AFFA does not have specific plans for managing emergencies in the aquatic animal and plant sectors the ANAO could only examine plans for the terrestrial animal sector.

**2.36** The ANAO found that there was confusion within AFFA over the status of different versions of its AFFAVETPLAN (previously DPIEVETPLAN) and that the current, authorised version was not clearly identified as such. The only plan approved by ARMCANZ is the 1990 version of DPIEVETPLAN and this is the version recognised by AUSVETPLAN. Working drafts of later versions appeared in 1997, 1998 and 1999, but none of these have been finalised. In addition, the OCVO's

[26] EMA guidelines issued in October 1998 - see Appendix 4.

internal guidelines, different to the AFFAVETPLAN, were marked as 'perpetual draft' and did not make clear at what time they were the current version.

**2.37** AFFA considered that confusion over the status of plans is of minor import as, in practice, recourse to plans in an emergency is not essential as activity is directed by a core of experienced staff. The ANAO considers that having a clearly identified current and approved plan reduces the risk of incorrect procedures being followed under time pressure. It also supports effective corporate governance by providing assurance to senior executives that the Department will respond appropriately in accordance with agreed procedures.

**2.38** The ANAO also found that:

- the February 1999 draft version of AFFAVETPLAN contained a lot of descriptive and background material and did not contain most of the features suggested by the October 1998 EMA guidelines, such as the aims of the plan, the authority under which it is issued, delegated responsibilities, resources, organisational procedures, any contractual arrangements or MOUs, or procedures for updating the plan;
- the linkages between the various plans, the link between national, Commonwealth, Departmental and Office plans is not fully and clearly demonstrated although recent drafts of AFFAVETPLAN have demonstrated an improvement; and
- AFFAVETPLAN makes little mention of the new National Office, despite the National Office being the area in the Department which will be dealing with emergencies for all sectors.

**2.39** None of the plans and guidelines examined contained objectives or indicators to assess what the Department aimed to achieve and how it intended to monitor or assess its performance. AFFA advised that the scope for the Commonwealth to include performance information in plans is limited by its role.

**2.40** AFFA does not report its performance in emergency management in its annual report to Parliament,[27] such as the number and nature of emergencies dealt with, the timeliness of its response activities (including convening consultative committees, informing industry, advising the Minister, notifying international bodies and overseas posts), or the outcome and consequences of the emergency. The ANAO considers that reporting performance to Parliament in respect of the Department's responsibilities for emergency management responses would improve accountability.

---

[27] However, information on pest and disease incidents is reported to some international organisations under annual or biennial international reporting obligations.

**2.41** None of the plans and guidelines examined contained a structured approach to risk management, either in terms of a technical risk assessment to assist in deployment of resources; or in terms of the management/operational risks associated with coordinating the national and international response to an emergency. AFFA has now commenced developing a risk appraisal for the terrestrial animal and plant sectors, but this is yet to be developed for the aquatic animal sector and integrated into planning documents.

### *Conclusion*

**2.42** The ANAO concludes that the current plans for AFFA's emergency management responsibilities could be substantially strengthened to improve their operational effectiveness. Areas for improvement include ensuring that sub-plans are up to date, appropriately authorised and clearly identified as such; reflecting EMA guidelines in sub-plans; and including objectives and appropriate indicators to assess performance. It would also be good practice to incorporate appropriate aspects of the Department's risk management arrangements to provide adequate assurance to stakeholders that the Department has identified, prioritised and addressed the risks associated with its emergency management responsibilities. Reporting to Parliament in respect of the Department's responsibilities for emergency management would improve accountability.

**2.43** The creation of the new National Office of Animal and Plant Health provides an opportunity to review AFFA's emergency planning framework and improve the content of associated plans, and AFFA has advised that it is giving this consideration.

## Recommendation No.4

**2.44** The ANAO recommends that in developing or refining its plans for managing pest and disease emergencies, AFFA:

- ensure that relevant plans are up to date, appropriately authorised and clearly identified;
- reflect recent Emergency Management Australia guidelines;
- demonstrate the linkages between the various plans (including the national, Commonwealth, Departmental and Office plans);
- incorporate objectives/planned outcomes and appropriate performance indicators; and
- incorporate appropriate risk management arrangements.

*AFFA response:*

**2.45** Agreed. Since 1980 Australia's emergency animal disease arrangements have been linked to EMA (previously the Natural Disasters Organisation) emergency management arrangements and have applied emergency management principles. Over this time EMA have been active participants in the development of AUSVETPLAN and AFFAVETPLAN. Though responsibility for AUSVETPLAN has now been passed to the AAHC, AFFA continues plan development under contract. In response to this recommendation EMA has been consulted, and has endorsed a revised version of AFFAVETPLAN.

**2.46** The AFFA Executive Board out of session has now approved this revised AFFAVETPLAN incorporating a number of these recommendations. A draft COMVETPLAN was provided at the same time for information. Further consideration of changes in line with the last two points identified by ANAO above will be considered in a revision of planning standards within AFFA, including the overall reconsideration of the planning framework.

## Reviewing plans is important

**2.47** One of the key emergency management principles identified by EMA and SCARM is that plans are regularly reviewed and updated as required to incorporate lessons learned and any scientific or technical developments. This ensures the plans reflect and support an up-to-date capability. As mentioned above, the most significant elements of the Commonwealth planning framework, COMVETPLAN and AFFAVETPLAN, are currently being reviewed by AFFA. The ANAO looked for evidence that other aspects of the planning framework are reviewed and updated as appropriate.

**2.48** The national planning framework for terrestrial animal disease emergencies (AUSVETPLAN) has been reviewed and continues to be reviewed and updated to reflect required changes and lessons learnt, in accordance with a process of review determined by the AAHC. However, the ANAO found that there has not been a systematic and structured review by AFFA of the lessons learnt from the EMV incident, and plans have not been amended to reflect knowledge about this previously unknown disease. It is expected that a review of the lessons learnt from the Newcastle Disease incident(s) will be conducted in the near future, and that the plan will be updated as required.

**2.49** In the aquatic animal sector, lessons learnt from the 1995 pilchards incident have been addressed by the development of a national contingency plan and the adoption of a national approach to coordination

by the CCEAD. It is too soon for national plans to be revised following lessons learnt in the 1998 pilchards incident. However, the ANAO considers that, at an appropriate juncture, it would be good practice for AFFA to coordinate a review to identify the lessons learnt and test the effectiveness of the draft planning framework.

**2.50** Disease specific plans in the plant sector are largely the responsibility of States and relevant industry groups. The ANAO notes that some reviews have been undertaken, or are in the process of being undertaken, by the relevant States and industry groups.

**2.51** The ANAO concludes that, although some plans have been reviewed, AFFA does not have a systematic and structured approach to reviewing plans, including identifying changing risks, new knowledge and lessons learnt and adjusting the plans accordingly. It would be better practice for AFFA to adopt a more systematic and structured approach to reviewing plans.

## Plans have facilitated responding to emergencies

**2.52** The ANAO found that there was no disease specific plan for EMV, as the disease was previously unknown. However, the principles of AUSVETPLAN were successfully applied in dealing with the emergency. AUSVETPLAN and the associated disease specific plan were implemented in an appropriate manner for the Newcastle Disease emergency and appeared to be effective in supporting what was considered at the time to be eradication of the disease. Stakeholders consulted by the ANAO affirmed that the planning framework in the terrestrial animal sector facilitated a timely and appropriate response to the EMV and 1998 Newcastle Disease emergencies.

**2.53** There were no national or Commonwealth plans in place to deal with the pilchards incident in 1995. However, there was a draft of AQUAPLAN at the time of the 1998 pilchards incident. This was activated, and together with the newly adopted CCEAD operating guidelines, appeared to facilitate a more timely and appropriate response than in 1995.

**2.54** In the plant sector, the ANAO found that there was no specific plan in place at the time of the October 1995 Papaya Fruit Fly incursion. However, contingency plans for Papaya Fruit Fly have since been developed by the Queensland Department of Primary Industries (QDPI) and NSW Agriculture. Victoria had a disease specific contingency plan for an outbreak of Fireblight in a fruit growing area. However, the outbreak was in the Royal Botanical Gardens, a location not covered by

the plan. The plan was used during the disease control effort and it is currently being reviewed in the light of lessons learnt.

**2.55** The ANAO notes that, although some stakeholders had some concerns about aspects of the management of the response (see 3.14 and 3.25), the outcomes for the Papaya Fruit Fly and Fireblight incursions appear, so far, to be effective. AFFA advised that the Papaya Fruit Fly incursion around Cairns has been declared eradicated. While no formal declaration of eradication of Fireblight is planned, AFFA advised that all communications on this subject now speak of 'no evidence of the presence of Fireblight in Australia'.

**2.56** Appendix 6 contains a summary of the case studies and pilchards emergencies and the ANAO's findings with respect to them.

## Conclusion

**2.57** As previously identified, there are limitations in planning frameworks and the plans themselves. However, where plans and associated response strategies were applied in response to the emergencies examined during this audit, they appeared to be effective in facilitating containment (and eradication where appropriate), and in minimising the impact on human health, the economy, international trade and the environment.

# 3. Coordination

*This chapter examines the arrangements for coordinating the national and international response to an emergency and evaluates the efficiency and effectiveness of the Commonwealth's response in particular emergencies.*

## Managing emergencies requires coordination

**3.1** The States and Territories are primarily responsible for the operational aspects of responding to an emergency in the field. However, as discussed in Chapter 1 (see Figure 5), the Commonwealth, and in particular AFFA, has a number of national and international responsibilities when coordinating responses to a pest or disease emergency. In addition to keeping the relevant Commonwealth Minister informed and contributing to a public relations/media strategy, these include:

- working with the States and Territories to coordinate the national response;
- keeping industry informed;
- communicating with other Commonwealth agencies to coordinate the Commonwealth's response; and
- reporting to international bodies and keeping relevant trading partners informed to meet international responsibilities and expectations.

**3.2** The ANAO examined the efficiency and effectiveness of the Commonwealth's role in coordinating response activities, with particular reference to the role of AFFA in managing particular emergencies.

## Working with the States and Territories is generally effective

**3.3** In accordance with the ARMCANZ/SCARM arrangements for emergency management (see Figures 2-4, Chapter 1), consultative committees are responsible for coordinating the national technical response to emergencies. Although the arrangements for the consultative committees vary between the sectors, the committees provide the formal structure for the Commonwealth to communicate and work with the States and Territories to coordinate the national response to an emergency.

## The operations of the CCEAD in the terrestrial animal sector are viewed favourably by stakeholders

**3.4** The Consultative Committee for Emergency Animal Diseases (CCEAD) is a sub-committee of SCARM. It comprises the CVO of each State/Territory, while the Commonwealth is represented by the Chief of the CSIRO Division of Animal Health and the Commonwealth CVO, who convenes and chairs the meetings. There is also provision for participation by industry representatives and other observers or resource people. *Operating Guidelines* for the CCEAD are agreed by the parties, and define the roles and responsibilities of members. Under these guidelines, the Commonwealth (AFFA) provides the secretarial support service for the CCEAD. The CCEAD normally meets by teleconference; makes decisions on the basis of consensus; and reports to SCARM and ARMCANZ, where decisions on the commitment of finances will be made as required.

**3.5** The ANAO found that operations of the CCEAD are viewed positively by the States consulted during the audit. Relations with the Commonwealth were considered to be effective and States valued the assistance provided by the Commonwealth during emergencies, in particular, Commonwealth input into media releases and responses. States also appreciated the opportunity provided by AFFA for input into international reporting by the Commonwealth.

**3.6** The ANAO also found that the Commonwealth's prompt initiation of CCEAD mechanisms for the EMV and Newcastle Disease emergencies contributed to an effective response. The States consulted during the audit considered the Commonwealth's role in coordinating the national response was effective.

## The CCEAD in the aquatic animal sector provides a useful framework

**3.7** A CCEAD structure and operating guidelines, along similar lines to the terrestrial animal sector, was implemented in October 1998 for the aquatic animal sector. This provided the mechanism for coordinating the national response to the 1998 pilchards emergency. Prior to this, the CCEAD was invoked informally to deal with the 1995 pilchards incident.

**3.8** The ANAO found that the Commonwealth's prompt initiation of the CCEAD mechanism for the deaths in pilchards in 1998 contributed to an effective response which was praised by the Director of Fisheries in South Australia as being 'exemplary'. However, during the 1995 incident, there was a delay of nearly six weeks before the informal CCEAD process was invoked which contributed to a less timely response. The ANAO understands from AFFA that the delay in coordinating the national

response was attributed to the difficulty of obtaining information about the extent and cause of the deaths in the initial stages of the outbreak.

## The operations of the CC in the plant sector could be improved

**3.9** A Consultative Committee (CC) on exotic insect pests, weeds and plant diseases is established for each emergency as required. The CC provides technical advice until eradication is achieved or is considered not feasible. The individual State/Territory affected has responsibility for implementation of the eradication or containment action.

**3.10** Where eradication is not considered feasible, the affected State/Territory assumes responsibility for any further action and the involvement of the CC ceases. Where eradication is considered possible, SCARM generally agrees, on a case-by-case basis, to fund the necessary action on the basis of a 50/50 Commonwealth/State cost sharing arrangement. There are no pre-agreed arrangements in place for compensation of growers for production losses.

**3.11** The CC is convened, and usually chaired, by the Commonwealth CPPO. The CC often meets by teleconference, but also meets in person. Its membership is flexible, but usually consists of Plant Health Committee members (all States/Northern Territory, the Commonwealth (AFFA and CSIRO).[28] The CC is normally augmented with appropriate expertise and, in a recent development, industry now participates in CC meetings as observers. Unlike the CCEAD *Operating Guidelines* for the terrestrial animal sector, the CC operating framework for the plant sector does not clearly define the roles and responsibilities of members, including the responsibility for record keeping.

**3.12** State stakeholders consulted during the audit supported the concept of the CC and welcomed the Commonwealth's role in enabling relevant people to come together to discuss the management of the incursion. The frequent informal communication between the States and Commonwealth was also valued.

**3.13** States also identified some ways in which the operations of the consultative committee system could be improved, to strengthen the effectiveness of emergency management of pest and disease incursions in the plant sector. These related to streamlining the size and composition of the CC and ensuring that meetings were conducted in a disciplined way. A need for improved record-keeping was also identified (see 3.16).

---

[28] Numbers participating in a CC vary. AFFA advised that there may be as few as 3-4; usual attendance may be about 17-27. Stakeholders reported that there may have been as many as 70 participants involved in a particular teleconference. As the records of the teleconference are not available, the ANAO cannot confirm this figure.

**3.14** In the plant sector, the ANAO found that the Commonwealth's response to the Papaya Fruit Fly and Fireblight incursions was generally appropriate and timely. However, the ANAO notes that while the States consulted during the audit generally reported that the incursions were as well managed as could have been expected, they reported some concerns, in relation to the Fireblight incursion, about the approach which the Commonwealth took in declaring the existence of the incursion before conclusive diagnostic data was available.[29]

### *Conclusion*

**3.15** The ANAO concludes that the consultative committee mechanisms provide an effective framework within which the Commonwealth is able to work with the States and Territories to coordinate the national response to an emergency, although there is scope to improve the operations of some consultative committee mechanisms, particularly in the plant sector. The States consulted by the ANAO during the audit confirmed that the consultative committee mechanisms generally provide an effective framework for responding to emergencies.

## Record-keeping is an area for improvement

**3.16** One of the Commonwealth's roles, in working with the States and Territories through the various consultative committees, is to provide secretarial support to the committees. The ANAO found, and States confirmed, that there have been weaknesses in this area, in particular in relation to record-keeping.

**3.17** Although it varies between the sectors, the weaknesses which have been identified include:

- not always making records of consultative committee meetings;
- not always distributing minutes of the meetings in a timely way to all participants to provide a basis for subsequent action; and
- not maintaining a consolidated set of minutes of all consultative committee meetings to enable tracking of events, decisions, judgements and advice.

**3.18** The ANAO recognises that production of minutes of the CCEAD and CC meetings may not always be a priority activity at the height of an emergency, and that record-keeping has improved recently. However, effective record-keeping enhances transparency and overall accountability by enabling tracking of decisions and actions taken. As part of good

[29] AFFA advised that the approach which erred on the side of caution was taken in order to protect Australia's international interests.

governance it also enables a review of the strategies and procedures post the emergency based on facts not recollections. This helps to make informed decisions about subsequent revisions to the plans and procedures. During the course of the audit AFFA indicated its intention to continue to make improvements to record-keeping.

## Recommendation No.5

**3.19** The ANAO recommends that AFFA ensure that appropriate and timely records are made of consultative committee meetings and distributed to participants, and that a consolidated set of minutes of all meetings is maintained for more effective and accountable performance.

*AFFA response:*

**3.20** AFFA agrees with this recommendation. New and improved records management are being implemented as resources permit. The adequacy of these arrangements are reviewed as part of the debrief for each incident. Arrangements are standardised across sectors to the extent possible.

## Keeping industry informed is important

**3.21** Keeping relevant industry bodies informed is important for effective emergency management, as it is industry which is most affected by the impact of a pest or disease emergency. Much of the direct communication with industry is carried out by the States with the degree to which industry is formally or otherwise involved determined by the CCEAD or CC. However, AFFA, through its involvement in the consultative committee mechanisms, and on-going contact with industry groups, also contributes.

**3.22** The ANAO found that the CCEAD process for terrestrial animal emergencies provides a structured approach for engaging industry and keeping peak bodies informed. Industry groups consulted during the audit were positive about AFFA's role in coordinating the national response to the 1998 Newcastle Disease emergency. An Incident Management Group (IMG) approach was formally adopted for the first time during this emergency,[30] and was strongly supported by industry.

**3.23** In the aquatic animal sector, the ANAO found that, although industry was involved in various capacities on a variety of committees, liaison groups and a taskforce during and after the 1995 pilchards

[30] Communication with industry during the EMV was largely handled by the affected State, Queensland.

emergency, there was no structured approach for engaging industry and keeping peak industry bodies informed during either of the two pilchards emergencies. The recent application of the terrestrial animal sector's CCEAD guidelines for the aquatic animal sector should provide the opportunity for industry to be engaged more effectively in the future.

**3.24** There is no formal (structured and agreed) mechanism for engaging industry and keeping it informed during a plant emergency. In practice, industry is invited on an *ad hoc* basis by the CPPO to participate as observers in the CC. Industry indicated that it welcomed participating in the CC process,[31] but indicated that its involvement could be more effective if peak bodies were identified in advance of an emergency and the role of the CC as an advisory body not a decision-making body was more clearly explained. AFFA advised that identifying industry bodies in the plant sector is not easy, as, unlike the animal sector, there are no clear broadly representative bodies in many areas.

**3.25** Industry groups consulted during the audit also made a number of observations about the effectiveness of the Commonwealth's role during the Papaya Fruit Fly and Fireblight incursions. While it was supportive of the process once the Commonwealth became involved, it indicated that there was scope for improvement in, among other things, the timeliness of both notification of the incursion[32] and implementation of some aspects of the emergency response. For example, in the case of Papaya Fruit Fly, industry expressed its concern about delays in the decision to eradicate; while in the case of Fireblight, industry was concerned about delays in both the decision to engage overseas experts and in the commencement of the testing program and seasonal surveys.

## Conclusion

**3.26** The ANAO concludes that, although industry groups welcome involvement in consultative committee processes, the mechanisms by which they are engaged and kept informed during an emergency, particularly in the plant sector, needs to be improved. Although it is properly a matter for PHC (or the APHC when established) to determine, there may be merit in considering the IMG mechanism used in the terrestrial animal sector for engaging industry more effectively during an emergency in the plant sector.

---

[31] The 1995 Papaya Fruit Fly emergency was the first CC to involve industry.

[32] AFFA advised that no early warning system would have been sensitive enough to detect the particular Fireblight incursion.

## Communicating with other Commonwealth agencies requires a better strategy

**3.27** Commonwealth agencies, other than AFFA, have a role to play in the Commonwealth's response to an emergency. AFFA's overall leadership and coordination role requires it to liaise with these agencies to ensure they are engaged as appropriate, and that the Commonwealth's response to an emergency is timely and appropriate.

**3.28** In the terrestrial animal sector, the role of AFFA in coordinating the Commonwealth's response is clearly defined in COMVETPLAN. The plan requires AFFA to notify Commonwealth agencies (as necessary) of the various stages of an emergency and, at the conclusion of the emergency, to evaluate, in consultation with those agencies, the effectiveness and efficiency of COMVETPLAN arrangements.

**3.29** The ANAO found that AFFA did communicate to varying degrees with most of the relevant Commonwealth agencies during the EMV and Newcastle Disease emergencies. However, although cables were sent to overseas posts, AFFA did not notify DFAT directly, and did not inform EMA as required under COMVETPLAN.[33] Although it is not required to do so under COMVETPLAN, the ANAO notes that AFFA provided briefings to Environment Australia (EA) during the Newcastle Disease emergency because of the possible impact of this disease on the native environment.

**3.30** In the aquatic animal sector, there was limited contact with some agencies, primarily CSIRO and the Australian Fisheries Management Authority (AFMA). However, there was little evidence to demonstrate that AFFA liaised effectively with other Commonwealth agencies; this included EA, even though the need for improved liaison with EA during aquatic animal emergencies had been identified years earlier.[34]

**3.31** In the plant sector, the ANAO found that, although limited contact occurred with a small number of agencies, primarily ACS and EA, AFFA did not have ongoing communication with EA during the management of the Papaya Fruit Fly and Fireblight incursions, despite a possible significant impact on the environment.

---

[33] DFAT advised that early communication from AFFA to the Department is needed in instances where emergency restrictions on either exports or imports are likely to be imposed. EMA advised that there was some telephone communication between AFFA and EMA during the Newcastle Disease emergency, although no records were maintained by either organisation. EMA has taken rectification action in this regard.

[34] Crane M and Rawlin G, *Aquatic Animal Disease Preparedness Assessment, Final Report*, FRDC Project No 95/087.

### Conclusion

**3.32** The ANAO concludes that, in general, AFFA liaised with most relevant Commonwealth bodies, in varying degrees, during its management of the emergencies included in the audit. The most notable omissions were the lack of a formal notification to EMA for terrestrial animal emergencies and the lack of a formal mechanism to engage EA during an emergency in all sectors. A more formal approach, as part of a communications strategy, which is tied to emergency plans, would provide greater assurance that relevant Commonwealth agencies would be engaged in a timely and appropriate way during an emergency.

**3.33** The ANAO notes that other Commonwealth agencies, such as ACS, AFMA, CSIRO, EA and EMA see benefit in formalising a communication strategy and procedures to ensure that all relevant bodies are engaged during an emergency.

## Recommendation No.6

**3.34** The ANAO recommends that, to ensure a timely and appropriate response by the Commonwealth, AFFA develop an appropriate communication strategy with relevant Commonwealth agencies likely to be involved in an emergency.

*AFFA response:*

**3.35** AFFA accepts the recommendation. COMVETPLAN refers to the need for AFFA to alert Commonwealth agencies about an emergency. A communication strategy could presumably also cover regular formal updates and briefings to relevant agencies and more two-way flow of information through regular fora. Further development of an overall AFFA emergency response communication strategy is an issue where input will be sought from other stakeholders with a view to developing an integrated/cohesive communication strategy.

## International reporting is increasingly important

### International reporting obligations have been met

**3.36** The Commonwealth has notification obligations arising from Australia's membership of international organisations. The international reporting provisions are not standard across all sectors, with the obligations more clearly defined in the terrestrial animal and aquatic animal sectors than in the plant sector.

**3.37** Disease occurrences in the animal sector are reported to the world organisation for animal health, the Office International des Epizooties (OIE). For plant emergencies, the Commonwealth may report directly

to the UN Food and Agriculture Organisation (FAO) or, under the FAO's International Plant Protection Convention (IPPC) to the Asia and Pacific Plant Protection Commission (APPPC) and the Pacific Plant Protection Organisation (PPPO), or directly to other countries on request.

**3.38** EMV was not subject to the OIE's 'immediate' reporting arrangements since it was a previously unknown disease. However, as a disease of exceptional significance, the Commonwealth did notify the OIE of the incident and submitted several reports during the course of the emergency. Newcastle Disease is a specified disease requiring notification to the OIE within 24 hours. The ANAO found that AFFA notified the OIE as soon as the CCEAD confirmed the presence of virulent Newcastle Disease and provided subsequent updates.

**3.39** The 1995 deaths in pilchards emergency, although not a notifiable disease, was reported to the OIE for information. There has been no similar report to the OIE for the 1998 emergency, although AFFA has advised that the incident will be included in Australia's annual report to the OIE.

**3.40** Appropriate reports have been made to the APPPC on both the Papaya Fruit Fly and Fireblight emergencies.

## Trading partners have been notified

**3.41** During an emergency, the Commonwealth should provide timely and accurate information about the emergency to foreign governments and industry in order to reassure relevant trading partners about its impact.

**3.42** The ANAO found that communication with overseas posts to inform the governments of relevant trading partners was timely and effective. Australia's overseas posts were notified of the mystery horse deaths during the EMV emergency on the same day as the first CCEAD meeting; while for Newcastle Disease they were advised on the same day as the CCEAD made a presumptive diagnosis. Regular updates were provided and a considerable volume of matters raised by foreign governments and industry were dealt with by AFFA, including market access issues.

**3.43** Timely and informative cables were sent to overseas posts advising them of both pilchards emergencies. Australia's overseas posts were also kept informed throughout the Papaya Fruit Fly and Fireblight emergencies, with special attention given to keeping relevant trading partners informed.

## Internet reports are being managed better

**3.44** Increasing use of the internet has created a challenge in managing internationally available information on emergencies. For example, 'unofficial' reports may be posted to electronic bulletin boards such as Promed by parties not directly involved in the emergency response, such as individual researchers or private individuals. This has caused difficulties in the past when reports posted to Promed have been judged by the authorities to be misleading. In the terrestrial animal sector, AFFA has sought to balance or refute these reports and the ANAO notes that there have now been improvements in managing this aspect of international reporting. Official reports sent to OIE are now posted simultaneously (or nearly simultaneously) on Promed and Australia has developed a relationship with the Promed moderator to influence the posting of other ('unofficial') reports concerning Australia if appropriate.

## Conclusion—international reporting

**3.45** The ANAO concludes that AFFA has fulfilled Australia's obligations to report certain emergencies to international organisations in a timely and appropriate manner. Communication with overseas posts to advise of incidents and reassure relevant trading partners was also timely and appropriate. The Department is working constructively to address the continuing challenge of managing the 'unofficial' reports which are posted on the internet, through such bulletin boards as Promed.

# 4. Diagnostic support

*This chapter examines the Commonwealth's arrangements to access diagnostic support during emergencies and evaluates the efficiency and effectiveness of diagnostic support provided during particular emergencies.*

## Diagnostic support is an important element of emergency management

**4.1** A critical component of emergency management is the ability to access appropriate diagnostic support to aid decision-making during an emergency. The ANAO sought to establish whether there was access to timely and accurate diagnostic support for the emergencies examined.

## Diagnostic support arrangements vary between the sectors

**4.2** The arrangements for providing diagnostic support vary between the three sectors. For the terrestrial animal sector, the States and the Northern Territory each maintain one or more animal health laboratories to provide diagnostic services for livestock producers, private veterinarians and others associated with the livestock industries. In addition, private laboratories provide an increasingly important support service as samples of diseases suspected of being caused by new agents, or incursions of exotic agents, are often initially submitted to these laboratories.[35]

**4.3** If a laboratory suspects a new animal disease or endemic or exotic agent, the samples are sent to the CSIRO's Australian Animal Health Laboratory (AAHL).[36] During an emergency, the State, Territory and private laboratories provide diagnostic support at a regional level to complement the reference laboratory work provided by AAHL.

**4.4** State and Territory laboratories also complement the work of the Fish Diseases Laboratory which is a part of AAHL. The general level of knowledge about aquatic animal diseases is not as great as the level of knowledge about terrestrial animal diseases because this is a relatively new area of scientific research, involving a large number of species.

---

[35] The AAHC is currently undertaking a review of Australia's animal health laboratory arrangements with a view to identifying the requirements to meet the needs of Australia's animal industries by overcoming any duplication or inadequacies.

[36] 192 samples were sent to AAHL for testing in the period 1993-1998—see Appendix 1.

**4.5** Australia's diagnostic capability for plant emergencies is more limited than in the terrestrial animal sector because of the wider range of possible pests and diseases and the fragmented arrangements for diagnostic support. The States and universities provide expertise in the area of plant pathology and disease diagnosis, while CSIRO's expertise is primarily in the area of insect identification.[37] There is no centralised, high security, containment facility for plant pathogens.

**4.6** In all sectors, international expertise is accessed through a variety of channels, if appropriate, to supplement domestic diagnosis.

## Diagnostic support is strongest in the terrestrial animal sector

**4.7** Under COMVETPLAN, the role of CSIRO is to provide 'rapid' and 'authoritative' laboratory diagnosis. The ANAO found that AAHL provided rapid and authoritative diagnosis for both the EMV and Newcastle Disease incidents.

**4.8** In the EMV emergency, AAHL eliminated known exotic diseases on the same day as it received the first samples. The existence of a new virus was confirmed within one month of receiving the first samples. The ANAO notes that a number of issues which arose during the course of the 1994 EMV emergency appear to have been resolved. These related to the volume of samples sent for testing to AAHL, and differences in the labelling systems in use by various laboratories. Diagnosis of the Newcastle Disease virus was provided within seven days of receipt of the first samples.

**4.9** A test for EMV has now been developed by AAHL and made available to the States. With this test, and an improved test for Newcastle Disease, which was used during the 1998 emergency, the potential exists to increase the timeliness and accuracy of diagnosis of these diseases in the future.[38]

**4.10** The AAHL advised the ANAO that it records relevant information about its performance during an emergency. However, it does not report its performance in relation to the timeliness and accuracy of its diagnostic support. The ANAO considers that it would be better practice and improve accountability for AAHL to report its performance against its aims of providing 'rapid' and 'authoritative' diagnosis. It would be particularly appropriate to report such performance in the AAHL/AFFA

---

[37] CSIRO has provided diagnostic support in recent years in relation to identifying aphids, thrips, mites and whiteflies, such as the ash whitefly incursion in SA.

[38] CSIRO advised that the improved tests for Newcastle Disease were used during the 1999 emergency.

Business Plan (which includes performance statements), as AFFA contributes half of the annual costs of maintaining the AAHL facility and has an interest in the performance of AAHL.

**4.11** In accordance with an MOU between AFFA and CSIRO, the Fish Diseases Laboratory at AAHL is responsible for diagnosis of exotic and emerging diseases of fish and shellfish. The ANAO notes that two of the major impediments to effective incursion management are the lack of information about aquatic animal diseases generally and the difficulties of obtaining suitable samples in the open seas. These factors, coupled with complex jurisdictional arrangements within and between the Commonwealth and States/Territories and the diverse nature of the industry, increase the risk that the Commonwealth may not be able to obtain timely and appropriate diagnostic support during an emergency involving wild caught species.

**4.12** The diagnostic support provided by AAHL during the 1995 pilchards incident identified a previously unknown virus within one week of samples received. During the 1998 pilchards incident, AAHL provided a confirmed diagnosis, six weeks after receiving the first samples, that the virus was the same as that implicated in the 1995 mortalities.

**4.13** For both incidents the actual cause of death has still not been conclusively determined, although it is believed to be associated with a previously unknown herpesvirus, the source of which has also not been determined.[39] AAHL is currently engaged in developing a range of diagnostic techniques in an effort to understand better the disease and to determine the source of the causative agent. AAHL advises that prevention of diseases of this type is the key objective as little can be done once the agent has gained access to a wild aquatic animal population.

**4.14** In the plant sector, the ANAO found that Papaya Fruit Fly was quickly and accurately identified by QDPI in October 1995 on the day after it was submitted for identification. Initial identification of the 1997 Fireblight incursion, was slow and inconclusive. Initial testing carried out by authorities in New Zealand, by a State laboratory in Victoria, and by a university in NSW produced conflicting and inconclusive results six days later. Further testing in Victoria, NSW and at a scientific institute in Germany, resulted in confirmation of the disease in some samples only some five weeks after they were first sent to the Australian laboratories.

[39] AFFA advised that a number of investigations into the cause of the mortalities in pilchards are either underway or planned.

### Erosion of technical skills base is a concern

**4.15** While the above arrangements appear to provide the Commonwealth with access to resources/expertise to enable it to perform its function of coordinating the national response to an emergency, there are concerns about continuing administrative effectiveness emerging for the future.

**4.16** AFFA advised that, in the terrestrial animal sector, there has been a decline in the number of veterinarians in Commonwealth and State/Territory Governments, with a resultant decline in relevant expertise, and fewer people with first hand experience of exotic diseases. The States consulted during the audit and CSIRO advised that expertise in insect taxonomy/identification and plant pathology has also declined, and that Australia lacks expertise in some key areas such as sucking insects. AFFA also advised that there is a lack of trained personnel in the aquatic animal sector.

**4.17** The ANAO considers that the limited national skills base for aquatic animals, and the erosion of the national technical skills base for plants and terrestrial animals, represents an important risk for the Commonwealth to address in its capacity of providing leadership and national coordination in plant and animal health matters. Addressing this risk by, for example, conducting a risk assessment of the implications of a limited or declining skills base would be an important priority to determine the areas of greatest need to make the most effective use of resources and to develop a risk management plan. In addition, consideration could also be given to establishing an on-shore and off-shore skills register to identify those resources which do exist. A further strategy might include exploring options with the States and other stakeholders for a partnership approach which would spread the burden of resource constraints while potentially improving Australia's level of expertise in a wider range of plant pests and diseases.

## Recommendation No.7

**4.18** The ANAO recommends that AFFA, in providing national leadership, consider means of addressing strategic risks associated with the erosion of relevant technical skills nationally.

*AFFA response:*

**4.19** AFFA accepts the recommendation, but notes the limitations of means to act on it within the bounds of current functions and resources. In conjunction with relevant stakeholders, AFFA will consider options and methods for possible implementation, including revision or expansion of current support programs for veterinary practitioner training activities.

### Commonwealth and States have some concerns about intellectual property

**4.20** The ANAO also found, particularly in the terrestrial animal sector, that intellectual property rights for diagnostic tests was an issue for the Commonwealth (AAHL) and the States. The issue increases the risk of a breakdown in working relationships which could, in turn, damage the efficiency and effectiveness of the emergency response. The AAHL Advisory Council has now developed a proposal to address the issue and referred it to the CCEAD. The CCEAD has now amended its operating guidelines to address the issue, by defining the roles and responsibilities of AAHL and State and Territory laboratories, which includes sharing of diagnostic information. At the time of writing, the revised CCEAD guidelines had not been endorsed by SCARM.

## Protocols are not in place in all sectors

**4.21** The arrangements for accessing diagnostic support are relatively well developed in the animal sector. An MOU between AFFA and CSIRO sets out AAHL's national responsibilities (including diagnosing exotic terrestrial animal diseases and fish health matters), while a separate protocol between VetComm (the peak terrestrial animal health committee advising SCARM / ARMCANZ) and AAHL contains provisions for dealing with suspect specimens and reporting to the CCEAD. The States and Territories operate under these protocols in respect of sample submissions to AAHL. AAHL has advised that, once the initial diagnosis has been provided, with the additional research requirements associated with emerging disease issues, it may need to consider re-defining its role in, and the funding arrangements for, emergency management. This issue is yet to be resolved.

**4.22** The MOU between AFFA and CSIRO applies in the aquatic animal sector. However, it is not clear whether the protocol between VetComm and AAHL applies to the submission of aquatic animal disease samples. While AFFA is of the view that the protocol will apply with the adoption of the CCEAD operating guidelines for terrestrial animals for aquatic animal emergencies, CSIRO considers that it requires clarification. This issue, too, is yet to be resolved.

**4.23** In the plant sector, AFFA (AQIS) has an agreement with CSIRO to provide routine identification of pests intercepted at borders. The South Australian Research and Development Institute and the National Museum of Victoria also have arrangements with AQIS for the identification of pests. Other than these arrangements, there are no protocols between Commonwealth agencies or with the States / Territories or other bodies, such as universities, which might be engaged to provide diagnostic

support during an emergency. AFFA advises that the flexibility to engage the most appropriate expertise provides a more efficient and effective response capability. The ANAO acknowledges that there are large numbers of potential pests and diseases which might threaten Australian agriculture; however, there is merit in arranging agreed protocols with a variety of service providers to ensure that diagnostic support will be provided as required in an emergency.

**4.24** The absence of protocols in the plant sector and the lack of clarity in the aquatic animal protocol does not appear to have hindered the efficiency or effectiveness of emergency responses to date. However, the ANAO considers that there would be benefit in clarifying roles and responsibilities by establishing protocols with relevant agencies to provide greater assurance that the required diagnostic support will be provided during an emergency in the plant and aquatic animal sectors. Consistent with EMA guidelines, which refer to the need to identify any MOUs or protocols in emergency plans, it would also be good practice to reflect the existence of these MOUs in any subsequent plans.

## Overall conclusion—diagnostic support

**4.25** Diagnostic support is available for all animal and plant sectors. Access to diagnostic support is well developed in the terrestrial animal sector, where the number of animals and types of diseases is widely known. Australia's diagnostic capability is more limited in the aquatic animal and plant sectors largely because of the diversity of hosts and possible pests and diseases and the smaller knowledge base about relevant pests and diseases.

**4.26** The potential lack of access to appropriate expertise increases the risk that accurate diagnosis may not be provided during an emergency and that the effectiveness of decision-making during an emergency may be compromised by inadequate scientific support.

**4.27** The ANAO considers that developing a strategy to facilitate greater access to diagnostic support during emergencies would improve the effectiveness of the Commonwealth's capability to coordinate emergencies in the aquatic animal and plant sectors. As previously discussed, AFFA has the role of providing national leadership and coordination. There would be merit in AFFA, in consultation with States, Territories, CSIRO and other key stakeholders, developing such a strategy to improve access to the required diagnostic support during emergencies. This might include addressing the skills base in both sectors as well as negotiating protocols or Memoranda of Understanding with relevant agencies to provide greater assurance that diagnostic support will be available.

## Recommendation No.8

**4.28** The ANAO recommends that AFFA, in order to improve Australia's diagnostic capability, consult with States, Territories, CSIRO and other key stakeholders to develop a strategy to improve access to effective diagnostic support during a plant or aquatic animal emergency.

*AFFA response:*

**4.29** AFFA notes and accepts the recommendation, but (similar to recommendation 7) will need to consider resource and implementation options in conjunction with stakeholders.

# 5. Monitoring and surveillance

*This chapter examines the monitoring and surveillance systems in place for providing early warning of a possible emergency and tracking an incursion or outbreak to its source. It also evaluates the effectiveness of these systems in relation to particular emergencies.*

## Monitoring and surveillance systems track the movements of pests and diseases

**5.1** Emergency preparedness is enhanced if:

- there is some advance notice of a possible imminent emergency; and
- the source of an incursion or outbreak can be tracked subsequently.

**5.2** Monitoring and surveillance systems are used to track the movements of pests and diseases and, in so doing, provide this information. The ANAO sought to establish whether these systems provided early warning for the emergencies examined, and whether the incursions or outbreaks were tracked to their source.

## Early warning systems involve the cooperation of many parties

**5.3** There are extensive systems to provide early warning of possible emergencies in the terrestrial animal sector. These systems are provided by the Commonwealth and States/Territories (separately or in partnership) and by industry and professional groups such as livestock producers and veterinarians. Most are directed at detecting possible incursions at the border, but some are directed at early detection in the field. Detail about these systems is included at Appendix 5. The OIE has identified significant international disease threats. Within this internationally agreed framework the Commonwealth's early warning system, the Northern Australia Quarantine Strategy (NAQS), is targeted at specified terrestrial animal diseases.

**5.4** States/Territories are largely responsible in the aquatic animal sector for monitoring and surveillance of commercial fisheries, aquaculture operations, recreational fishing and fish processing. The Australian Fisheries Management Authority (AFMA) is responsible for the monitoring and surveillance of Commonwealth fisheries. Although State fisheries track fish movements, prevention and early warning systems are very difficult in the wild where there are no geographic

boundaries to contain the species and diseases may occur in aquatic animals in remote locations. Reports from commercial fishermen are an important element of the early warning systems.

**5.5** Prevention is also difficult in the plant sector because of the diversity of natural entry points for pests and diseases (such as air currents and migratory birds) which are not all able to be controlled. Priority is usually given to dealing with an incursion once it is detected. Unlike the terrestrial animal sector, there is no international identification of the most significant pest or diseases on which to build a structured risk assessment of the most likely threats to Australia. However, NAQS is targeted at some specified plant pests and diseases which are considered to be high risk for Northern Australia. The monitoring and surveillance systems in place are largely the responsibility of the States/Territories, although the Commonwealth has implemented some targeted national surveillance programs, such as the national fruit fly surveillance program, for high risk areas of introduction. Details of these systems are included at Appendix 5.

**5.6** Apart from these formal systems, there are many other sources of reports on suspicious pests and diseases. These include universities, research organisations, private consultants, pest control operators, and interested members of the public. Coordinating reports on a diverse range of pests and diseases, from such a wide range of possible sources, is an important challenge for the Commonwealth.

## A national database is a useful tool

**5.7** A national database for the terrestrial animal sector is used to collate and report animal health information, including exotic disease investigations. There is no national database in the aquatic animal sector, although it is to be considered as part of the evolving AQUAPLAN framework.

**5.8** In the plant sector, the Commonwealth has a national database for exotic diseases and pests, although it is in the early stages of development and is therefore not yet complete or up-to-date. In the view of the ANAO, an information system is an essential management tool which would facilitate the ability of the Commonwealth to provide leadership in the coordination of plant health issues. The absence of a complete and up-to-date national database for plants has the potential to compromise the ability of the Commonwealth to meet national and international research and reporting requirements and may reduce the effectiveness of the emergency management of pest and disease incursions.

## Systems were not always effective in providing early warning

**5.9** As discussed in paragraphs 1.7-1.8, given Australia's thousands of kilometers of coastline and its geographic isolation, complete avoidance of exotic pest and disease incursions is not practically possible. Within the 'managed risk' approach, resources are allocated in part to prevention, detection and control once an incursion or outbreak is detected. The particular emergencies examined during the audit (see Appendix 6) demonstrate some of the difficulties in providing sufficient early warning in all circumstances.

**5.10** It is believed that neither the EMV nor the Newcastle Disease emergencies were the result of a border violation. EMV, which was at first considered to be an exotic disease, has been found to be a previously unrecorded virus for which Australian bats are the natural host—as such it is an endemic rather than an exotic disease. Newcastle Disease, which was also at first considered to be an exotic disease, occurred in an urban area not covered by surveillance systems. It has been tracked to a mutation of an existing Australian virus. The extensive systems and procedures to provide early warning of certain possible terrestrial animal disease incursions could not provide early warning because of the nature and location of these emergencies.

**5.11** As mentioned in paragraph 5.4, early warning in the aquatic animal sector is particularly difficult in the wild, an environment where there are no geographic barriers and where diseases may occur in aquatic animals in remote locations. This is demonstrated by the absence of early warning of the high rates of death in pilchards in 1995 and 1998.

**5.12** Monitoring and surveillance systems in the plant sector are limited to specified exotic pests and diseases and for limited geographic areas. These systems were not fully effective in providing early warning of either the October 1995 Papaya Fruit Fly or the Fireblight incursions (although NAQS survey teams had successfully detected the Papaya Fruit Fly on two previous occasions in 1992.) In October 1995, the fly was first detected in the built up area of Cairns when a grower submitted an infested pawpaw to Queensland authorities for identification. This part of Cairns was not clearly designated to be a NAQS responsibility. Following the 1995 incident, an MOU has now been concluded between AQIS and QDPI which clarifies AQIS responsibilities under NAQS and the responsibility of QDPI. Further, trapping has now been incorporated into the national fruit fly surveillance program managed by AFFA and operated by the States.

**5.13** There was no early warning of the possible arrival of the Fireblight disease. AFFA advised that it would not have been possible to provide early warning as there is no equivalent NAQS strategy for the southern States, where the risk is deemed to be lower; surveillance systems do not include urban areas, where the incursion was detected; and no system would have been sensitive enough to detect the particular Fireblight incursion as it was an isolated incident in an unusual location.

**5.14** It is not known whether the Papaya Fruit Fly and the Fireblight incursions resulted from a border violation since their sources have not been established.

## Incentive to report is different in each sector

**5.15** AFFA considers that early warning systems are more effective if there is an incentive to report. They consider that pre-agreed arrangements to cover the costs for eradication and compensation for the loss of stock/crops provide such incentives. In the terrestrial animal sector, the Commonwealth/States Cost-Sharing Agreement (CSA) provides for the sharing of costs for eradication of twelve specific animal diseases and compensation arrangements for owners of stock which have to be destroyed. There is no such arrangement for other exotic diseases (although veterinarians are required by law to report notifiable diseases.) The ANAO understands that the AAHC is reviewing the funding arrangements for emergency animal disease management, including the number of diseases covered by the CSA.

**5.16** In the aquatic animal and plant sectors, there are no agreed arrangements for cost-sharing for either eradication or compensation. However, AFFA has prepared a discussion paper on compensation and resource funding in aquatic animal health, drawing on experiences in the terrestrial animal sector, for consideration by the Australian Fish Health Management Committee (AFHMC).

**5.17** Plant emergencies are considered on a case-by-case basis. The Commonwealth has shared the costs of eradication on five occasions in the last five years. During this time one *ex gratia* payment has been made to a grower in compensation for lost crops. Incentives to report are a matter for Governments which the APHC may address when it is established.

## Administration of NAQS could be improved

**5.18** NAQS is a series of programs to monitor and survey targeted pests and diseases of plants and terrestrial animals. It was developed specifically to address the special quarantine risks associated with Northern Australia. It primarily covers the Torres Strait and a 20 km

zone along the coastline from Cairns (QLD) to Broome (WA). NAQS is funded and managed by AQIS.[40] It comprises three programs—NAQS Scientific, NAQS Operations and NAQS Public Awareness—with an annual budget over $5 million and some 60 staff. The various components of the strategy are administered and coordinated by different branches in AQIS.

**5.19** The ANAO found that separation of the programs has led to some administrative difficulties which have the potential to reduce assurance to stakeholders of effective outcomes. For example, there were inconsistencies within AFFA about the programs which made up NAQS which were reflected in business plans; there was no clear or consolidated presentation of the components of the strategy and the way in which the overall strategy was coordinated; and not all areas of AFFA involved in emergency management were fully aware of the different NAQS programs and the contribution NAQS makes to providing early warning of pest and disease incursions. This finding was supported by some Commonwealth and State stakeholders who perceived that the NAQS lines of responsibility and coordination within AFFA were not always clear. A recent review of NAQS by the Quarantine and Exports Advisory Council,[41] also found that, although NAQS was an effective early warning system, there was/is a need for administrative improvement.

**5.20** It was not the purpose of this audit to assess the effectiveness of NAQS. However, the ANAO considers that it would be good practice for AFFA to ensure that the contribution of the NAQS to emergency preparedness is maximised by improving understanding within the Department of the nature and scope of NAQS programs. This could be achieved through a consolidated and documented framework which reflects the full range of components of the NAQS strategy, including arrangements for coordination.

## Tracking the source of an emergency is more successful in the terrestrial animal sector

**5.21** Tracking techniques are used by the Commonwealth and States to trace the possible sources of an emergency in the animal and plant sectors. Data generated by the monitoring surveillance programs is used to track the movements of pests and diseases. AQIS is responsible for undertaking the Commonwealth's investigations to track the source of

---

[40] *Northern Australia Quarantine Strategy Annual Report 1997-98.*

[41] Quarantine and Exports Advisory Council, *Report to the Minister for Agriculture, Fisheries and Forestry of a review of the Northern Australia Quarantine Strategy,* October 1998, pp. 5 and 31.

an incursion or outbreak. The Bureau of Rural Sciences (BRS) provides scientific support to these activities and, in the case of a new disease, is involved in research to identify the source. AQIS investigates whether the source could be linked to an unlawful entry of material into Australia, working with the Australian Customs Service and other agencies as appropriate. States and Territories also have research and compliance programs.

**5.22** The source of most major incursions and outbreaks in the terrestrial animal sector in recent years has been tracked. Of the 19 emergencies in the period 1993-1998, the source of four was not known, six cases were from migratory birds/insects or free-flying wild birds; three related to previously unknown diseases (one of which was EMV); while the remainder were from various sources including mutation of a virus (eg. Newcastle Disease), natural hosts and one suspected illegal importation.

**5.23** Determining the source of an emergency in the aquatic animal sector is more difficult because of the nature and location of disease emergencies. AFFA advised that the source of the virus associated with the deaths in pilchards in 1995 and 1998 is not known and the possible relationship between the virus and the cause of death has not been conclusively established. The deaths in tuna in 1996 were attributed to sediment in the water column arising from stormy weather.

**5.24** AFFA advised that the sources of four of the 11 major exotic pest/disease emergencies in the plant sector in the period 1993-1998 have been identified. The source of the May 1995 Papaya Fruit Fly emergency was an incursion from PNG or other infested island(s) in the Torres Strait; and the source of the sugar cane smut in 1998 was most likely windborne spores from Java in Indonesia. The source of the Siam Weed emergency was an undetected contaminant in imported pasture seed, while the source of the Philippines Fruit Fly was an illegal introduction from the Philippines. The source of the remaining incursions, including the October 1995 Papaya Fruit Fly and Fireblight is not known, despite an investigation by the Compliance Unit of AQIS into the source of the Fireblight incursion.

**5.25** Appendix 1 provides further details.

## Overall conclusion—monitoring and surveillance

**5.26** The ANAO recognises the need for achieving an appropriate balance in resource allocation for prevention, detection and control once an incursion or outbreak is detected and that it is not possible or practical to provide complete protection from an exotic pest or disease emergency because of the nature and location of some threats. Notwithstanding these constraints, limitations in the systems which are designed to provide early warning of possible pest or disease emergencies potentially reduce Australia's capacity to respond quickly, while weaknesses in systems for tracking the source increase the possibility that the incursion or outbreak might not be contained in the most timely manner and/or might recur.

**5.27** Because of these constraints, sufficient early warning has not been provided for emergencies examined during the audit. The practical constraints flowing from the nature and location of pest and disease emergencies also mean that the sources of incursions or outbreaks, particularly in the plant and aquatic animal sectors, have not always been traced. Systems and procedures have been more effective in tracing the source of incursions or outbreaks in the terrestrial animal sector.

**5.28** There has been some review of specific monitoring and surveillance systems to assess their effectiveness; in particular a recent review of NAQS. There would be merit in AFFA examining the effectiveness of the range of other systems and procedures for monitoring, surveillance and tracking in order to identify improved means of providing early warning of a possible incursion in the plant sector and in tracking its source. Such means might include working with the States/Territories and industry to develop information about the risks to certain industries and the potential impact to Australia's trade and economy if certain pests and diseases occurred in order to prioritise the possible risks and allocate resources accordingly.

## Recommendation No.9

**5.29** The ANAO recommends that AFFA, in consultation with the States and Territories, examine the effectiveness of current systems and procedures for monitoring and surveillance of possible pest and disease emergencies, in order to identify improved means of providing early warning and tracking the source.

*AFFA response:*

**5.30** AFFA agrees with this recommendation. But the Department notes that many of the relevant issues have largely been covered under several recent reviews (ie Nairn and AAHC specific issue reviews).

**5.31** The report acknowledges general effectiveness of systems and procedures in place for the terrestrial animal sector, and that a review of the NAQS program was undertaken in 1998. Nevertheless, ANAO believes there is merit in reviewing the effectiveness of the other systems. A planned review of Nairn implementation, due in 2000 may be a useful opportunity in relation to this recommendation.

---

Canberra ACT
25 August 1999

P. J. Barrett
Auditor-General

# Appendices

## Appendix 1

# Summary of animal and plant health emergencies[42]

## Summary of terrestrial animal health emergencies[43]

| *Date* | *Nature of the emergency* | *Consequences* | *Outcome* | *Source* | *Cost to the Commonwealth*[44] |
|---|---|---|---|---|---|
| February 1993 | • chalkbrood<br>• South East QLD<br>• affected bee/honey industries | • significant to affected producers<br>• minor overall | • eradication attempted initially; now managing impact | • suspected illegal imported material | • not separately identified<br>• not covered by CSA[45] |
| March 1993 | • invasion of Asian honey bees<br>• Boigu and Saibai Islands, Torres Strait<br>• affected bee/honey industries | • none | • eradicated<br>• monitoring continuing under NAQS | • migration from Papua New Guinea | • not separately identified<br>• not covered by CSA |
| June 1994 | • *salmonella arbortus ovis*<br>• Mungindi, NSW<br>• affected humans | • diagnosed in two children | • no evidence of sheep infection found | • unknown | • $6 000 *ex gratia* payment to farmer |

[42] Adapted from information provided by AFFA.

[43] Includes only animal emergencies with the potential to significantly affect trade or industry, human health or to have a cost for the Commonwealth. The 19 emergencies included were classified as significant. Over the same period there were 435 suspected animal disease incursions. Of these, specimens were sent to AAHL on 192 occasions; and 43 required higher levels of response, up to and including the alert or stand-by phase of an emergency.

[44] Commonwealth costs directly attributable to specific incidents including, where appropriate, specific Commonwealth contributions for eradication, compensation and research. Does not include salaries or related on costs.

[45] Cost Sharing Agreement between States and the Commonwealth.

| Date | Nature of the emergency | Consequences | Outcome | Source | Cost to the Commonwealth |
|---|---|---|---|---|---|
| September 1994 | • Equine Morbillivirus (EMV)<br>• Hendra, QLD<br>• affected horses and humans | • one human death, another infected but recovered<br>• horse racing in South East QLD suspended for two weeks<br>• horse exports to several countries suspended | • eradicated | • previously unrecorded virus hosted by Australian bats | • $64 445 direct DPIE funding to CSIRO (research)<br>• not covered by CSA |
| December 1994 | • virulent avian influenza<br>• QLD<br>• affected domestic poultry and geese | • restriction on exports from QLD<br>• owner ceased business | • eradicated | • presumed free-flying wild birds | • $490 233 (including operations, compensation and research) |
| December 1994 | • suspected classical swine fever<br>• Lake Tyers, VIC<br>• affected pigs | • none | • diagnosis excluded classical swine fever | • N/A | • not separately identified |
| March—May 1995 | • ostrich fading syndrome<br>• several States<br>• affected domestic ostriches | • severe on owners of affected birds | • indeterminate; this has been recognised as a global industry problem | • not established | • not separately identified<br>• not covered by CSA |
| April 1995 | • blindness in kangaroos<br>• several States<br>• kangaroos | • some restrictions on kangaroo shooters<br>• minor localised effects on kangaroo populations | • naturally self limiting | • Australian virus | • not separately identified not covered by CSA |
| April 1995 | • Japanese encephalitis<br>• Badu Island, Torres Strait<br>• affected pigs, horses and humans | • two human deaths, several other people infected but recovered | • indeterminate; ongoing monitoring for seasonal incursion | • birds and/or insects migrating from Papua New Guinea | • not separately identified<br>• not covered by CSA |

| Date | Nature of the emergency | Consequences | Outcome | Source | Cost to the Commonwealth |
|---|---|---|---|---|---|
| September —October 1995 | • EMV<br>• Mackay, QLD<br>• affected horses and humans | • one human death<br>• some extra horse export restrictions | • indeterminate; identified as a low prevalence problem in bats; studies continue | • previously unrecorded virus in Australian bats | • not separately identified<br>• not covered by CSA |
| October 1995 | • rabbit calicivirus<br>• Point Pearce, SA<br>• affected rabbits (wild) | • loss of employment for rabbit shooters<br>• closure of a game processing business<br>• ultimately beneficial to the environment | • controlled release program initiated, now widespread | • escape from trial site | • not separately identified[46]<br>• not covered by CSA |
| June 1996 | • lyssavirus<br>• Ballina, NSW<br>• affected bats and humans | • one human death | • identified as a low prevalence rabies related virus circulating in bats | • bats are the natural host | • not separately identified<br>• not covered by CSA |
| January—March 1997 | • anthrax<br>• Victoria<br>• affected cattle, sheep and humans | • one human illness<br>• access disrupted to several major meat and dairy product markets | • remains endemic in limited geographical areas (parts of NSW and VIC) with sporadic outbreaks | • historical soil infections | • not separately identified<br>• not covered by CSA |
| April 1997 | • Japanese encephalitis<br>• Saibai Island, Torres Strait<br>• affected pigs | • none | • indeterminate; ongoing monitoring for seasonal incursion | • birds and/or insects migrating from Papua New Guinea | • not separately identified<br>• not covered by CSA |

[46] Controlled release program and national monitoring/surveillance program funded separately.

| *Date* | *Nature of the emergency* | *Consequences* | *Outcome* | *Source* | *Cost to the Commonwealth* |
|---|---|---|---|---|---|
| April—August 1997 | • paramyxoviridae<br>• Menangle, NSW<br>• affected pigs | • two humans became ill<br>• loss of export access for affected piggeries | • apparently eradicated, to be confirmed by studies currently underway. Also appears to have a natural host in flying foxes; thus potential to be further cases in the future | • previously unrecorded virus possibly from Australian bats | • not separately identified<br>• not covered by CSA |
| November—December 1997 | • virulent avian influenza<br>• Tamworth, NSW<br>• affected commercial poultry and ostrich chicks | • major economic impact within the Tamworth area<br>• significant impact in NSW<br>• minor for the rest of Australia | • eradicated | • presumed to be from free-flying wild birds | • $2.2 million (subject to finalisation) (including operations, compensation and research) |
| March 1998 | • Japanese encephalitis<br>• Mitchell River, QLD<br>• affected pigs and humans | • one human illness<br>• otherwise minor impact | • indeterminate; ongoing monitoring for seasonal incursion | • birds and/or insects migrating from Papua New Guinea | • not separately identified<br>• not covered by CSA |
| June—July 1998 | • Asian honey bees<br>• NT<br>• affected bees | • minor economic impact | • not confirmed eradicated | • not established | • not yet determined |
| September 1998 | • Newcastle disease<br>• Western Sydney and Rylstone, NSW<br>• affected domestic poultry, feral pigeons, geese and ostriches | • major economic impact for NSW<br>• suspension of access to some export and domestic markets for NSW producers | • at the time of writing, believed to be eradicated monitoring continues) | • mutation of an Australian virus | • estimate $1.7 million (including operations and compensation) |

## Summary of aquatic animal health emergencies

| *Date* | *Nature of the emergency* | *Consequences* | *Outcome* | *Source* | *Cost to the Commonwealth*[47] |
|---|---|---|---|---|---|
| April—June 1995 | • deaths in pilchards<br>• Noosa—QLD to Geraldton—WA and NZ | • suspension of pilchard exports to NZ<br>• suspension of southern bluefin tuna exports | • incident allowed to run its course[48] | • cause of death not established<br>• virus is a suspected factor<br>• source of virus has not been determined | • unknown but relatively low as pilchard fishery is a State responsibility |
| April 1996 | • deaths in southern bluefin tuna<br>• Port Lincoln—SA | • disruption to exports of southern bluefin tuna | • naturally self limiting | • stormy weather and sediment in the water column | • unknown but relatively low as bluefin tuna fishery is a State responsibility |
| October 1998—present | • deaths in pilchards<br>• SA, WA,VIC and NSW | • none | • incident allowed to run its course[49] | • cause of death not established<br>• virus is a suspected factor<br>• source of virus has not been determined | • unknown but relatively low as pilchard fishery is a State responsibility |

[47] Commonwealth costs directly attributable to specific incidents including, where appropriate, specific Commonwealth contributions for eradication, compensation and research. Does not include salaries or related on costs.

[48] containment not possible in ocean environment.

[49] containment not possible in ocean environment.

## Summary of plant health emergencies[50]

| *Date* | *Nature of the emergency* | *Consequences*[51] | *Outcome* | *Source* | *Cost to the Commonwealth*[52] |
|---|---|---|---|---|---|
| July 1994—present | • Siam weed<br>• first detected in Bingil Bay, North QLD<br>• all subsequent detections within 100 kms of this site in pasture and riparian (riverside) areas<br>• potential to affect grazing lands, forests and conservation areas | • economic consequences not determined (although the actual economic losses were not determined the value of industries potentially at risk from Siam weed was estimated at $1500 million)<br>• environment not affected, but the weed has the potential to disrupt areas of high conservation value such as Cape York, Wet Tropics Region and Kakadu | • ongoing efforts to eradicate | • suspected to have been an undetected contaminant in imported pasture seed | • $376 750 (Commonwealth contribution to eradication costs 1994/95–1997/98)<br>• $85 000 Commonwealth contribution for 1998/99 approved |
| October 1994—present | • silver leaf whitefly<br>• NSW, QLD, Adelaide, NT and Perth<br>• affected nearly 600 host plant species | • potential lost production of $343 million<br>• impact on native whiteflies and vegetation not known | • eradication not attempted<br>• now widespread | • not determined | • $300 000 (Commonwealth contribution to research and development) |

[50] Includes only plant emergencies with the potential to significantly affect trade or industry or to have a cost for the Commonwealth. Eleven emergencies were classified as significant. Over the same period there were 64 detected incidents, of these: 39 were incursions; 9 are pending identification; 7 were false; 6 were resurgences of diseases thought to be eradicated; 2 involved the spread of a pest within Australia; and 1 was a new native.

[51] AFFA provided details of potential consequences and estimated actual losses. Details of actual costs were not provided.

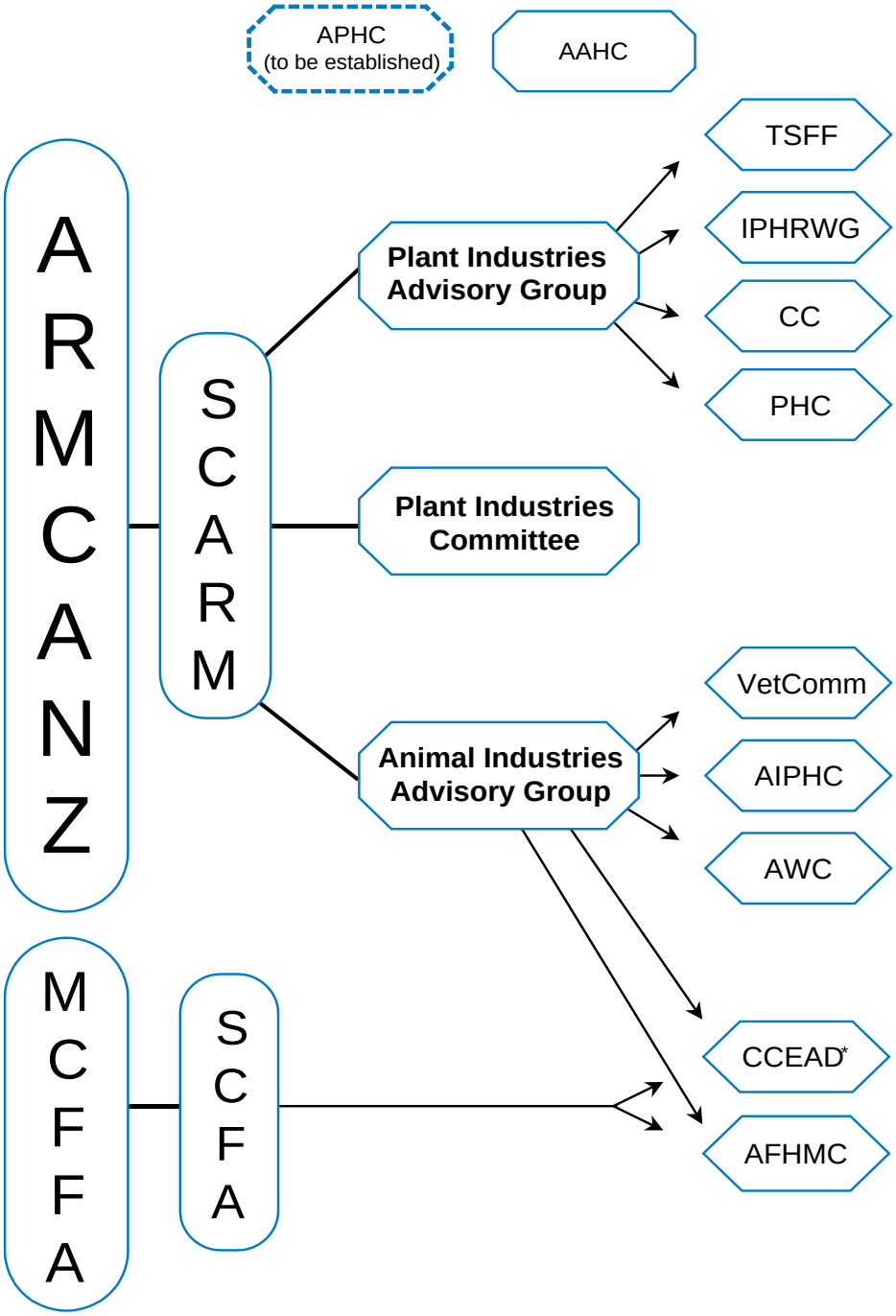
[52] Commonwealth costs directly attributable to specific incidents including, where appropriate, specific Commonwealth contributions for eradication, compensation and research. Does not include salaries or related on costs.

| *Date* | *Nature of the emergency* | *Consequences* | *Outcome* | *Source* | *Cost to the Commonwealth* |
|---|---|---|---|---|---|
| May 1995 | • papaya fruit fly<br>• Yorke and Murray Islands, Torres Strait<br>• affected fruit and vegetable industries | • potential to spread to horticultural areas<br>• slight potential to disrupt the ecology of native fruit fly species and native host plants | • eradicated | • incursion from PNG or other infested island(s) in the Torres Strait | • $49 460 (Commonwealth contribution to eradication costs) |
| October 1995—present | • papaya fruit fly<br>• Cairns, QLD<br>• affected fruit and vegetable industries | • potential to cost the fruit and vegetable industries an estimated $73.5 million per year<br>• estimated actual losses to industry of $100 million<br>• potential to disrupt the ecology of the Wet Tropics World Heritage Area, particularly native fruit fly species and native host plants | • eradicated in the Cairns area | • not determined | • $16 664 500 (Commonwealth contribution to eradication costs to 30 June 1998) |
| July 1996—present | • western flower thrips<br>• widespread in NSW and QLD; considered established in Perth and parts of Adelaide; detected at low levels in Albany, WA; and detected in TAS<br>• affected a range of ornamental plants and vegetable crops | • potential losses due to the species transmitting viruses and direct damage through feeding | • eradication not attempted<br>• interstate quarantine measures mostly unsuccessful<br>• now established | • not determined | • no direct costs |

| *Date* | *Nature of the emergency* | *Consequences* | *Outcome* | *Source* | *Cost to the Commonwealth* |
|---|---|---|---|---|---|
| May 1997—present | • fireblight<br>• Melbourne, VIC<br>• affected apple and pear species and many species in the family Rosaceae | • potential to cause $125.7 million losses in total Australian apple and pear product<br>• estimated loss of trade of $1.5 million (Goulburn Valley area only) | • suspected eradication, pending further survey work | • not determined | • $1 396 664 (Commonwealth contribution to eradication costs) |
| June 1997 | • black sigatoka<br>• Daintree region, QLD<br>• affected bananas | • estimate of the lost income is from $282 232 to $331 957<br>• potential to affect a native plant | • eradicated | • not determined | • $100 061 (*ex gratia* payment to grower) |
| July 1997 | • panama disease<br>• 80km south of Darwin, NT<br>• affected bananas | • cost to industry not determined<br>• potential to affect a native plant | • eradication efforts are continuing | • not determined | • $106 268 (Commonwealth contribution to eradication costs) |
| Nov 1997—early 1998 | • Philippines fruit fly<br>• Darwin, NT | • unquantified losses to producers due to suspension of fruit and vegetable trade | • eradication | • illegal introduction from Philippines | • $2 554 000 (Commonwealth contribution to eradication costs) |
| June 1998 | • black sigatoka<br>• Pascoe River, Cape York Peninsula, QLD<br>• affected bananas | • cost to industry not determined<br>• potential to affect a native plant | • eradication suspected, pending further survey work | • not determined | • no direct costs |
| July 1998—present | • sugar cane smut<br>• Ord River, WA<br>• affected sugar cane | • estimated value of crops and costs associated with the destruction was $86 680 | • eradication still to be determined | • most likely windborne spores from Indonesia (Java) | • $186 250 (Commonwealth contribution to eradication costs) |

## Appendix 2

# Animal and plant health committees—roles and membership




* CCEAD arrangements for the animal sector adopted for the aquatic animal sector October 1998 (endorsed by SCARM 1999)

## Peak bodies

### Australian Animal Health Council (AAHC)

The AAHC is a non-profit public company that is the peak animal health body for developing strategic policy advice and for funding of agreed animal disease programs. The role of the Council is to:

- provide strategic leadership in national policy development for Australia's animal health system;
- manage agreed national animal health programs; and
- promote international and domestic confidence in Australia's animal health status.

*Membership*

Members of Federal and State Governments, CSIRO and 10 peak industry/professional organisations.

### Australian Plant Health Council (APHC) (to be established)

The role of the APHC will be to:

- provide advice to industry and government and coordinate action on:
  - the management of incursions of exotic pests and diseases;
  - the development of uniform approaches to the management of endemic plant pests and diseases of concern to more than one state; and
  - the adequacy of plant pest and disease research and diagnostic services.
- establish a national pest and disease information system;
- provide an interstate quarantine dispute resolution mechanism;
- facilitate joint involvement of industry and government in management and funding of agreed national plant protection programs.
- ensure diagnostic capacity to meet WTO standards; and
- develop and implement strategic and operational plans.

*Membership*

Expected to include representatives from the Commonwealth, States/Territories and industry.

# Committees overseeing animal and plant sectors

## Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ)

ARMCANZ is the peak government forum for consultation, coordination and, where appropriate, ensuring an integrated approach by governments on agriculture, land and rural and urban water issues.

### *Membership*

All Ministers responsible for agriculture and resource management from all States and Territories, the Commonwealth and New Zealand.

## Standing Committee on Agriculture and Resource Management (SCARM)

SCARM's main objectives are to support ARMCANZ in the achievement of its objectives and to develop cooperative and coordinated approaches to matters of concern to the Council.

### *Membership*

All Department heads / CEOs of Commonwealth, State / Territory and New Zealand Government agencies responsible for agriculture, soil, water and rural adjustment policy.

# Terrestrial animal health committees

## Animal Industries Advisory Group (AIAG)

The role of the group is to ensure issues of strategic importance to animal industries are examined by SCARM / ARMCANZ.

### *Membership*

Executive level officers from the Commonwealth and relevant States / Territories.

## Consultative Committee on Emergency Animal Diseases (CCEAD)

(formerly the Consultative Committee on Exotic Animal Diseases)

The role of the CCEAD is to:

- consult on emergencies resulting from diseases of livestock or serious epizootics of Australian origin;
- make judgements regarding the presumptive and confirmatory diagnosis of outbreaks of diseases of livestock for the purpose of making recommendations to ARMCANZ concerning invoking the provisions of the Commonwealth / State financial arrangements for combating outbreaks; and

- advise on eradication or control methods for presumptive or confirmed introductions of animal disease emergencies.

*Membership*

Representatives of the relevant SCARM member agencies. The CCEAD is chaired by the Commonwealth CVO.

### Veterinary Committee (VetComm)

The role of this committee is to:

- provide scientific and technical advice on animal health matters to SCARM/ARMCANZ;
- act as the principle source of technical input into the development of Australian Animal Health Council (AAHC) issues;
- contribute to national policy development on animal health issues; and
- coordinate relevant program delivery across governments, industries and state boundaries.

*Membership*

Representatives of the relevant SCARM member agencies. The chair is rotated between member agencies.

### Animal Industries Public Health Committee (AIPHC)

The role of the AIPHC is to:

- monitor, assess and advise SCARM on all serious issues emanating from animal industries which pose a threat to human health;
- recommend to SCARM on proposals to manage veterinary public health and food safety issues; and
- coordinate national responses to ongoing serious veterinary public health and food safety issues.

*Membership*

- the Commonwealth Chief Veterinary Officer;
- representatives of the relevant SCARM member agencies—State/Territory veterinary public health experts, Commonwealth trade policy expert and State trade policy expert;
- an AFFA (AQIS) representative;
- a CSIRO representative;
- the Commonwealth Chief Medical Officer;
- an academic research microbiologist;

- a representative from the Australian Animal Health Council;
- a representative from the National Farmers' Federation; and
- a representative from the Australia New Zealand Food Authority.

### Animal Welfare Committee (AWC)

The role of the AWC is to report to SCARM on all issues relating to animal welfare as these affect the agricultural industries.

*Membership*

Representatives of relevant SCARM member agencies and industry observers as appropriate.

## Plant health committees

### Plant Industries Advisory Group (PIAG)

The role of the group is to ensure issues of strategic importance to plant industries are examined by SCARM / ARMCANZ.

*Membership*

Executive level contact officers from the Commonwealth and relevant States / Territories. The PIAG is chaired by a Commonwealth representative.

### Plant Industries Committee (PIC)

The role of the committee is to:

- review, report and make recommendations to SCARM on matters of current significance in relation to plant industries including production of crops and pastures, and post harvest handling, processing and marketing of crop products;
- assess and make recommendations relating to information needs and technical, research, training, extension, financial, legislative and administrative considerations in the fields of production, processing and marketing of plant products;
- consider and advise SCARM on the technical and administrative implications of Government policies on the production, processing and marketing of plant products;
- act collaboratively with other committees of SCARM; and
- deal with matters referred to it by SCARM's Plant Industries Advisory Group.

*Membership*

Representatives of relevant SCARM member agencies.

## Plant Health Committee (PHC)

The role of the PHC is to:

- undertake a continuing review of pests and diseases affecting Australian plant industries;
- advise SCARM on action required to control, contain or eradicate specific pest of diseases;
- advise SCARM on recommendations to be made to governments with respect to developments in the fields of plant pathology and agricultural entomology;
- advise SCARM on the use of biological control and integrated pest management for pest and disease control; and
- recommend to SCARM on principles and procedures necessary for eradication or control of exotic plant diseases, nematodes and entomological pests.

### *Membership*

Representatives of relevant SCARM member agencies.

## Consultative Committee (CC)

(formerly the Consultative Committee on Exotic Insect Pests, Weeds and Plant Diseases)

The CC is a subcommittee of the PHC and responds to outbreaks of exotic plant pests or diseases in Australia. The Committee:

- consults on emergencies due to the introduction of an exotic pest of plants;
- makes judgements regarding the confirmation and extent of outbreaks of exotic plant pests for the purpose of invoking the provisions of any State/Commonwealth financial arrangements for combating outbreaks;
- advises on the eradication and control methods for confirmed introduction of exotic plant pests; and
- advises and makes recommendations on introduced exotic pests of plants to SCARM through the PHC.

### *Membership*

Representatives of relevant SCARM member agencies. The CC is chaired by the CPPO. A separate committee is convened for each emergency.

## Interstate Plant Health Regulations Working Group (IPHRWG)

The role of IPHRWG is to:

- review and comment on current consultative processes which enable the involvement of States/Territories and the Commonwealth in the development and establishment of plant health policy;
- review the respective roles of SCARM/ARMCANZ, AFFA and State/Territory departments in formulating policies, procedures and delivery programs for interstate and international plant health, inspection and exotic disease/pest exclusion;
- review the role and effectiveness of the Plant Health Committee in developing plant quarantine policies and controls;
- recommend a method of reviewing plant quarantine issues with the aim of identifying outdated or technically unjustified interstate plant quarantine barriers;
- recommend methods by which plant quarantine consultative processes could be implemented to improve the involvement of respective States and Territories; and
- report through the Plant Health Committee to SCARM.

### *Membership*

Representatives of relevant SCARM member agencies and a representative from the Plant Health Committee.

## Tri-State Fruit Fly Committee (TSFFC)

The role of the TSFFC is to:

- advise government and the horticultural industries on the management of fruit fly in south east Australia and specifically advise on the needs of the exclusion zone and associated suppression and eradication activities;
- manage the implementation of the Tri-State Fruit Fly Strategy through coordination of State and industry responsibilities;
- develop and manage financial and resource use strategies for the efficient and effective management of fruit fly;
- manage public communication and information on the regulatory and control requirements of fruit fly;
- coordinate the efficient implementation of the National Code of Practice for fruit fly control within the fruit fly exclusion zone;
- coordinate fruit fly suppression and control activities in the area around the fruit fly exclusion zone;

- advise SCARM on the funding and resource needs for effective management of fruit fly in south east Australia; and
- supply sterile fruit fly to other States outside the Tri-State agreement on a cost recovery basis.

*Membership*

- representatives of relevant SCARM member agencies;
- a representative from AFFA; and
- representatives from horticultural industries in each State.

## Aquatic animal health committees

### Ministerial Council on Forestry, Fisheries and Aquaculture (MCFFA)

The MCFFA is the forum for the development of policies which are consistent with the objectives of Commonwealth, State/Territory and, where relevant, the New Zealand Governments. Where appropriate, the Council will provide the means to achieve an integrated approach to action on forest, fisheries and aquaculture issues.

The council is consultative only. Final decisions are the responsibility of member governments.

*Membership*

The Council is comprised of the Commonwealth, State/Territory and New Zealand Ministers responsible for forestry, fisheries and aquaculture, with Papua New Guinea Ministers as observers.

### Standing Committee on Fisheries and Aquaculture (SCFA)

The SCFA provides support to the MCFFA. Specifically, its functions are to:

- advise the MCFFA on all matters relating to the functions of the Council;
- perform such functions from time to time as deemed necessary by the Council; and
- consider any matter referred to it by the Chairman of the Council at the request of any member of the Council.

*Membership*

- the Heads of the State/Territories agencies responsible for fisheries;
- executive level representatives from CSIRO and AFFA; and
- the Director-General of the Ministry of Agriculture and Fisheries, New Zealand.

## Consultative Committee on Emergency Animal Diseases (CCEAD)[53]

The role of the CCEAD is as described above.

### *Membership*

Representatives of relevant SCARM agencies with appropriate expertise. The CCEAD for the aquatic animal sector is chaired by the Commonwealth CVO.

## Australian Fish Health Management Committee (AFHMC)

The role of the AFHMC is to:

- examine and develop a comprehensive national fish health framework;
- oversee the development of emergency outbreak management arrangements for the fishing and aquaculture sectors; and
- reports to SCFA and the Australian Seafood Industry Council (ASIC), and advises SCARM as appropriate.

### *Membership*

- a representative from AFFA;
- a representative from SCARM;
- a representative from SCFA;
- three representatives from ASIC; and
- the chair of the Fish Health Coordinating Group (currently being wound up).

[53] CCEAD arrangements for the animal sector adopted for the aquatic animal sector October 1998 (endorsed by SCARM 1999)

## Appendix 3

# Stakeholders consulted during this audit

*Commonwealth Government*

Australian Customs Service

Australian Fisheries Management Authority

Commonwealth Scientific and Industrial Research Organisation—Australian Animal Health Laboratory and Division of Entomology

Department of Agriculture, Fisheries and Forestry—Australia

Department of Defence (Emergency Management Australia)

Department of the Environment and Heritage (Environment Australia)

Department of Finance and Administration

Department of Foreign Affairs and Trade

Department of Health and Aged Care

*State Government*

NSW Agriculture

Queensland Department of Primary Industries

Victorian Department of Natural Resources and Environment (Agriculture Victoria)

*Industry Groups*

Australian Apple and Pear Growers Association

Australian Chicken Meat Federation Inc

Australian Egg Industry Association Inc

National Farmers' Federation

Nursery Industry Association of Australia

Queensland Fruit and Vegetable Growers

Queensland Harness Racing Board

Queensland Principal Club

Queensland Racing Science Centre

Queensland Trainers Association

## Appendix 4

# Guidelines for the preparation of agency supporting plans for COMDISPLAN

Guidelines developed by EMA provide a framework for reviewing/developing the Commonwealth's planning framework for managing emergencies, in particular, for reviewing/developing COMVETPLAN, AFFA's own sub-plan and the sub-plans of other Commonwealth agencies. The *Guide to the preparation of agency supporting plans for the Commonwealth Government disaster response plan (COMDISPLAN)*, October 1998, includes a planning checklist to ensure consultation has occurred, aims are clearly stated, alert lists are kept up to date, lines of authority are clearly established, an emergency operations room is available, actions to be taken are identified and plans are reviewed regularly. A supporting plan format is also suggested, which includes the sorts of information which may be included in a plan, as follows:

- Title page—short descriptive title, name of the organisation and the date of publication;
- Table of contents—a chronological list of each item in the plan;
- Distribution list—identifies all individuals inside and outside the agency who have a copy of the plan. The plan should also include each person's title, telephone number, and mailing address. The list should be an annex to the plan and updated regularly;
- Executive Summary—a brief generalised statement explaining the rationale for the plan and the expected results when the plan is implemented;
- Aim of the plan—a brief, clear statement of the plan's aim and purpose;
- Authority—the authority under which the plan is issued;
- Delegation of responsibilities—a list, by title, of responsibilities delegated to officers within the agency;
- Memoranda of Understanding (MOU)/Letters of Agreement—this should list MOU and Letters of Agreement with other agencies that may affect the provision of resources/assistance by the agency;
- Resources:
  - financial—a description of any special financial arrangements the agency may need to use in the provision of assistance;
  - human—apart from the human resources in the agency, the plan should identify outside agencies from which specialist advice can be obtained if required;

    - facilities and equipment—this will include the facilities and equipment that the agency may be required to provide in response to a request under COMDISPLAN. This may be shown as a tabular annex to the plan.
- Organisation and procedures:
    - organisation—a description of the agency's organisational structure involved in the planning, actioning and provision of assistance;
    - planning committees—a committee may be established for the development of the supporting plan. Ideally, the committee should meet regularly to review procedures because, as personnel and personalities change, so do agency arrangements. This may affect how assistance is to be provided;
    - alert list—a telephone alert list identifying the key personnel who would need to be contacted, showing office / home / mobile and pager numbers;
    - actions of warning—describes the procedures to be followed on receipt of a warning message of COMDISPLAN-WHITE / YELLOW. This may include briefing of personnel and review of after hours contact procedures;
    - action on receipt of a request for assistance—describes the procedures to be followed once a request for assistance has been received. This may include identification of resources, tasking, contracting, transport and financial delegations;
    - authorisation procedures to commit resources—procedures for the authorisation to commit resources needs to be clearly defined. This should include delegates who can authorise commitment if the primary authority cannot be contacted;
    - reporting / recording of information—records should be kept, especially financial, on resources expended in the provision of assistance. This should also detail who is to receive this information and how it is to be passed. After-action reports should be prepared at the completion of each operation;
    - liaison inside and outside the agency—this will primarily be through Emergency Management Liaison Officer (EMLO) who should have an up to date agency directory to ensure that information can be obtained quickly. It is important that an alternative EMLO be nominated and contactable when the primary EMLO is absent. Emergencies have a habit of occurring on weekends or public holidays;

  - arrangements in regional centres—agencies may provide arrangements through regional centres. Coordination arrangements with regional centres should be established if support is to be provided from interstate offices of the agency.
- Updating the plan—This should specify when the plan is to be reviewed and by whom.

## Appendix 5

# Monitoring and surveillance systems in the terrestrial animal and plant sectors

## Terrestrial animal and plant sectors

### *Northern Australia Quarantine Strategy (NAQS)*

NAQS is the main Commonwealth system providing early warning of exotic animal and plant pest and disease incursions. It is a program of monitoring and surveillance of specified pests and diseases of both plants and animals, developed specifically to address the special quarantine risks associated with Northern Australia. Coastwatch helicopters are used for monitoring and surveillance purposes and to transport NAQS staff to islands for trap clearing and setting purposes.

It was established in 1989 following the Lindsay Review of Quarantine[54] which pointed out that Northern Australia posed a number of unique challenges for quarantine and found that the existing program was not fully effective in achieving its aims.

NAQS comprises three programs funded and managed by AQIS: NAQS—Operations; NAQS—Scientific; and, NAQS - Public Awareness. It includes both offshore and onshore components. The total annual budget for these programs is in excess of $5 million.

### *Border activities—Australian Customs Service / AQIS*

The ACS and AQIS work in partnership to undertake a range of border management activities for air and sea passengers, vessels and aircraft, postal articles and cargo that cross Australia's borders. The ACS's Coastwatch provides 500 hours of dedicated helicopter support to the NAQS in northern Queensland and the Torres Strait. There is an MOU between AQIS and ACS for the provision of Coastwatch activities.

## Terrestrial animal sector

Early warning of possible terrestrial animal disease emergencies is provided through a range of systems of monitoring and surveillance. These involve livestock producers and private and public sector veterinarians, together with associated support staff. Stakeholders reported that early detection by veterinarians is one of the most effective early warning systems. The Commonwealth, States and industry also provide some early warning systems through their monitoring and surveillance programs.

---

[54] Professor D Lindsay (Convenor), *Australian Quarantine Requirements for the Future*, Report of the Quarantine Review Committee, May 1988.

In addition to NAQS the following monitoring and surveillance activities are undertaken solely by the Commonwealth:

- *Veterinary counsellor reports*—AFFA has veterinary counsellors in South Korea, the USA and Europe whose duties include reporting on animal health matters. AFFA's agricultural counsellors based in other countries also report developments in animal health;
- *DFAT advice from posts*—Under COMVETPLAN, DFAT is required to monitor and report on significant foreign animal disease events to AFFA; and
- *AQIS meat inspection arrangements*—As part of AQIS meat production inspection arrangements, antemortem inspection on animals slaughtered at export abbatoirs occurs. This includes consideration of whether or not any emergency animal diseases are present.

In addition to collaboration with States on information systems such as the National Animal Health Information System (NAHIS),[55] the Commonwealth participates in the following monitoring and surveillance activities on a collaborative basis:

- *National Arbovirus Monitoring Program (NAMP)*—NAMP is a collaborative Commonwealth, States and industry program of active surveillance to demonstrate that large areas of Australia are free from insect-borne viruses (such as bluetongue) and their vectors. NAMP also provides warning of incursions of exotic arboviruses as well as a means for monitoring any subsequent spread; and
- *International collaborative programs*—Australia has MOUs with Papua New Guinea and Indonesia on quarantine/animal and plant health matters which include joint surveillance and monitoring operations and other collaborative activities. Sentinel herds and other animals are monitored and tested for specified pests of quarantine significance.

The Commonwealth is also formally involved with third parties in the following monitoring and surveillance activities:

- *Local intelligence sources*—AQIS has a program which locates Australians working in other countries to provide reports on developments in animal health issues; and
- *OIE notifications and information systems*—As a result of Australia being an OIE member, the OIE provides weekly disease information reports and maintains a website which is accessed by AFFA staff.

---

[55] NAHIS has as its primary aim the collation and reporting of animal health information necessary to underpin Australia's trade in animal and animal products, and to meet Australia's reporting obligations to OIE, FAO and WHO.

Other sources of intelligence which may provide early warning are:

- *Disease Watch Hotline*—A toll-free number, partly funded by AAHC, connecting callers to the relevant State/Territory officer to report concerns about any potential exotic disease situation. Anyone suspecting an exotic disease can use this number to get immediate advice and assistance;
- *Promed*—An electronic bulletin board widely used by public and private sector interests, including journalists, for rapid dissemination of animal health news; and
- *Informal/professional networks*—Veterinary associations, academic contacts, etc.

## Plant sector

The States and Territories have their own systems of monitoring and surveillance for both domestic and exotic pests. This is generally through their extension activities. States and Territories are usually the first point of contact during an incursion in the plant sector.

The Commonwealth monitoring and surveillance systems largely relate to port surveillance through the exotic fruit fly and Asian Gypsy Moth surveillance programs.

In addition to NAQS, these two national early warning surveillance programs, developed in 1996, involve traps baited with lures in port areas (and adjacent urban areas) considered to be high risk for the introduction and establishment of exotic fruit flies. The programs are linked to existing fruit fly surveillance programs conducted by State Governments and are also linked to NAQS.

The OCPPO administers the Asian Gypsy Moth program, while exotic fruit fly detection trapping sites (there are over 1600 traps) which are administered by OCPPO are serviced by the relevant State/Territory governments.

## Appendix 6

# Case Studies (including aquatic animal emergencies)

| Case study—Equine Morbillivirus (EMV) (1994) | |
|---|---|
| **The emergency:**<br><br>**EMV is a new endemic disease which affects humans and horses.** | The unexplained deaths of 12 racehorses at stables in the Brisbane suburb of Hendra were advised to the Qld CVO on 22/9/94. The Qld CVO instituted quarantine measures and, after considering the available data, notified the Commonwealth CVO of the situation on 23/9/94. National emergency management processes were activated on the same day with a meeting of the CCEAD.<br>Tests on samples from dead horses by AAHL on 23/9/94 eliminated the major exotic horse diseases as the cause of death. AAHL then embarked on a standard scientific investigation which, within weeks, resulted in the detection and identification of a new virus as the cause of this previously unknown disease.<br>In total, 21 horses died or were destroyed as a result of infection. A trainer and stablehand contracted the (then unknown) disease. The trainer died several days later while the stablehand recovered. Due to the possibility of an exotic disease, racing in South East Qld was cancelled and the movement of horses suspended for a short period. Some restrictions were also placed on the export of horses.[56] |
| **Summary of ANAO findings:** | |
| **Planning:** | • *this emergency concerned a previously unknown—and hence unplanned for—disease*<br>• *AUSVETPLAN principles were successfully applied in responding to the emergency*<br>• *the various national and Commonwealth plans implemented in response to the emergency appeared to be effective in containing and eradicating the disease at the time* |
| **Coordination:** | • *the CCEAD mechanism provided an effective framework for responding to the emergency*<br>• *the Commonwealth's prompt initiation of the CCEAD mechanism contributed to an effective response*<br>• *State stakeholders considered the Commonwealth's role in coordinating the response was effective*<br>• *industry considered the emergency was well managed* |
| **Diagnostic Support:** | • *AAHL provided rapid and authoritative diagnosis* |
| **Monitoring and Surveillance:** | • *the extensive systems and procedures could not provide early warning due to the nature of this emergency which involved a previously unknown endemic disease*<br>• *the source was later traced to fruit bats, the natural host for the virus*<br>• *no border violation was believed to be involved* |

[56] A year later another EMV emergency arose with death of a man from EMV. In August 1994 (ie prior to the discovery of EMV) the man assisted with the autopsy of two horses. Samples of preserved tissue from the horses were tested in October 1995 and found to contain EMV. There were no cases of EMV in horses or other animals in 1995.

| Case study—Newcastle Disease (1998) | |
|---|---|
| **The emergency:**<br><br>**Newcastle Disease affects poultry and wild birds and is usually classed as an exotic disease. However, this case proved to be an endemic disease as it involved the mutation of an existing Australian virus.** | On 17/9/98 the Commonwealth CVO was advised by the NSW CVO that Newcastle Disease had been found in two commercial poultry flocks in Western Sydney. Although further laboratory work (at AAHL) was needed and occurring, emergency response processes were activated the following day with the convening of the CCEAD where members agreed on a presumptive diagnosis of virulent Newcastle Disease. This was the first outbreak of virulent Newcastle Disease in Australia since it was eradicated in 1932.<br><br>Disease investigations had been occurring on one of the infected properties since early August with a range of concurrent infections being diagnosed. Newcastle Disease was first suspected on 10/9/98, notified to NSW CVO 15/9/98 and confirmed by AAHL on 22/9/98. The disease was confirmed on another poultry farm in Central NSW in October. One of the Sydney farms was identified as the source of the infection for both the other properties.<br><br>A stamping out policy was implemented in accordance with the approved AUSVETPLAN strategy and a total of just over 110 000 birds were slaughtered on the infected properties. Tests on wild birds found that the disease had not spread beyond domestic poultry.<br><br>The Commonwealth/States Cost-sharing Agreement, under which the Commonwealth contributes half the costs of eradication, was invoked. The total cost of eradication could be in excess of $3 million.[1] |
| **Summary of ANAO findings** | |
| **Planning:** | • *a specific AUSVETPLAN for Newcastle Disease existed and was successfully implemented*<br>• *the various national and Commonwealth plans implemented in response to the emergency appeared to be effective in containing the disease which, at the time of writing, was considered to have been eradicated* |
| **Coordination:** | • *the CCEAD mechanism provided an effective framework for responding to the emergency*<br>• *the Commonwealth's prompt initiation of the CCEAD mechanism contributed to an effective response*<br>• *State and industry stakeholders considered the Commonwealth's role in coordinating the response was effective* |
| **Diagnostic Support:** | • *AAHL provided rapid and authoritative diagnosis* |
| **Monitoring and Surveillance:** | • *the extensive systems and procedures could not provide early warning due to the nature and location of this emergency*<br>• *the source was subsequently determined to be a mutation of an existing Australian virus*<br>• *no border violation was believed to be involved* |

[57] Another outbreak of Newcastle Disease occurred in NSW in April 1999. This outbreak resulted in the slaughter of 1.9 million birds.

| Case study—Fireblight (1997) | |
|---|---|
| **The emergency:**<br><br>**Fireblight is an exotic bacteria which affects apples, pears and a range of other plant species.** | The first notification of a Fireblight incursion came when New Zealand authorities advised Australia on 2/5/97 that Fireblight had been detected in cotoneaster samples taken from Melbourne's Royal Botanic Gardens.<br>A ban was placed on the movement of all apples, pears and Fireblight host nursery stock from Victoria.<br>Inconsistent and inconclusive test results were received in May, however, the presence of Fireblight was confirmed in June 1997.<br>Tracking of the possible spread of the disease has been undertaken by the use of State administered seasonal surveys, which were nationally coordinated in late 1997. Further seasonal surveys were conducted in 1998. |
| **Summary of ANAO findings:** | |
| **Planning:** | • *no national or Commonwealth plan for a plant emergency existed*<br>• *Victoria had a plan for dealing with an outbreak of Fireblight in a fruit growing area however, the outbreak was in the Melbourne Royal Botanical Gardens, a location not covered by the plan*<br>• *while no formal declaration of eradication it planned, there is apparently now no evidence of the presence of Fireblight in Australia* |
| **Coordination:** | • *the Consultative Committee (CC) mechanism provided an effective framework for responding to the emergency, but there is scope to improve the operations of the CC*<br>• *the Commonwealth response was generally appropriate and timely*<br>• *States generally considered the incursion was as well managed as possible but expressed concern about the Commonwealth's declaration that Fireblight was present prior to a conclusive diagnosis being available*<br>• *industry was supportive of the coordination process once the Commonwealth became involved but was concerned about delays in notification, the decision to engage overseas experts and the commencement of the testing program and seasonal surveys* |
| **Diagnostic Support:** | • *despite the utilisation of Australian and international expertise, the identification of Fireblight was neither rapid nor authoritative*<br>• *conflicting and inconclusive test results were achieved initially*<br>• *the presence of Fireblight was not confirmed until five weeks after the samples were first sent to Australian laboratories* |
| **Monitoring and Surveillance:** | • *it is not possible or practical to provide complete protection and the monitoring and surveillance systems designed to facilitate early warning in the plant sector are limited to specified diseases and pests and for limited geographic areas*<br>• *these systems were not fully effective in providing early warning of the Fireblight incursion as the outbreak occurred in an urban location and in an area not specifically covered by the monitoring and surveillance systems*<br>• *no system would have been sensitive enough to detect this particular incursion*<br>• *as the source of the incursion has not been determined it is not known whether or not a border violation occurred* |

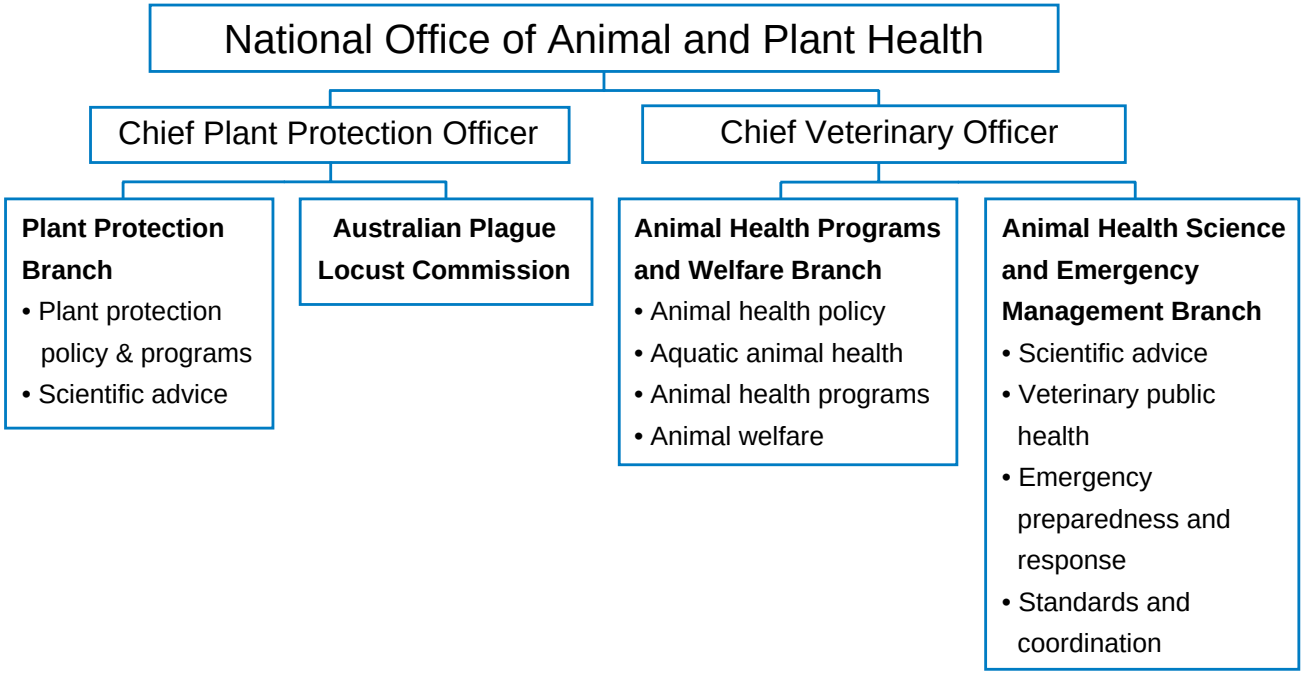
| Case study—Papaya Fruit Fly (Oct 1995) | |
|---|---|
| **The emergency:**<br><br>**Papaya Fruit Fly is an exotic insect pest which affects fruit and vegetables.** | Papaya Fruit Fly was first detected on the Australian mainland on 17/10/95 when a grower submitted an infested pawpaw to Queensland authorities for identification.<br><br>Following detection a Pest Quarantine Area of 15 000 square kilometres was established around Cairns and a national trapping program was established to ensure Papaya Fruit Fly did not occur outside the Pest Quarantine Area.<br><br>A national fruit fly monitoring (trapping) program was agreed in November 1995 with the aim of verifying that the fly did not occur outside the Pest Quarantine Area. AQIS has monitored the regular reports from the States since then. |
| **Summary of ANAO findings:** | |
| **Planning:** | • *no national or Commonwealth plan for a plant emergency existed*<br>• *no specific disease plan existed at the time of the incursion however, contingency plans for Papaya Fruit Fly have subsequently been developed by QLD and NSW*<br>• *the Papaya Fruit Fly incursion around Cairns has been declared eradicated this year* |
| **Coordination:** | • *the Consultative Committee (CC) mechanism provided an effective framework for responding to the emergency, but there is scope to improve the operations of the CC*<br>• *the Commonwealth response was generally appropriate and timely*<br>• *the States considered the incursion was as well managed as possible*<br>• *industry was supportive of the process once the Commonwealth became involved but indicated that there was scope for improvement in the timeliness of notification of the presence of Papaya Fruit Fly and was concerned about delays in the decision to eradicate* |
| **Diagnostic Support:** | • *Papaya Fruit Fly was quickly and accurately identified by QDPI* |
| **Monitoring and Surveillance:** | • *it is not possible or practical to provide complete protection and the monitoring and surveillance systems designed to facilitate early warning in the plant sector are limited to specified diseases and pests and for limited geographic areas*<br>• *the systems of monitoring and surveillance were not fully effective in providing early warning of the incursion as the outbreak occurred in an urban location which was not clearly designated for coverage by the monitoring and surveillance systems*<br>• *AQIS and QDPI have now clarified their monitoring and surveillance responsibilities*<br>• *as the source of the incursion has not been determined it is not known whether or not a border violation occurred* |

| Deaths in Pilchards (1995) | |
|---|---|
| **The emergency:**<br><br>**These deaths appear to be the result of a new, probably exotic, disease.** | The first reports of deaths in pilchards were made by commercial fishermen on a trawler in the Great Australian Bight on 22/3/95. 1000 kms away and 24 hours later, lobster fishermen reported dead pilchards south of Kangaroo Island.<br>In total the episode spread over approximately 6000 kms in about 70 days reaching Geraldton, Noosa and the east coast of Tasmania. Dead pilchards were also reported of the east coast of the North Island of New Zealand.<br>Only adult pilchards were affected, with preliminary estimates that in WA, between 8 per cent and 30 per cent of the pilchard population were killed. As far as is known no other aquatic animal species or predator was affected.<br>There was a major public health concern over the possibility that biotoxins related to phytoplankton blooms were involved but extensive testing showed no evidence that a toxin was responsible nor was there any evidence of any link between pilchard mortalities and health risk to humans or other animals.<br>A voluntary closure on pilchard fisheries was implemented in both WA and Victoria for a short period as a quarantine measure. |
| **Summary of ANAO findings** | |
| **Planning:** | • *no national or Commonwealth plans existed to respond to the incident*<br>• *aquatic animal diseases in the wild cannot be contained and diseases cannot be eradicated—the outbreak was left to run its natural course* |
| **Coordination:** | • *the informal CCEAD mechanism provided a framework for responding to the emergency*<br>• *the Commonwealth's response of informally invoking the CCEAD process to coordinate the national response was delayed due to difficulties in obtaining information about the extent and cause of deaths* |
| **Diagnostic Support:** | • *the diagnostic support provided by AAHL through its Fish Diseases Laboratory identified a previously unknown virus within one week of samples being received*<br>• *the actual cause of death of the pilchards has not been conclusively determined but is believed to be associated with a previously unknown herpesvirus* |
| **Monitoring and Surveillance:** | • *early warning in the aquatic animal sector is particularly difficult in the wild, as demonstrated by the absence of early warning of the high rates of death in pilchards*<br>• *the source of the virus has not been determined* |

| Deaths in Pilchards (1998) | |
|---|---|
| **The emergency:**<br>**These deaths appear to be the result of a new, probably exotic disease which may be similar to the 1995 incident.** | The first deaths in Pilchards were reported on 4/10/98 in SA. The episode spread to VIC, WA and NSW.<br>AAHL advised that there was 'conclusive evidence that the disease process in the gills of affected pilchards in 1998 (was) similar to that seen in 1995, and that a herpesvirus (was) present'. AAHL later confirmed that the herpesvirus was the same as that implicated in the 1995 incident. However, the cause of death has still not been conclusively identified, nor has the source of the virus. |
| **Summary of ANAO findings:** | |
| **Planning:** | • *a draft of a national contingency plan—AQUAPLAN—has been developed since the 1995 incident and was implemented to deal with the 1998 emergency*<br>• *aquatic animals have now been formally included in the CCEAD Operating Guidelines and the OCVO internal planning framework*<br>• *aquatic animals in the wild cannot be contained and diseases cannot be eradicated—the outbreak was left to run its natural course* |
| **Coordination:** | • *the CCEAD mechanism provided an effective framework for responding to the emergency*<br>• *the Commonwealth's prompt initiation of the CCEAD process contributed to an effective response*<br>• *SA was very supportive of the Commonwealth's role in coordination* |
| **Diagnostic Support:** | • *diagnostic support provided by AAHL was not as timely as in 1995 as diagnosis of the presence of the same virus as in 1995 was not confirmed for six weeks*<br>• *ongoing research is attempting to establish the cause of the mortalities* |
| **Monitoring and Surveillance:** | • *early warning in the aquatic animal sector is particularly difficult in the wild, as demonstrated by the absence of early warning of the high rates of death in pilchards*<br>• *the source of the virus has not been determined* |

## Appendix 7

# Structure of the National Office of Animal and Plant Health



# Abbreviations

| | |
|---|---|
| AAC | AAHL Advisory Council |
| AAHC | Australian Animal Health Council |
| AAHL | Australian Animal Health Laboratory |
| ACS | Australian Customs Service |
| AFFA | Agriculture, Fisheries and Forestry—Australia (formerly DPIE) |
| AFHMC | Australian Fish Health Management Committee |
| AFMA | Australian Fisheries Management Authority |
| AHC | Animal Health Committee (now VetComm) |
| AIAG | Animal Industries Advisory Group |
| AIPHC | Animal Industries Public Health Committee |
| ANAO | Australian National Audit Office |
| APHC | Australian Plant Health Council |
| APPC | Asia and Pacific Plant Protection Commission |
| AQIS | Australian Quarantine and Inspection Service |
| ARMCANZ | Agriculture and Resource Management Council of Australia and New Zealand |
| ASIC | Australian Seafood Industry Council |
| BRS | Bureau of Rural Sciences (formerly Bureau of Resource Sciences) |
| CC | Consultative Committee (on exotic insect pests, weeds and plant diseases) |
| CCEAD | Consultative Committee on Emergency Animal Diseases |
| CPPO | Chief Plant Protection Officer |
| CSA | Cost Sharing Agreement (Commonwealth/States) |
| CSIRO | Commonwealth Scientific and Industrial Research Organisation |
| CVO | Chief Veterinary Officer |
| DFAT | Department of Foreign Affairs and Trade |
| DHAC | Department of Health and Aged Care |

| | |
|---|---|
| DNA | Deoxyribonucliec Acid |
| DoFA | Department of Finance and Administration |
| DPIE | Department of Primary Industries and Energy (now AFFA) |
| EA | Environment Australia |
| EMA | Emergency Management Australia |
| EMLO | Emergency Management Liaison Officer |
| EMV | Equine Morbillivirus |
| FAO | Food and Agriculture Organisation (United Nations) |
| FDL | Fish Diseases Laboratory |
| FRDC | Fisheries Research and Development Corporation |
| GDP | Gross Domestic Product |
| IMG | Incident Management Group |
| IPHRWG | Interstate Plant Health Regulations Working Group |
| IPPC | International Plant Protection Convention |
| MCFFA | Ministerial Council on Forestry, Fisheries and Aquaculture |
| MOU | Memorandum of Understanding |
| NAHIS | National Animal Health Information System |
| NAMP | National Arbovirus Monitoring Program |
| NAQS | Northern Australia Quarantine Strategy |
| NSW | New South Wales |
| NT | Northern Territory |
| NZ | New Zealand |
| OCPPO | Office of the Chief Plant Protection Officer |
| OCVO | Office of the Chief Veterinary Officer |
| OIE | Office International des Epizooties |
| PHC | Plant Health Committee |
| PIAG | Plant Industries Advisory Group |
| PIC | Plant Industries Committee |
| PNG | Papua New Guinea |
| PPPO | Pacific Plant Protection Organisation |
| QDPI | Queensland Department of Primary Industries |

| | |
|---|---|
| QEAC | Quarantine and Exports Advisory Council |
| QLD | Queensland |
| SA | South Australia |
| SCARM | Standing Committee on Agriculture and Resource Management |
| SCFA | Standing Committee on Fisheries and Aquaculture |
| SIMS | SCARM Incursion Management Strategy |
| TAS | Tasmania |
| TSFFC | Tri-State Fruit Fly Committee |
| USA | United States of America |
| VetComm | Veterinary Committee (formerly Animal Health Committee) |
| VIC | Victoria |
| WA | Western Australia |
| WHO | World Health Organisation |

# Glossary

| | |
|---|---|
| AFFAVETPLAN | AFFA's plan for responding to terrestrial animal emergencies. It describes how AFFA will discharge its responsibilities under COMVETPLAN. |
| AQUAPLAN | A strategic plan for aquatic animal health which includes a national emergency response plan for the aquatic animal sector. |
| AQUAVETPLAN | A series of technical response plans that describe the proposed Australian approach to an aquatic animal disease emergency event. |
| AUSVETPLAN | A national emergency response plan for the control and eradication of exotic and certain endemic terrestrial animal diseases. |
| COMDISPLAN | A contingency plan for the provision of Commonwealth assistance to the States and Territories in an emergency or disaster. It is issued by the Director-General of Emergency Management Australia. |
| COMVETPLAN | The Commonwealth veterinary emergency plan which is a subsidiary of AUSVETPLAN. |
| COST SHARING AGREEMENT | The Commonwealth / States cost sharing agreement for the eradication of certain exotic terrestrial animal diseases. |
| EXOTIC (pest or disease) | A pest or disease which is introduced to Australia from abroad. |
| EMERGENCY | An emergency is said to exist when the immediate viability of an agriculture or fisheries sector is compromised, or potentially compromised, by a threat such as an emerging or exotic disease or pest. |
| ENDEMIC (pest or disease) | A pest or disease which is regularly found in Australia. |

| | |
|---|---|
| OCPPO | The Office of the Chief Plant Protection Officer is an office in AFFA which deals with significant policy, strategic and management issues in plant protection and provides national leadership and coordination in emergency management. |
| OCVO | The Office of the Chief Veterinary Officer / Special Adviser is an office in AFFA which deals with significant policy, strategic and management issues in the areas of food safety and terrestrial animal and fish health and provides national leadership and coordination in emergency management. |

# Index

## S



## T

# Series Titles

## Titles published during the financial year 1999–2000

Audit Report No.1 Performance Audit
*Implementing Purchaser/Provider Arrangements between Department of Health and Aged Care and Centrelink*
Department of Health and Aged Care
Centrelink

Audit Report No.2 Financial Control and Administration Audit
*Use of Financial Information in Management Reports*

Audit Report No.3 Performance Audit
*Electronic Travel Authority*
Department of Immigration and Multicultural Affairs

Audit Report No.4 Performance Audit
*Fraud Control Arrangements in Education, Employment, Training and Youth Affairs*

Audit Report No.5 Performance Audit
*IP Australia—Productivity and Client Service*

Audit Report No.6 Audit Activity Report
*Audit Activity Report January to June 1999*
*Summary of Outcomes*

Audit Report No.7 Protective Security Audit
*Operation of the Classification System for Protecting Sensitive Information*

Audit Report No.8 Performance Audit
*Managing Data Privacy in Centrelink*
Centrelink

# Better Practice Guides

| | |
|---|---|
| Administration of Grants | May 1997 |
| AMODEL Illustrative Financial Statements 1998 | Jul 1998 |
| Asset Management | Jun 1996 |
| Asset Management Handbook | Jun 1996 |
| Audit Committees | Jul 1997 |
| Cash Management | Mar 1999 |
| Commonwealth Agency Energy Management | Jun 1999 |
| Controlling Performance and Outcomes | Dec 1997 |
| Core Public Sector Corporate Governance, Principles for (includes Applying Principles and practice of Corporate Governance in Budget Funded agencies) | 1997 |
| Corporate Governance in Commonwealth Authorities and Companies–Principles and Better Practices | Jun 1999 |
| Financial Statements Preparation | 1996 |
| Life-cycle Costing (in Audit Report No. 43 1997–98) | 1998 |
| Managing APS Staff Reductions | Jun 1996 |
| Managing Parliamentary Workflow | Jun 1999 |
| Management of Accounts Receivable | Dec 1997 |
| Management of Corporate Sponsorship | Apr 1997 |
| Management of Occupational Stress in Commonwealth Agencies | Dec 1998 |
| New Directions in Internal Audit | Jul 1998 |
| Paying Accounts | Nov 1996 |
| Protective Security Principles (in Audit Report No.21 1997–98) | |
| Public Sector Travel | Dec 1997 |
| Return to Work: Workers Compensation Case Management | Dec 1996 |
| Security and Control for SAP R/3 | Oct 1998 |
| Selecting Suppliers: Managing the Risk | Oct 1998 |
| Telephone Call Centres | Dec 1996 |
| Telephone Call Centres Handbook | Dec 1996 |