5

Prevention and early detection of pest species

Overview

5.1 It is apparent from evidence received by the committee that prevention of new pest species entering the country or moving into new regions, and early detection and eradication, are far simpler and more cost-effective than managing a pest species once it has become established. Although detection and prevention measures may initially be expensive, they are less costly than programs to control pest species whose populations have escalated.[1]

5.2 The obvious starting point for the prevention of new pest animal species entering Australia is entry point surveillance and quarantine. It is vital that items entering Australia through ports and airports are subject to adequate inspections and testing, which would alert authorities to the presence of potential pest species. Adequate screening of postal items is also necessary, especially to prevent the spread of exotic insects that are difficult to detect once they have escaped.

5.3 Most of the serious pest animal species currently plaguing Australian farmers, such as wild dogs, foxes and rabbits, have been introduced to Australia through legal means. Although well-intentioned, these introductions have resulted in immeasurable damage to the environment, and billions of dollars in lost production and control costs since these

1 *Submissions 33*, *34*, *46*, *52*, p. 1, *59*, p. 13, *70*, p. 8, *76*, p. 4, *84*, p. 38.

species were introduced. Laws that regulate the introduction of exotic species into Australia play an important part in ensuring that further pest animal species are not introduced.

5.4 It is also necessary to prevent the spread of pest species between states and territories, or between regions. A pest species which has established itself in a particular area may be containable, but can elude control once it spreads to several areas. The deliberate introduction of pest animals into Australia, or into a region where that pest previously did not exist, is a particularly reprehensible act and must be subject to adequate regulation and enforcement.

5.5 Despite best efforts at prevention, new pest species will be introduced. Once a pest species has entered the country, or entered a particular region, there is still the possibility of containment if it is identified and destroyed quickly. Rapid detection and eradication will be facilitated if there is consistency across jurisdictions in recognising and declaring pest species.

5.6 Adequate means of detection and reporting must be put in place to enable early establishments of pest species to be eliminated before they become a serious problem. This requires that members of the public be aware of pests and able to identify them, and that adequate reporting systems are in place to alert authorities to the presence of potential pests. Early warning systems and means of identifying sleeper populations before they become pests can also assist in this regard.

5.7 Effective detection, reporting and recording systems at a national level will facilitate monitoring and mapping of pest animal species. Creating a clear picture of the distribution and abundance of pest animal populations across the country enables those responsible for control to plan and target activities more effectively. In cases where infestations are detected early on, eradication of the species, or local eradication, may be possible.

Prevention

5.8 A number of submissions emphasised the importance of prevention, due to the difficulties and expense involved in controlling established species.[2] Preventing entry by new populations and expansion of existing pest

2 *Submissions 34*, *46*, *52*, p. 1, *59*, p. 13, *84*, p. 38.

species has the added advantage of having fewer animal welfare implications than ongoing control.[3]

5.9 Although the benefits of prevention are difficult to quantify, a study conducted for the Local Governments Association of Queensland estimated that for every dollar invested in weed and pest animal prevention activities, a return of between $26 and $38 was achieved. The benefit accruing from prevention activities was greater than the return on eradication activities, which was greater in turn than containment activities which occurred after species had become widespread.[4]

Entry point surveillance and quarantine

5.10 Ports and airports provide the first possible port of entry for many potential pest species into Australia. It is vital that adequate checks and safeguards be put in place to ensure that cargo entering Australia on ships and planes is free from exotic species that might establish themselves as pest animals.

5.11 This is particularly important in the case of invertebrate pests, the presence of which may not be immediately obvious to the naked eye. DAWA estimated that maintaining freedom from Emergency Plant Pests saves the state's plant industry over $0.6 billion per annum in avoided control costs.[5]

Quarantine

5.12 The importance of quarantine surveillance in preventing new pest species from entering Australia was emphasised in a number of submissions.[6] Mr Matthew Arkinstall, of Rathdowney in Queensland, described quarantine as "… insurance of our vital rural industries and also our way of life".[7]

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3 *Exhibit 11*, *A National approach towards humane vertebrate pest control*, Discussion paper arising from the proceedings of an RSPCA Australia/AWC/VPC joint workshop, Melbourne, 4-5 August 2003, p. 23.

4 *Exhibit 1,* AEC Group, *Economic Impact of State and Local Government Expenditure on Weed and Pest Animal Management in Queensland*, Local Government Association of Queensland, Fortitude Valley, October 2002, pp. 23, 100.

5 DAWA, *Submission 98*, p. 5.

6 *Submissions 11*, *43*, p. 2, *46*, *48*, *59*, p. 12, Mr Michael Litchfield, NSWFACDC, *Transcript of evidence,* 9 September 2005, p. 25, Mr Quentin Hart, BRS, *Transcript of evidence*, 16 February 2005, p. 3.

7 *Submission 82*.

5.13 Quarantine services are the responsibility of the Australian Quarantine and Inspection Service (AQIS), which monitors incoming cargo, luggage, mail, animals, plants, and their products. AQIS falls under the responsibility of DAFF.[8]

5.14 The north of Australia is strategically important in terms of quarantine risk. For that reason, the Northern Australia Quarantine Strategy (NAQS) has been developed for the area from Broome to Cairns and above. NAQS identifies and evaluates quarantine risks for the region and provides early detection of new pest incursions by conducting scientific surveys and monitoring, border activities and public awareness. It also carries out animal and plant health surveys in neighbouring countries.[9]

5.15 DAWA, in its submission, drew attention to the Breach Database managed by AQIS, which records incidents of exotic insect incursions at quarantine checkpoints. DAWA called for the database records to be made accessible to all states and territories to provide a complete picture of invertebrate pest risks posed by imports.[10]

5.16 The Agtrans Report prepared for the National Invasive Species Task Group, in a review of recent progress made in the delivery of quarantine services, stated:

> … (O)verall few specific results of analyses of border protection interception data or breach follow up data to identify high risk locations or means of entry were sighted in the material reviewed. No doubt this exists in AQIS or NAQS databases and is analysed in order to assess strategies and priorities.[11]

5.17 DAWA also drew attention to current uncertainties in the delineation of responsibility between AQIS and state and territory governments. It is commonly accepted that AQIS is responsible for quarantine breaches (organism detected in an item but not established outside the item), while states and territories are responsible for incursions (organism detected and

8 DAFF, *Australian Quarantine and Inspection Service,* DAFF, Canberra, 30 September 2005, viewed 21 October 2005, <http://www.daff.gov.au/content/output.cfm?ObjectID=3E48F86-AA1A-11A1-B6300060B0AA00014>.

9 DAFF, *Northern Australia Quarantine Strategy (NAQS),* DAFF, Canberra, 25 March 2004, viewed 21 October 2005, <http://www.daff.gov.au/content/output.cfm?ObjectID=4043ACCA-1540-4945-9FE2C20733351712>.

10 *Submission 98*, p. 15.

11 Agtrans Research in conjunction with Noel Dawson, *Review of Progress on Invasive Species – Final Report to Department of Environment and Heritage*, DEH, Canberra, 12 April 2005, viewed 21 September 2005, <http://deh.gov.au/biodiversity/invasive/publications/review/pubs/review-full.pdf> (Agtrans Report), p. 61.

established outside the imported item). There is, however, an area in between in which there is only a risk that the exotic organism has been established outside the imported item. That situation may require additional measures such as fumigation of a house or vehicle. DAWA called for AQIS to be made responsible for funding of activities to ensure that breaches do not become incursions.[12]

5.18 The committee notes the important role that quarantine plays in ensuring that new pest species do not enter Australia, particularly in relation to invertebrate pests. The committee recommended in Chapter 4 that the proposed National Pest Animals and Weeds Committee establish a central database of exotic pest animal breaches and incursions.[13] AQIS records should be made available to the committee proposed in Chapter 4 to enable it to compile such a database.

5.19 The committee also believes that it is important that a clear delineation of responsibility between AQIS and state and territory governments be established. If there is uncertainty as to the division of responsibilities, this may result in vital pest animal control activities not being carried out.

Fumigation and inspection of containers

5.20 Inspection and fumigation of containers entering Australian ports is one means of providing some assurance that cargo does not contain exotic insects.

5.21 AQIS has a range of measures in place to reduce the risk of new pest animal species entering Australia. These include:

- General surveillance is carried out at wharves and airports of cargo not in containers;
- Consignments are randomly targeted for further examination;
- External surfaces of incoming containers are examined for potential quarantine risk material;
- Containerised consignments destined for rural areas are mandatorily examined; and
- Quarantine Approved Premises are used for unloading and examining at-risk consignments.[14]

12 *Submission 98*, p. 16.

13 Chapter 4, Recommendation no. 6.

14 Agtrans Report, p. 59.

5.22 The committee is aware that AQIS has developed the Australian Fumigation Accreditation Scheme (AFAS), which targets countries from which a disproportionate number of ineffectively fumigated cargoes are received. The scheme aims to enhance the technical expertise of overseas fumigation providers and assist them to comply with AQIS requirements. Overseas fumigation companies who can demonstrate access to methyl bromide and necessary equipment and have at least one AFAS-trained fumigator present at all export fumigations are recognised as registered off-shore fumigation companies by AQIS.[15]

5.23 Despite these measures, there are still problems with exotic invertebrates entering Australia, as pointed out by Mr Dick Bashford of Forestry Tasmania:

> The main problem with the inspection of containers is that there are so many containers coming into Australia. Something like five to 10 per cent are actually inspected. The cost of fumigation is very high. You have to have special containers that you can fumigate. Because of the cost of sending goods, it has to be a pretty good case to warrant full inspection, fumigation—all those other things. The better way to do it is have the goods certified before they leave the country of origin, and that is the approach being taken at the moment. But the countries of origin do not necessarily have the same standards of packing materials as other countries.[16]

5.24 The problems associated with certification standards in other countries mean that inspection of containers on entry into Australia is important. The committee received evidence indicating that, in recent times, extra emphasis has been placed on examining pallet wood, packing crates and airport warehouses for potential pests.[17]

5.25 Despite these increased efforts and the AFAS, DAWA gave evidence that there has been a steady increase in the amount of furniture imported from south-east Asia that is found to be infested with exotic powderpost and other beetles. In Western Australia, borers are reported in furniture on an almost weekly basis.[18]

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15 DAFF, *Australian Fumigation Accreditation Scheme (AFAS)*, DAFF, Canberra, 18 August 2005, viewed 21 September 2005, <http://www.daff.gov.au/content/output.cfm?ObjectID=953B6214-FEEB-45FA-95552C43ED1E0A31&contType=outputs>.

16 *Transcript of evidence*, 29 March 2005, p. 5.

17 Mr Dick Bashford, *Submission 2*.

18 *Submission 98*, pp. 11, 13.

5.26 The Breach Database established in Western Australia to show breaches of quarantine by exotic pests gave a record of 273 possible barrier breaches over a 20-month period. One hundred and forty-seven of these involved exotic insects, and of these, 145 were associated with wood, cane or bamboo products imported into Australia.[19]

5.27 DAWA stated, "Pathway analysis of potential avenues for the introduction of pests into Australia is a logical and effective strategy for reducing the risk of exotic pests gaining entry into Australia."[20] The suggested approach is to require unique identifying codes to be affixed to imported furniture to allow identification of companies that fail to provide effective fumigation:

> Despite a theoretical capacity of AQIS to 'black-ban' fumigation companies whose fumigations fail, in practice this is impractical and ineffective because there is currently no capacity to trace an infested item back to a particular shipment and therefore to a failed fumigation and hence the fumigation company cannot be identified. For new furniture at least, unique identifying codes are required to be fixed to each individual item to enable this 'trace-back' with resultant 'black-banning' of companies who consistently fail to provide effective fumigations.[21]

5.28 The committee believes that this would be an effective means of reducing the importation of exotic invertebrates through wooden furniture and personal effects.

5.29 DAWA also identified perceived inadequacies in the inspection procedures for wooden personal effects:

> In the case of personal effects, AQIS standard operating procedures (SOP) are considered inadequate to satisfactorily manage the risk of exotic invertebrates entering Australia. The case for this assessment can be summarised as follows:
>
> - Personal effects are the recognised prime pathway for the spread of drywood borers and drywood termites.
> - AQIS allows the importation of personal effects from countries it knows are infested with serious wood boring pests including EHB (European House Borer) and West Indian drywood Termites (WIDT).
> - AQIS protocols for personal effects only require visual inspection on arrival in Australia.

19 *Submission 98*, p. 13.

20 *Submission 98*, p. 13.

21 *Submission 98*, pp. 13-14.

- AQIS knows that visual inspection is an ineffective method for the detection of wood boring insects.[22]

5.30 The committee notes that, if these perceived deficiencies in the inspection process do exist, this creates an unacceptable risk of invertebrate pest species entering Australia via imported personal effects. DAWA's comments should be investigated by DAFF with a view to amending procedures for inspection if necessary.

Rules for introducing new species into Australia

5.31 The entry of live plants and animals into the country is regulated by the *Quarantine Act 1908* (Cth) and the *Environment Protection and Biodiversity Conservation Act 1999* (Cth). A live species can only be imported into Australia if it appears on the live import list established under the *Environment Protection and Biodiversity Conservation Act 1999* and it is also permitted for import by DAFF or AQIS. If an importer wishes to import a new species, an application can be made to DEH, which will conduct an environmental risk assessment. If the Minister for Environment and Heritage approves the species' inclusion on the live import list, a permit is still required from DAFF and Biosecurity Australia will conduct an import risk analysis for that purpose.[23]

5.32 The committee received evidence that under the current process for importing potential pest animal species into Australia, applicants are required to assess the risks of importing new species themselves.[24] This leads to an obvious conflict of interest, as applicants have an interest in minimising the apparent risks of importation in order to ensure approval of applications.

5.33 The BRS has developed a risk assessment model that assesses the potential threat of certain exotic vertebrate species becoming invasive species if introduced into Australia.[25] The model takes into account such factors as the climate match between a species' overseas range and Australia and whether the species has a history of becoming a pest in other countries. The BRS noted:

> It is … essential that all risk assessments on species be conducted by appropriate experts who act independently of either those

22 *Submission 98*, p. 14.

23 Agtrans Report, p. 61.

24 Western Australian Government, *Submission 70*, p. 6.

25 BRS, *Submission 76,* Attachment N, M Bomford, *Risk Assessment for the Import and Keeping of Exotic Vertebrates in Australia*, BRS, Canberra, 2003.

> applying to import or keep them or others with a vested interest in the outcome of the risk assessment. Therefore, if the applicant pays for a risk assessment, it is desirable that this is done through an independent authority that arranges for an independent risk assessment. Such arrangements are not yet in place in Australia to ensure this independence is achieved for the import of exotic vertebrates and this can put at risk the integrity of the risk assessment process.[26]

5.34 The QFF expressed concern at some aspects of the procedures relating to importation of new species:

> QFF supports the process of animal risk assessment undertaken by Biosecurity Australia (BA) and considers the agency's performance as satisfactory, though found highly questionable the conclusions of the recent import risk analysis (IRA) report for pig meat importations as well as revised draft IRA reports for apples and bananas. QFF is aware that both DEH and BA do not currently carry out full risk assessment processes on all proposed import species. For example recent risk assessment for deer species by BA did not take account for (sic) the pest potential of the imported deer species.[27]

5.35 This issue was considered by the Senate Environment, Communications, Information Technology and the Arts References Committee in its invasive species inquiry. The committee noted that the then Minister for Agriculture, Fisheries and Forestry, the Honourable Warren Truss MP, announced in July 2004 new measures to boost confidence in the import risk analysis process.[28] The committee also recommended that "the import risk analysis process be modified to guarantee greater independence in their preparation".[29]

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26 *Submission 76*, p. 11.

27 *Submission 59*, p. 12.

28 Biosecurity Australia, *New Arrangements to Strengthen Import Risk Analysis*, Animal Biosecurity Memorandum 2004/15, Plant Biosecurity Policy Memorandum 2004/22, DAFF, Canberra, 16 August 2004, viewed 27 September 2005, <http://www.affa.gov.au/content/output.cfm?ObjectID=AA1B7E9A-FBD2-40F1-AF26ED8B7AEF7ECB>.

29 Senate Environment, Communications, Information Technology and the Arts References Committee, *Report on the regulation, control and management of invasive species and the Environment Protection and Biodiversity Conservation Amendment (Invasive Species) Bill 2002*, Commonwealth of Australia, Canberra, December 2004, p. 163 and Recommendation 17. Also see CCWA, *Submission 37*.

5.36 The committee acknowledges that the measures announced by Minister Truss will hopefully have gone some way towards making the import risk analysis process more rigorous. It considers it appropriate, however, to recommend that DAFF investigate whether the procedures for import risk analysis need to be tightened, in light of evidence provided to the committee.

Recommendation 11

5.37 **The committee recommends that the Australian Government Department of Agriculture, Fisheries and Forestry:**

- **provide the proposed National Pest Animals and Weeds Committee with access to appropriate Australian Quarantine and Inspection Service and Northern Australia Quarantine Strategy records to enable it to establish a central database of quarantine breaches and incursions;**
- **liaise with state and territory governments to agree on a clear delineation of responsibility for breaches and incursions between the Australian Quarantine and Inspection Service and state and territory governments, including responsibility for containment of potential incursions;**
- **investigate perceived deficiencies in the quarantine inspection process for wooden personal effects and make amendments if necessary to ensure that the risk of allowing entry of invertebrate pests is minimised;**
- **investigate the possibility of requiring wooden items to be affixed with a unique identifying code to enable tracing of companies responsible for ineffective fumigation practices; and**
- **investigate whether procedures for import risk analysis need to be made more rigorous.**

Measures to reduce release of pest species into new areas

5.38 The possibility of pest animal species moving interstate, or between areas or regions within a state or territory, is also problematic. Any expansion in the population of a pest animal species makes it more difficult to control. Measures must be taken to prevent the spread of pest animal species beyond their established domain.

Measures in relation to hunting and keeping of pest species

5.39 A number of submissions suggested that hunters contribute towards the growth and spread of pest animals in two ways: first, by losing dogs while hunting, which then breed with wild dogs,[30] and secondly, by deliberately introducing pest animals to pest-free areas for the purpose of building up populations of prey.[31] In Cooma, the committee received evidence that some hunters remove the ears from sows before releasing them, so that they cannot be caught by dogs, in order to build up populations of feral pigs for hunting.[32]

5.40 The Curdies Valley Landcare Group gave evidence that populations of wild deer in the Curdies Valley have largely established due to escape from local deer farms and deliberate release by deer hunters and more recently the 'safari-styled hunt/guiding industry'.[33]

5.41 The PAC CRC cited DNA evidence that pigs have been moved from the north to the south of Perth, although this was the only evidence they were aware of that there is a deliberate effort to spread pests between areas.[34]

5.42 On the other hand, representatives of the Sporting Shooters Association of Australia (SSAA) and Field and Game Australia (FGA) questioned whether there was any evidence of transfer of animals by hunters, but emphasised that their organisations did not support the practice in any way.[35]

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30 VFF Corryong Branch, *Submission 39,* Mr David Saxton, TFAWG, *Transcript of evidence*, 18 June 2004, p. 68.

31 *Submissions 39*, *68*, *70*, p. 12, *72*, p. 2, *77*, p. 2, *81*, p. 10.

32 Mr John Alcock, Monaro Merino Association, *Transcript of evidence,* 9 September 2005, p. 14.

33 *Submission 38*.

34 *Transcript of evidence*, 11 May 2005, p. 5.

35 *Transcript of evidence*, 25 May 2005, p. 5.

5.43 Severe penalties were suggested for anybody introducing pest animals into new areas,[36] or anyone allowing potential pest species to escape from confinement.[37] The Western Australian Government noted that, when new animal industries are developed, for example deer farming, contingency planning and exit strategies must be put in place to ensure that the newly-farmed species does not itself become a pest species.[38]

5.44 The committee notes that in New South Wales, the *Game and Feral Animal Control Act 2002* expressly makes it an offence to release animals for the purpose of hunting. The maximum penalty for doing so is 50 penalty units, amounting to a fine of over $5,000.[39] The committee considers that a provision such as this should be enacted in each jurisdiction that has not already done so, to ensure that there are measures for prosecution of persons where deliberate release of animals for hunting purposes is occurring. Adequate measures should also be taken to ensure that, where potential pest species are being farmed, proper measures to keep them from escaping are implemented.

Recommendation 12

5.45 **The committee recommends that the Australian Government:**

- **encourage state and territory governments to implement minimum containment requirements for the control of animals that have the potential to become pests to ensure that they are properly confined and are not released to establish populations in the wild; and**
- **encourage state and territory governments that have not done so to enact provisions similar to section 55 of the *Game and Feral Animal Control Act 2002* (NSW), making it an offence to deliberately release a potential pest animal for the purpose of hunting, and imposing comparable penalties.**

36 *Submissions 13*, *48*, *49*, p. 5, *72*, p. 2, *77*, p. 2.

37 Bombala RLPB, *Submission 80*, p. 2.

38 *Submission 70*, p. 8. Also see David and Penny Shaw, *Submission 34*.

39 *Game and Feral Animal Control Act 2002* (NSW), s 55 and *Crimes (Sentencing Procedure) Act 1999* (NSW), s 17.

Mail inspection services

5.46 The CCWA called for the introduction of interstate mail quarantine services (for example, sniffer dogs) to detect pest plants and pest species that the mail may be harbouring.[40]

5.47 The committee notes that the Western Australian Government used to scan interstate mail for quarantine risk material. This practice was stopped, however, due to an inconsistency between Western Australia's *Plant Diseases Act 1914* and the Commonwealth *Australian Postal Corporation Act 1989*, which states that mail can only be inspected by customs officials, federal police and AQIS. As a result of this inconsistency, the state government is no longer permitted to scan interstate mail.[41]

5.48 The committee believes that interstate scanning of postal items is an additional level of protection preventing the spread of pest animal and plant species across borders and that, where states are prepared to conduct inspections of interstate mail, they should be entitled to do so.

Recommendation 13

5.49 **The committee recommends that the Australian Government amend the *Australian Postal Corporation Act 1989* to allow state and territory governments to inspect interstate mail for quarantine purposes.**

Detection

5.50 Despite the best efforts of those involved in preventing the entry of new pest species, it is inevitable that in a country as big as Australia, some species will slip through the net. At any point in time, there will be a range of pest species existing in Australia, ranging from newly-arrived species that have the potential to be eradicated, through to widely-established species such as wild dogs and feral pigs, that require ongoing control.

40 *Transcript of evidence*, 11 April 2005, p. 10. See also Australian Biosecurity Group, *Invasive Weeds, Pests and Diseases: Solutions to Secure Australia*, PAC CRC, CRC for Australian Weed Management and WWF, Canberra, 2005, p. 35.

41 Western Australian Government, *Submission 70*, Appendix 1 (Submission to Senate Invasive Species Inquiry), p. 26.

5.51 Because of the significant damage that pest species cause to the environment and to agriculture, and because it is more cost-effective to eradicate new pest species early, it is vital that processes be put in place that allow early detection and control of species that have crossed our borders. It is also important that steps be taken to monitor populations of all existing pest animal species, so that the most effective means of control can be undertaken.

Declaration of pest species

5.52 Each state and territory has its own system for declaring pest species. These systems are obviously an important aspect of overall pest animal management, as they determine which animals are to be treated as pests, and monitored and controlled accordingly.

5.53 The committee received some evidence that there is a need for reconsideration of the systems for declaring pest animals. For example, Mr Rodney Chevis, of Oakdale in New South Wales, noted in his submission:

> … only feral pigs, wild dogs and rabbits are declared pest species in NSW. This leaves foxes and feral cats, both significant predators, not officially recognised as pests, even though 1,000,000 fox baits were issued to landholders in NSW, during 2002. … Goats and deer living in the wild are of concern and should be considered along with the other pests, while the cost of recurrent mouse plagues should be documented and work undertaken to anticipate and combat future population explosions. … It would appear that NSW is in need of a new mechanism for recognising, declaring and attacking species that have become pests.[42]

5.54 The committee recognises the importance of ensuring that there is consistent identification across state and territory borders of pest animal species. Although each state and territory will have different pest animal problems, it is important that the criteria for recognition and identification of pest species be as uniform as possible. To this end, the committee recommended in Chapter 4 that the proposed National Pest Animals and Weeds Committee liaise with state and territory representatives to improve consistency of pest animal legislation.

42 *Submission 44*, p. 3.

5.55 The committee also notes the recommendation of the Australian Biosecurity Group for the development of an agreed list of 'Invasive Species of National Importance', which would include a National Quarantine List, National Alert List and a National Control List.[43] The committee agrees with the recommendation and believes that this would be an excellent means of uniformly identifying pests and potential pest species across state and territory borders. The list could be used to improve consistency across jurisdictions in the declaration of pest species. It would also be useful as a list of species to be targeted for surveillance by AQIS and NAQS.

Recommendation 14

5.56 **The committee recommends that the National Invasive Species Task Group create a 'List of Invasive Species of National Importance', including a National Quarantine List, a National Alert List and a National Control List.**

Community awareness

5.57 Community awareness of pest animal issues is one of the most important factors in ensuring that the importation of new pest species into Australia, and into new areas within Australia, is limited as much as possible.[44]

5.58 The Northern Territory Government, in its submission, pointed to the need for public education at both state and national levels to assist people to detect new pest establishments and prevent movements of pest species between jurisdictions.[45]

5.59 Representatives of the Western Australian Government also discussed the important role to be played by the community in early detection and reporting of pest animals:

> Australia … puts itself forward as having a very effective quarantine service where, in effect, nothing gets through. That can never be the case. If you put yourself forward in that way then you lull the community into a false sense of security and a false sense

43 Australian Biosecurity Group, p. 21.

44 PAC CRC, *Submission 33*.

45 *Submission 72*, p. 2.

> that they do not have a role to play and that everything is okay. There is ample evidence that that is not the case; unless we double the size of the quarantine service again, there will always be things, whether they are cryptic termites or other things, which will evade inspection or other measures at the border. We need that second or third tier all the way to an individual person in their house, on their farm, at their business to play that important role.[46]

5.60 To this end, the Western Australian Government provides a free identification and advisory service to the public, pest control industry and some agricultural industries. The community is encouraged to submit suspect specimens, which are then identified free of charge.[47] In this way, the services of the public in helping to identify and detect pest animal species are utilised. It was suggested in the Agtrans Report to the Invasive Species Task Group that charging for identification services operates as a disincentive to people to submit suspected pests for identification.[48]

5.61 The committee believes that identification and advisory services are vital in ensuring that quarantine breaches and incursions are detected as early as possible, so that they can be effectively dealt with.

Reporting systems

5.62 A number of submitters were supportive of the need for effective systems to be put in place for reporting of pest animals.[49] Reporting systems allow government agencies and private landholders to identify more clearly the location of pest animal populations and therefore to plan control more effectively.[50]

5.63 Reporting also enables control and even eradication of pest species populations where they have not yet become established. DAWA noted, for example, that reporting by members of the public following an information campaign prevented the establishment of the European wasp in Western Australia.[51]

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46 Mr Robert Delane, DAWA, *Transcript of evidence*, 20 July 2005, p. 23.

47 DAWA, *Submission 98*, p. 20.

48 Agtrans Report, p. 69.

49 *Submissions 6*, *43*, p. 2, *44*, p. 5, *49*, pp. 5-6, *76*, p. 12, *78*, p. 4, *80*, p. 2, *98*, p. 19.

50 SSAA and FGA, *Submission 90*, Mr Graham Hillyer, Bombala RLPB, *Transcript of evidence,* 9 September 2005, p. 5.

51 *Submission 98*, p. 20.

5.64 The need for reporting from the community is especially great with regard to pest species whose populations cannot be monitored in any other way. Mr Robert Delane, Executive Director of Biosecurity and Research with DAWA, stated:

> We have exotic fruit fly monitoring traps—I think we have 2,000 pheromone traps—that we monitor around the state. Asian gypsy moth traps have been monitored for quite a number of years. We monitor for interstate movement of coddling moth. So there are opportunities for all of those. But, of course, then there are issues like dry wood termites where you actually need people monitoring what is going on in their houses because you are very unlikely to pick it up through a trapping mechanism.[52]

5.65 Each state and territory currently has its own reporting system for pest animals in place. For example, the State Council for the RLPB of New South Wales indicated that the Software Application Suite, due to be available in the middle of this year, would include a Pest Animal Database, allowing boards to record any sightings or occurrences of pest animals as well as the distribution of bait.[53]

5.66 Cooloola Shire Council in Queensland collects data from primary producers on levels of wild dog predation and stock losses, which is then used to plan baiting programs on public and private lands. They indicated that this may soon form part of a regional multi-shire approach to wild dog reporting.[54]

5.67 In addition to these state and territory initiatives, the committee is aware of a national Exotic Plant Pest Hotline set up by PHA. This is a freecall service provided for members of Australia's plant production sectors and plant health services, which enables them to report suspected detections of unusual plant pests and diseases.[55]

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52 *Transcript of evidence*, 20 July 2005, p. 22.

53 *Submission 81*, p. 6.

54 *Submission 95*.

55 PHA, *Exotic Plant Pest Hotline,* PHA, Canberra, 22 July 2005, viewed 27 September 2005, <http://www.planthealthaustralia.com.au/our_projects/display_project.asp?ID=107&Category=1>.

5.68 The committee received a number of submissions indicating the need for a nationally uniform detection and reporting system to operate throughout Australian states and territories.[56] The committee was told that DAWA and New South Wales Department of Agriculture are coordinating to establish a national reporting system.[57]

5.69 The Western Australian Government gave evidence about a new national system for reporting that could be applied to pest animal management. The system, known as the National Surveillance, Quarantine, Control and Recovery System (SQCR) was instigated by the National Information Manager's Technical Group (NIMTG) under the Primary Industries Health Committee, and allows for standardised data collection.[58]

5.70 The committee notes that the terms of reference for the proposed National Pest Animals and Weeds Committee include the harmonisation of pest animal data collection. The committee anticipates that this will include a strategy for pest animal reporting that can be implemented in all states and territories. Given the work of the NIMTG in relation to standardised data collection, consultation with that group would be beneficial.

5.71 In its submission, DAWA discussed perceived problems with the process for public reporting of exotic insect infestations to AQIS. The public is currently encouraged to report quarantine breaches to AQIS, for example through television advertisements featuring the 'Crocodile Hunter', Steve Irwin. When breaches are reported, AQIS seeks to recover the costs of treating infested goods from the person who has reported the breach, under its cost-recovery policy.

5.72 As DAWA's submission points out, the cost-recovery policy effectively discourages the public and pest control industry from reporting breaches. This is unfortunate, given that eradication programs are most cost-effective when conducted early at the breach stage, rather than once the pest has become established.[59]

56 *Submissions 15*, p. 2, *70*, pp. 8-9, *78*, p. 4.

57 Western Australian Government, *Submission 70*, p. 7.

58 *Submission 70*, p. 9.

59 *Submission 98*, p. 16.

5.73 The committee agrees with DAWA that the policy of recovering costs from individuals who report quarantine breaches is unfortunate and operates as a disincentive to the public to report pest animal incursions in imported products. The committee considers that, despite the additional expense that would be incurred by AQIS following the removal of this policy, this is still significantly less expensive than the costs of control once a pest has become established.

Recommendation 15

5.74 **The committee recommends that the Australian Government:**

- **encourage state and territory governments that do not currently do so to provide free species identification and advisory services to the public and industry, to enable early identification of potential pest animal species; and**
- **dispense with the policy of cost recovery by the Australian Quarantine and Inspection Service for the costs of treatment for pest infestations from those who report the presence of pest animals in imported goods.**

Recommendation 16

5.75 **The committee recommends that the proposed National Pest Animals and Weeds Committee establish a national reporting system for pest animals and consult with the National Information Manager's Technical Group in relation to possible application of the National Surveillance, Quarantine, Control and Recovery System for this purpose.**

Early warning systems

5.76 Mr Dick Bashford, of Forestry Tasmania, made a very useful submission regarding the need for a monitoring system near Australian ports to provide early warning of the presence and possible establishment of new insect pests.[60]

60 *Submission 2.*

5.77 Mr Bashford's submission pointed out that initial establishment of exotic pest species usually occurs within a five kilometre zone around port of entry sites (ports and airports). If the pest is not contained within this area within two years of establishment, then eradication will be virtually impossible. Monitoring systems established in these zones would enable early detection of exotic insect species that have escaped from entry port areas.[61]

5.78 The committee was provided with evidence in relation to exotic invertebrate surveillance conducted in two states. Formal surveys, funded in part by DAFF, have been carried out in Tasmania to monitor Asian Gypsy Moth. A total of 120 traps were placed at Burnie, Devonport, Bell Bay, Triabunna and Hobart at a cost of $16,600 for 2003-2004.[62] DAWA also has in place targeted surveillance systems for a range of exotic invertebrates, including Qfly, screw-worm flies, Codling moth, Asian Gypsy Moth, resistant grain insects, grain borers and European wasps.[63]

5.79 Despite these initiatives, QFF expressed concern about perceived inadequacies for early warning systems for pest animals in Australia. The organisation stated:

> Successful containment and eradication is contingent upon early detection and although national surveillance is carried out for high-risk plant pests including exotic fruit flies, screw worm flies and Asian Gypsy Moth, early detection systems for pest animals are generally under-developed, under resourced, and require far better coordination.[64]

5.80 Forestry Tasmania also noted that current systems for post-barrier protection against establishment of insect pests are limited, and target only Asian Gypsy Moth.[65] The lack of a comprehensive national early warning system was one of the reasons RIFA were able to establish in Brisbane, creating the need for a very expensive eradication campaign.[66]

61 *Submission 2*.

62 *Submission 2*, *Transcript of evidence*, 29 March 2005, p. 2.

63 DAWA, *Submission 98*, p. 20.

64 *Submission 59*, p. 13.

65 *Submission 67*.

66 Australian Biosecurity Group, p. 14.

5.81 The committee is concerned that Australia currently has little in the way of a formal national monitoring system in place for the detection of exotic insects within the five kilometre entry zone. Some of the systems trialled in Tasmania may provide models for similar systems in other parts of the country.

5.82 Static trapping is a low-maintenance means of detecting the existence of an exotic insect species before it becomes established. Forestry Tasmania has conducted a series of trials at several northern seaports and Hobart Airport, at a cost of $18,888 in the first year and $11,048 plus GST for subsequent years.[67]

5.83 Blitz surveys are annual examinations conducted at a site for pathogen detection and tree damage. A blitz survey carried out at Bell Bay and Hobart Airport in 2002-2003 cost approximately $5,000 per site.

5.84 The sentinel planting plots method involves planting small plots of varied tree species at a site, including commercial timber and dominant urban tree species. The plots can be quickly and thoroughly examined for the presence of exotic insect species. Sentinel planting plots have not been trialled or costed in Australia.[68]

5.85 The committee is aware that NAQS already uses traps and sentinel animals to locate exotic invertebrate incursions in regions of northern Australia.[69] The committee considers that there would be merit in expanding trapping and monitoring systems to other coastal regions.

5.86 The committee notes that the costs of these trapping programs are not significant, especially when compared with the potential damage that might be caused by exotic pest incursions to forestry plantations and native trees.

Recommendation 17

5.87 **The committee recommends that the Australian Government Department of Agriculture, Fisheries and Forestry work with state and territory government agencies to examine the port surround monitoring system trialled by Forestry Tasmania with a view to implementing similar systems at strategic port entry sites throughout Australia.**

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67 Mr Dick Bashford, *Submission 2*.

68 Mr Dick Bashford, *Submission 2*.

69 DAFF, *Activities of NAQS,* DAFF, Canberra, 18 February 2005, viewed 21 October 2005, <http://www.daff.gov.au/content/output.cfm?ObjectID=72DC0D3B-DAEC-417A-AB012CEEFCD590C0>.

Identification of sleeper populations of pest species

5.88 It is important that appropriate procedures be put in place for recognising 'sleeper populations' of pest species, that is, species that already exist in Australia and have the potential to constitute a pest at some point in the future.[70]

5.89 A number of different species were identified as sleeper species in submissions, including magpie geese and maned geese (wood duck); feral deer; rainbow lorikeets; eastern long-billed corellas; ferrets; black rat; red fox in Tasmania and tropical Australia; cockatoos; and indian mynas. [71]

5.90 QFF stated:

> In addition to the management of the impacts of established pest species and the control and eradication of exotic species incursions, QFF considers the threat from exotic species found already in the country but not yet considered to be a widespread problem (so called 'sleeper species' and the like) as high and a significant pest animal issue warranting a national focus. Whilst the most effective response to a pest animal is ideally to prevent them from entering the country, early rapid detection of any newly introduced or spread of established pest animal is the key to timely and cost effective intervention and provides the best opportunity for eradication and containment.[72]

5.91 Sleeper species should be closely observed and their population levels recorded at regular intervals. This will ensure that intervention can occur as soon as the population of a potential pest begins to expand, rather than waiting until the species has caused serious environmental or economic damage. Close monitoring and recording of sleeper populations can help to provide early warning of any expansion in the population.[73]

5.92 The committee also notes that a project assessing the threat posed to agriculture by a selection of exotic vertebrates already present in Australia is ongoing under the NFACP.[74] The committee believes that projects such as these are important in ensuring that the relevant authorities and

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70 CSIRO, *Submission 55*, pp. 5-6.

71 *Submissions 54*, p. 2, *55*, p. 6, *70*, p. 9, *90*.

72 *Submission 59*, p. 11.

73 SSAA, *Submission 20*, p. 2.

74 DAFF, *National Feral Animal Control Program Projects*, DAFF, Canberra, 8 July 2005, viewed 21 September 2005, <http://www.affa.gov.au/content/output.cfm?ObjectID=DDAFD1FF-AD40-46DA-933393C42AA69A29>.

potentially-affected landowners are in a position to take measures to protect themselves against new pest animal threats.

5.93 The committee notes that the identification of 'emerging pest species' is part of the terms of reference for the VPC and will therefore constitute part of the terms of reference for the proposed National Pest Animals and Weeds Committee, if the committee's recommendation is acted upon. The committee believes that the proposed National Pest Animals and Weeds Committee should prepare a list of sleeper animal species with a view to ensuring that populations of those species are closely monitored.

Recommendation 18

5.94 **The committee recommends that the proposed National Pest Animals and Weeds Committee compile a list of sleeper pest species.**

Monitoring of pest animal populations

5.95 A number of submissions pointed to the need to map incidences and density of pest animal species, to enable more effective control and planning.[75] The general lack of awareness of the scale of pest animal problems was pointed out by Dr Jeanine Baker, President of the SSAA (South Australia):

> There is also a lack of information on pest numbers and distribution and the actual impact that they cause. Added to that is the fact that often the information we have is fragmented or uncoordinated on a national and local scale. This causes big problems when we are looking at emerging or new pest animals because we often do not identify them in time. It also causes problems if we are looking at national or regional coordinated programs.[76]

75 *Submissions 15*, p. 2, *34*, *44*, p. 4, *52*, pp. 1-2, *80*, p. 2, Mr Jack Jones, Ovens Landcare Network, *Transcript of evidence*, 18 June 2004, p. 2. See also *Exhibit 1,* AEC Group, *Economic Impact of State and Local Government Expenditure on Weed and Pest Animal Management in Queensland*, Local Government Association of Queensland, October 2002, p. 101.

76 *Transcript of evidence*, 25 May 2005, p. 1.

5.96 Lack of knowledge of the abundance, ecology, movements and impacts of pest animals can be an impediment to the implementation of control measures for that species.[77] On the other hand, knowledge about population levels of a pest species and its correlation with damage caused can help to pinpoint more effective control strategies. Dr Tim Wardlaw, Principal Scientist, Biology and Conservation with Forestry Tasmania, gave the following evidence in relation to control of browsing mammals in forestry plantations:

> It is fair to say that in situations where traditionally we have used 1080 it has not been the most effective treatment. I am talking here about situations of extreme browsing risk where, no matter how many times you go and poison an area, you are still going to have browsing problems. You end up with plantations that have a halo of damage around the perimeter. If you measure some of those areas you might find 10 or 15 per cent of the plantation has failed to establish even with the application of 1080. So there are situations where 1080 is not the best option for managing browsing. By going to this risk based approach we are able to better target specific actions for certain situations of browsing risk.[78]

5.97 Monitoring conditions such as pest animal density, native flora composition and agricultural productivity both before and after pest animal control activities helps to determine the relationship between pest animal density and resource damage. It also assists in determining whether the type of control activity being used is having an impact, or whether alternative measures should be considered.[79] It enables those responsible for control to determine whether control targets have been met.

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77 *Exhibit 7,* TFAWG, *Cooperative Wild Dog/Fox Management Program*, Draft no. 5, March 2002, p. 11.

78 *Transcript of evidence*, 29 March 2005, p. 23.

79 NRM, *Selected Ecologically Significant Invasive Species Extent and Impact: Vertebrate Pests (indicator status: for advice)*, NRM, Canberra, viewed 21 September 2005, <http://www.nrm.gov.au/monitoring/indicators/pubs/vertebrate.pdf>, p. 2.

5.98 Monitoring of pest animal populations, including mapping populations, and defining and measuring impacts of pests, is consistent with existing pest animal strategies operating in states and territories.[80] There is, however, currently no standardised framework for measuring pest animal distribution, density and impact in operation across the states and territories.[81] A standardised framework would allow data to be collected and collated at a national level.

5.99 Monitoring of native pest species is important because, at times of significant population growth, it may be appropriate to increase quotas of animals which can be harvested commercially. Alternatively, at times when populations have stabilised at normal levels, quotas may need to be reduced.

5.100 Monitoring pest animal populations for incidence of disease is also important to enable disease outbreaks to be identified and dealt with quickly. The collection of samples from feral populations for disease monitoring was recommended by the Victorian and New South Wales Wild Dog Coordinating Committee.[82]

5.101 In Chapter 4, the committee recommended that the proposed National Pest Animals and Weeds Committee be tasked to establish a National Pest Animal Database, to be contributed to by state and territory governments, and local governments and pest animal control groups. The committee anticipates that this database will provide a means of monitoring pest animal density and distribution on a national scale.

Early eradication

5.102 Early eradication of populations established in small areas may be possible if detection occurs early enough. This may prevent the need for large-scale, costly control programs that are required when pest species become established throughout a region. Several submissions received were supportive of early eradication programs.[83]

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80 ACT Government, *Submission 63,* Appendix, Environment Act, *ACT Vertebrate Pest Management Strategy*, ACT Government, Canberra, 2002, pp. xi, 12, Queensland Government, *Queensland Pest Animal Strategy 2002-2006*, DNRM, viewed 5 October 2005, <http://www.nrm.qld.gov.au/pests/management_plans/pdf/qld_animal_strategy.pdf>, p. 12, NRM, pp. 9-12.

81 NRM, p. 3.

82 *Submission 66*.

83 *Submissions 34*, *48*, *55*, p. 7, *59*, p. 13, *70*, p. 9, *76*, p. 12, *78*, p. 4, *98*, p. 14.

5.103 In its submission, CSIRO pointed to the lack of an efficient process for responding rapidly and appropriately to animal pest incursions. As an example, they pointed to the lapse in time between the reported presence of foxes in Tasmania and the development of detection and reporting systems.[84]

5.104 The BRS, in its submission to the inquiry, referred to the six criteria that must be satisfied if an eradication program is to be successful:

1. rate of removal must exceed the rate of increase at all population densities;
2. immigration is zero;
3. all animals are at risk from control measures;
4. animals can be detected at low densities;
5. discounted cost-benefit analysis favours eradication over control; and
6. a suitable socio-political environment exists.[85]

5.105 These six criteria may be met in the case of localised populations of newly-established pest animals,[86] and eradication may therefore be a feasible alternative.

5.106 QFF referred to the action taken in relation to the incursion of RIFA in Queensland and noted that:

> … the fragmented reactive response to the Fire Ant incursion has been less than ideal and illustrates the need for clarity in the roles and responsibilities between the Commonwealth and States and between Qld government agencies in the event of nationally significant pest animal incursion in the State.[87]

5.107 The Western Australian Government, in its submission, noted that the capacity to strike quickly is critical to the eradication of local infestations of pest animals. There is a need for plans and funding arrangements to be in place prior to undertaking eradication operations. On that basis, the Western Australian Government called for the development of an eradication protocol as part of the National Pest Animal Strategy, and suggested AUSVETPLAN as a model.[88]

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84 *Submission 55*, p. 7.
85 *Submission 76*, Attachment C.
86 *Submission 76*, p. 12.
87 *Submission 59*, p. 13.
88 *Submission 70*, pp. 9-10.

5.108 The committee takes on board these considerations and notes that an eradication protocol would facilitate eradication programs, particularly where there is an urgent need to deal with a pest animal incursion. An eradication protocol should be developed as part of the National Pest Animal Strategy.

Recommendation 19

5.109 **The committee recommends that the National Pest Animal Strategy, currently under development, include an eradication protocol to be used where required for early eradication of newly-established pest animal infestations.**