Chapter 5

Management of invasive species within Australia

> Despite the fact that invasive species are widely regarded as a major threat to biodiversity, it is relatively rare to find much mention of them in biodiversity policy documents, except for a focus on a few high profile species. The 1996 National Strategy for the Conservation of Australia's Biological Diversity does cover alien species (at 3.3), but it and other general policy statements are not well translated into detailed practices. There are no national invasive species statutory controls.[1]

Introduction

5.1 The Commonwealth's involvement in the management of established pests is limited to funds delivery for research or specific on-ground activities, some planning activities under the EPBC Act, and representation on national consultative committees.[2] The Commonwealth also has a role in incursion management, when an exotic pest, disease or weed that is likely to have an impact upon Australia's primary industries is detected within national quarantine borders for the first time and has spread beyond the recognised limits of quarantine operations.[3] However, ultimately it is the States and Territories which have statutory responsibility for managing invasive species once they are in the country and have cleared the quarantine barrier.[4]

5.2 The Department of Agriculture, Fisheries and Forestry's (DAFF) submission outlined the fundamental position in relation to the management of invasive species within Australia:

> While responsibility for the management of established pests rests fundamentally with State, Territory and local governments as well as landholders and industry, the Commonwealth plays a major role in setting the strategic framework that other stakeholders implement.[5]

5.3 In this chapter, the Committee will direct its attention at the regulation, control and management of invasive species within Australia's borders, including incursion management. This discussion reviews both State and Territory and Commonwealth action in regard to invasive species management. A detailed discussion on border control and importation issues is provided in the following chapter.

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1 CSRIO, *Submission* 34, p. 23.

2 Queensland Government, *Submission* 43, p. 20.

3 Department of Agriculture, Fisheries and Forestry, Submission 62, p. 5.

4 Government of Western Australia, *Submission* 67, p. 18.

5 Department of Agriculture, Fisheries and Forestry, Submission 62, p. 7.

Commonwealth, State and Territory action

The National Weeds Strategy

5.4 Having established that it is substantially the States and Territories which have statutory responsibility for managing invasive species once they are in the country the Commonwealth plays a strategic role in developing national strategies and fostering national coordination and harmonisation which require cooperation from all levels of government. This is best examined in relation to the national effort to control invasive weeds through the National Weeds Strategy (NWS).

5.5 The National Weeds Strategy (NWS) was launched in June 1997, by three Ministerial Councils; the Agriculture and Resource Management Council of Australia and New Zealand, the Australian and New Zealand Environment and Conservation Council and the Forestry Ministers.

5.6 It was established with the aim of taking a strategic approach to weed management problems of national significance, and addressing environmental and agricultural weeds equally. The NWS describes the nature of the problem, discusses why existing weed management measures are not adequate, lists the roles and responsibilities of government, community, landowners and land users.

5.7 Its three goals are:

- To prevent the development of new weed problems;
- To reduce the impact of existing weed problems of national significance; and
- To provide the framework and capacity for ongoing management of weed problems of national significance.

5.8 The goals and objectives of the NWS are set out in the document titled *National Weeds Strategy: A Strategic Approach to Weed Problems of National Significance*.

5.9 The NWS sets out and categorises roles and assigns responsibility in the management of invasive weeds as follows:

Role of Individuals and Groups

Individual Landowners and Land Users Have a Role to:

- understand that weeds are an important factor in land degradation
- detect and report new weed occurrences
- understand land use systems and the cause/effect relationships which apply to weed problems
- apply their knowledge and sills to improving weed management
- integrate economic and environmental values in the management of weed problems on their land

- cooperate with and , where relevant, plan weed management activities jointly with neighbours
- support and promote sustainable production practices to minimise the development of weed problems.

Communities Have a Role to:

- coordinate local group development and action on weed problems
- encourage local involvement in the management of public land
- participate in local and regional weed management programs
- raise awareness and improve education on weed issues

Community and Industry Organisations Have a Role to:

- represent members' interests on weed issues
- provide their members with information on weed management issues
- participate in the development of codes and policies which will reduce the impact of weeds.

Local Governments Have a Role to:

- assist with data collection and information exchange
- assist with the coordination of community weed management programs
- act as a community advocate on weed issues
- support the activities of local self-help groups to undertake weed management activities
- develop and apply local weed management strategies
- exercise statutory responsibilities to encourage responsible weed management
- manage weed problems on their own land responsibly, in cooperation with other landowners.

State and Territory Governments Have a Role to:

- encourage responsible weed management by:
- providing a suitable institutional and legislative framework
- developing and implementing effective policies and programs
- providing positive support through financial incentives and assistance schemes as well as appropriate standards and regulations
- provide leadership, coordination and resources for research, assessment, advisory services, education and public awareness programs on weeds
- encourage the development of effective weed management strategies at local, regional, State and national levels
- enhance cooperation and coordination of weed management at local, regional and State levels
- manage weed problems on their own land responsibly, in cooperation with other landowners.

The Commonwealth Government Has a Role to:

- manage weed problems on its own land responsibly, in cooperation with other landowners and in cooperation with the States to:
- facilitate the development of an economic, social and cultural framework that encourages weed management as an integral part of sustainable land management
- provide the appropriate legislative framework, including quarantine and environmental legislation, necessary to reduce the impact of weeds
- provide the mechanism by which weed problems of national significance can be identified and addressed
- develop and encourage national weed management policies and programs
- provide leadership, coordination and resources for research, assessment, education and public awareness on weed issues of national significance
- encourage the development and integration of effective weed management strategies at local, regional and State and national levels
- develop with stakeholders a balanced program of incentives, standards and penalties to ensure effective action to address weed problems.[6]

5.10 However, despite this framework the management of invasive weeds by the States and Territories has been largely in an *ad hoc* manner due to inconsistencies in legislation and a lack of political will. In relation to the national effort to control invasive weeds, the Invasive Species Council expressed its concerns thus:

> Ultimately, nation-wide efforts to control invasive species are substantially hindered by inadequate and inconsistent state legislation. This is not 'news' to anyone working in the area of environmental management. The National Weeds Strategy identified the fact that "States have not always harmonised legislation to address situations where a weed in one State can affect another State or where infestations cross State borders.[7]

5.11 The Council of Australian Weed Societies noted that both legislative and funding arrangements create a fragmented management approach which leads to greater cross-jurisdictional inconsistency.[8] A lack of legislative synergies is discussed in Chapter 3.

Weeds of National Significance

5.12 The National Weed Strategy provides a national approach to the management of weeds through the Weeds of National Significance (WONS) list. As outlined in Chapter 2, the Australian, State and Territory governments agreed in 1999 to list 20 Weeds of National Significance from some 2,700 non-native naturalised plants

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6 Mr Richard Sharp, *Submission* 2, p. 9.

7 Invasive Species Council, *Submission* 33, p. 9.

8 Council of Australian Weed Societies, *Submission 68*.

identified through a weed risk assessment process.[9] While many factors were considered when making decisions on priorities, assessment of WONS was based on four major criteria:

- invasiveness;
- impacts;
- potential for spread; and
- socioeconomic and environmental values.

5.13 Five main data sources were used for the Weeds of National Significance analysis:

- an invasiveness and impacts questionnaire was submitted to three expert panels covering weeds for temperate, sub-tropical and tropical environments;
- observed distribution and density for each weed provided by State and Territory agencies and sourced from the literature. This data and published literature was used to predict potential distribution of weeds using climatic modelling;
- economic information on the cost of control for agricultural and forestry weeds provided by State and Territory agencies;
- environmental information on the number of threatened species, communities and IBRA regions provided by State and Territory agencies and the monoculture potential of a weed from the expert panels; and
- a qualitative assessment by the expert panels of social impacts caused by a weed (not examined by other data sources).[10]

5.14 A Weed of National Significance status brings a weed species under national management for the purpose of restricting its spread and/or eradicating it from parts of Australia. A central component of the strategy is the identification of Weeds of National Significance and the resultant coordinated actions across all States and Territories to ban the sale of WONS nationally. The program has increased inter-state discussion and coordination on various issues and increased synergies between agencies for delivery on some species. For example, through the development of best practice manuals for weeds such as mesquite.[11]

9 Department of Environment and Heritage, *Submission 61*, p. 2.

10 Weeds of National Significance website at: *http://www.weeds.org.au/natsig.htm*, accessed 6 October 2004.

11 Queensland Government, *Submission 43*, p. 21.

Problems with WONS

5.15 However, while the Commonwealth is actively trying to broker a national approach to the sale of WONS, the continued sale of known weedy plants in a number of States and Territories continues to undermine weed management initiatives.

5.16 To date the program has not achieved the nationwide prohibition of the sale of the 20 Weeds of National Significance. Only Queensland and South Australia have acted to prohibit the sale of all 20 plants[12]and five or a quarter of the WONS are still available for sale in one or more States and Territories.[13] The WWF stated in its submission that:

> Commonwealth investments in the detection and eradication of serious invasive plant species is being undermined by State noxious weed laws that enable some of these nationally targeted invasive weeds to be widely traded by the nursery industry. This is an example of poor coordination between the Commonwealth and the States, is not cost-effective and is wasting tax payer dollars.[14]

5.17 The WWF's Andreas Glanznig added that:

> You have the Commonwealth on the left hand doing good work, but you have the states still contributing to the problem on the other.[15]

5.18 Due to the ease with which seed and plants stock can be traded, both intra- and interstate, and the proliferation of trade over the Internet, the failure to impose a national ban on the sale of the plants compromises the work of states that have bans in place and impedes national efforts to control weeds of national significance.

5.19 Evidence received by the Committee indicated support for a review of the NWS as it had not been effective in achieving its goals and objectives. This view was supported by the Council of Australian Weed Societies which submitted that:

> …the strategy needs updating, and legislative arrangement and funding is needed to enable implementation of the strategy.[16]

5.20 The Committee heard that:

> At the last meeting of the Australian Weeds Committee they agreed to recommend for council's agreement a review of the national weeds

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12 A Glanznig and O Kessal, *Invasive Plants of National Importance and their Legal Status by State and Territory*, WWF Australia, Sydney, 2004, p. 4.

13 A Glanznig, K McLachlan and O Kessal, *Garden Plants that are Invasive Plants of National Importance: an overview of their legal status, commercial availability and risk status*, WWF Australia, 2004, p.v.

14 WWF Australia, *Submission 30*, p. 4.

15 Mr Andreas Glanznig, *Committee Hansard*, Canberra, 26 November 2003, p. 11.

16 Council of Australian Weed Societies Inc., *Submission 68*, p. 1.

> strategy, recognising that there had been significant progress in the existing strategy, that there was an opportunity and that it was very timely to review the strategies and the effectiveness of the actions.[17]

5.21 Dr Dickson, Assistant Secretary, Natural Resource Management Policy Branch, Department of Environment and Heritage, told the Committee that:

> There are still such things as sale of banned weeds … Those sorts of issues have stimulated the need for both the review of the Weeds Strategy, how can it be done more effectively and having not a blank sheet but certainly being open to a range of different options for improving the robustness of the framework and that coordination.[18]

5.22 The Committee was advised that the Commonwealth Government has not taken a greater role in banning the trade in the 20 Weeds of National Significance as:

> It is important to recognise that in the first instance the responsibility for sale of these weeds, or for that matter most such products, is a state responsibility. It is not a Commonwealth responsibility.[19]

5.23 The Committee is disappointed at the lack of cooperation and coordination between the States and Territories to address the invasive weed problem. The Committee appreciates that achieving the process of harmonisation and the passage of uniform regulation through six state and two territory parliaments, without amendment, is no easy task – and takes time. In relation to the WONS, after seven years that excuse is wearing thin. The WONS are agreed to be the 20 most problematic weeds in Australia. They have to be vigorously attacked on a unified basis before the country can move on to address its next priorities. The national effort to overcome invasive species is only as strong as the weakest link – and control and eradication efforts in one region are quickly undone in other regions which adopt a less aggressive regulatory stance.

5.24 The Committee draws the conclusion that weed laws at a national level are poorly harmonised because of a lack of political will on the part of the States and Territories. Dr Rachel McFadyen told the Committee:

> Unfortunately, we believe that current controls are not adequate. I have cited two examples of this. I could cite you plenty more, but I have simply chosen two. One is Mexican feather grass, Nasella (Stipa) tenuissima. It is closely related to serrated tussock and Chilean needlegrass. They are already costing us nearly $60 million a year, and this is a close relative. They are both major weeds of pastures in the temperate zone of eastern Australia. Mexican feather grass is in fact more drought tolerant than both of those, so it would be expected to have an even wider climatic range. It was discovered being sold as a garden ornamental in Victoria and it was

17 Dr Rhondda Dickson, *Committee Hansard*, Canberra, 18 June 2004, p. 56.

18 ibid, p. 64.

19 Mr Bernard Wonder, *Committee Hansard*, Canberra, 18 June 2004, p. 65.

> removed from sale in 1998. It was put on the prohibited import list under AQIS legislation, so import is now banned. It is a declared plant and therefore banned from sale in four states—South Australia, Victoria, New South Wales and Western Australia. However, it can still be legally sold in the Northern Territory, the ACT, Tasmania and Queensland.[20]

5.25 The Committee supports the efforts of the Commonwealth, States and Territory Governments to work collaboratively on environmental issues. However, ultimately, it considers that if consensus and action cannot be achieved then the Commonwealth needs to have the courage to take a leadership role and apply legislation that is within its power, in order to prevent further detrimental impacts by invasive species. As the Committee heard:

> Therefore, we believe that there is an urgent need for national regulations to control the sale of all known weedy species and that this is quite separate from the controls on importation into Australia. We believe that relying on the states for action is, quite simply, not working. If the states cannot get their act together for the 20 weeds on the list—the request that they forbid the sale of these plants was made in 1999, and we are now in 2004—the chance of their ever getting their act together for other plants are very small indeed. The stakes are very high. We cannot afford to have another branched broom rape or another serrated tussock which will cost us hundreds of millions of dollars in control and lost production.[21]

Recommendation

The Committee recommends that those States and Territories that have failed to legislate a prohibition on the Recommendation on the sale of WONS within their jurisdictions should act to do so as a matter of priority.

5.26 While WONS is clearly a step in the right direction, submitters highlighted a number of other weaknesses in the approach to date. Mr Tim Low from the Invasive species council highlighted a range of issues which restricted the effectiveness of WONS and the management of invasive species generally.

> Then you have the spectacular conflicts of interest. Hymenachne was released in 1988 as a pasture grass. Eleven years later it was declared one of our weeds of national significance, implying that it was one of our 20 worst weeds. It took 11 years to go from something that people thought was a good idea to something that was decided to be a disaster. The national hymenachne management committee that is meant to control it was set up only two weeks ago. I am a member of that committee. I am asking the committee: why has it taken nearly four years to get action on what is a weed of national significance? You cannot explain it. But it comes back to

20 Dr Rachel McFadyen, CRC for Australian Weed Management, *Committee Hansard*, Brisbane, 14 April 2004, p. 21.

21 ibid, p. 22.

> the lack of funding, bureaucratic inertia and the fact that farmers want the stuff—and in that time the cost of eradicating it has probably doubled.[22]

5.27 The Nature Conservation Society of South Australia submitted that there is a need for a nationally integrated and regionally coordinated approach to WONS.

> When controlling invasive plant species an integrated approach is also important to ensure that one invasive species is not replaced by another. To a certain extent the Weeds of National Significance (WoNS) program perpetuates this single species approach. What is missing is the relationship component between species. The WoNS program also ignores regional priorities. As most of the Commonwealth money spent on the environment (NHT) is directed through regional groups there is an apparent inconsistency between these two Commonwealth initiatives.[23]

5.28 Only established weeds can be listed as WONS and this process excludes emerging and potential invasive weeds. Mr Mark Ramsey, Executive Officer of South Australia's Animal and Plant Control Commission raised this issue with the Committee:

> The WONS system was based on existing damage caused by a weed, not projecting a hypothetical damage into the future. So it [Branched Broomrape] was excluded on those parameters when the original list of 20 weeds was put together.[24]

5.29 Ms Helen Moss submitted:

> The release of the National Weeds Strategy in 1996 did little to change the on-ground reality of the problem. The recognition of 20 weeds of national significants in 1999 has targeted some problematic species, but the influx of potential weeds into Australia continues unabated.[25]

Recommendation

The Committee recommends that the species listed on the WONS list be reviewed and that other significant threatening species be included as part of a new national control list of invasive plant species.

Sleeper weeds

5.30 The National Weeds Strategy recognised the need to deal with 'sleepers'. These are cultivated exotic and native plants and minor weeds which are already in Australia and which have the potential to become major weeds. The Invasive Species Council submitted:

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22 Mr Tim Low, Invasive Species Council, *Committee Hansard* Brisbane, 14 April 2004, p. 45.

23 The Nature Conservation Society of South Australia, *Submission* 76, p. 5.

24 Mr Mark Ramsey, *Committee Hansard*, Adelaide, 28 June 2004, p 7.

25 Ms Helen Moss, *Submission* 48, p. 1.

> Even if Australia closed the door on all new introductions today, our pest numbers would multiply because many non-native species are already here and are simply awaiting their chance to escape, or have escaped but only in small numbers. Similarly, some native species can cause just as much damage as exotic introductions when translocated beyond their natural range, or when lacking natural limiting factors…. They are all around us, in our gardens and aviaries, on farms and plantations, in laboratories and aquaria. Australian weed experts have compiled a list of 300 sleepers that are likely to become the nation's next set of aggressive invaders. This figure is likely to be a gross underestimate.[26]

5.31 The WWF argued that there was a lack of adequate funding for detection and eradication of sleeper species.[27] The Natural Heritage Trust funded a study to prioritise 'sleeper weeds' for eradication. The Committee was informed that the findings of this study would be wasted if no funds are made available, or joint Commonwealth/State funding set in place, for the actual on-ground eradication of the 10 top-priority weeds.[28]

5.32 The Committee heard that government departments lacked the necessary resources to detect and eradicate small infestations of sleeper weeds. Despite the fact that return-on-investment models demonstrate that prevention and early detection are vastly more cost effective than neglect or late action, resources are more often invested in projects where a clear pest problem already exists. The Invasive Species Council noted that the National Weeds Strategy has to date done little to address the issue of sleeper weeds:

> Although the National Weeds Strategy (NWS) acknowledges the need to recognise and eliminate sleepers during their benign phase, and institute a detection and rapid response program, authorities have been slow to act. The National Weeds Strategy has to date focussed most efforts and resources on major widespread weeds (the Weeds of National Significance), and is only belatedly starting to address high priority 'sleeper' and emerging weeds.[29]

5.33 Additionally, the 2002 National Weed Experts Meeting found that there was no clear responsibility for 'sleeper' weeds and that no responsibility exists for national level funding of weeds with purely an environmental or social impact.[30]

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26 Invasive Species Council, *Submission* 33, p. 7.

27 WWF Australia, *Submission* 30, p. 3.

28 CRC for Weed Management, *Submission* 22, p. 9.

29 Invasive Species Council, *Submission* 33, p. 9.

30 WWF Australia, *Submission* 30, p. 13.

Recommendation

The Committee recommends that The National Weeds Strategy better clarify responsibility for funding eradication of 'sleeper weeds' with purely an environmental or social impact.

Recommendation

The Committee recommends that investment in early warning systems needs to increase for the detection and eradication of sleeper weeds.

National Environmental Alert List

5.34 The Commonwealth Government has taken action to identify weeds species that are in the early stages of establishment. The Department of Environment and Heritage advised that:

> During 2000, the Department worked with consultants and technical experts to identify species to include on a National Environmental Alert List. The alert list identifies weed species that are in the early stages of establishment and have the potential to become a significant problem if they are not managed. This list contains 28 non-native species that are, or are likely to be, significant threats to biodiversity.[31]

5.35 The list contains 28 non-native taxa identified on the basis of their potential to become threats to biodiversity if they are not managed. A WWF Australia report, published in August 2004, identified that of the 28 listed species, 9 were able to be legally imported into Australia. It identified that 16 species are listed as naturalised garden plants in 1 or more of the states and territories, and 6 of the species are recorded for sale in one or more of the states and territories. Of the 16 naturalised garden plants, 7 are controlled at some level in one or more state or territory.[32]

5.36 The Committee is concerned that when the community, who is being actively encouraged to detect and report infestations of these species through a 'hotline', will increasingly feel disaffection when they realise that their efforts are undermined when someone can simply go to a local nursery and buy an Alert List species and then plant it in their garden.

5.37 The Queensland Government advised:

> The development of this list did not involve the agency in Queensland with major pest management responsibilities.[33]

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31 Department of Environment and Heritage, *Submission 61*, p. 2.

32 A Glanznig, K McLachlan amd O Kessal, *Garden Plants that are Invasive Plants of National Importance: an overview of their legal status and commercial availability*, WWF Australia, Sydney 2004, p. 11.

33 Queensland Government, *Submission 43*, p. 21.

5.38 Due to the lack of a coordinated consultative process in the development of the list, the Committee questions the effectiveness of the list in its ability to achieve its goals. The Queensland Government identified this as an issue in its submission. It advised:

> The current DEH "weed alert list" is not considered by Queensland to be useful for regional groups, as a number of the species identified by the state are not of concern to government agencies or the community. Queensland consider it unlikely therefore those regional groups will apply for funds to control these species under the new regional funding arrangements.[34]

5.39 The Committee acknowledges efforts made to identify and list species that will have significant impacts if they become established. It also applauds the work of the CRC for Australian Weed Management for its work developing Weed Management Guides for all 28 species. However, the Committee considers that the relevance of the list and the value of the guides are diminished by the failure of DEH to adequately consult with key stakeholders on the development of the list, and the absence of a uniform national statutory framework to control the trade in these species. An absence of political will and community support has significant negative adversely affects any prospect of success in managing invasive species.

Recommendation

The Committee recommends that as part of developing a list of invasive plant species of national importance, the Commonwealth, States and Territories develop an agreed national Alert List.

Pest animal management

5.40 In contrast to the national approach to weeds the lack of authentic national cooperation and action becomes particularly apparent when looking at the situation in relation to pest animal management, where no national strategy is yet in place. Yet such a strategy is clearly necessary:

> There is considerable variation between states and territories in policies, legislation and institutional arrangements for the formulation and delivery of pest animal management. The development of a national pest animal strategy, similar to the National Weeds Strategy is needed.[35]

5.41 As discussed in Chapter 3 the Vertebrate Pests Committee is a sub-committee of the NRPPC, under the Natural Resource Management Standing Committee.[36] While the Committee identifies nationally significant vertebrate pest issues, recommends appropriate management actions, and develops principles, national

34 Queensland Government, *Submission 43*, p. 21.

35 Animal and Plant Control Commission South Australia, *Submission* 15, p. 8.

36 Bureau of Rural Sciences, *Submission 62a*, p. 14.

policies, strategies and programs relating to vertebrate pests[37] it does not have a funded secretariat and therefore is limited in it ability to support nationally consistent action.[38]

5.42 Currently there is no national vertebrate pest strategy, such as with weeds, however, the Committee heard that a national strategy to address the impact and management of invasive animal species is being considered by the Vertebrate Pests Committee.[39]

5.43 The current lack of a coordinated national strategy for vertebrate pests has meant that Commonwealth funds that are provided for vertebrate pest management programs have not had a nationally agreed strategic focus or direction. The Queensland Government noted that the National Feral Animal Control Program (NFACP) was an example of a national program that has not had a nationally agreed strategic focus or direction.[40] This was highlighted through the example of Pestplan funding.

> For example Pestplan funding from the Commonwealth, developed as a national model for community engagement in pest planning used in New South [Wales]. The final product is not consistent with Queensland delivery of pest management at a local government level and so cannot be used effectively in this state.[41]

5.44 The NFACP has been funded by the NHT since 1996. BRS submitted:

> NFACP is establishing improved control techniques and institutional frameworks to reduce damage caused by nationally significant agricultural pests such as rabbits, wild dogs, feral pigs and feral goats, and will work with relevant agencies to reduce the threat of new pest species establishing and spreading.
>
> NFACP provides input into a range of national priorities (including risk assessment for import and keeping of exotic vertebrates, exotic disease contingency, review of individual species management, national competency standards and animal welfare) with the overall intention of achieving greater coordination and uniformity of State agency activity. NFACP also assists with capacity building at State and regional levels through the development of a wide range of national 'best practice' pest animal management extension materials which are being promoted through national competency-based training.
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> Priorities for project funding under NFACP are identified in the national pest animal management guidelines produced by BRS. These guidelines are

37 Department of Environment and Heritage, *Submission 61*, p. 9.

38 ACT Government, *Submission 44*, p. 8.

39 Dr Rhondda Dickson, *Committee Hansard*, Canberra, 18 June 2004, p. 56.

40 Queensland Government, *Submission 43*, p. 21.

41 ibid.

> written by expert task forces and overseen by the National Vertebrate Pests Committee. Guidelines have been developed for managing feral horses, rabbits, foxes, feral goats, feral pigs, rodents, carp and wild dogs.[42]

5.45 The goal of the program is to develop and implement coordinated action to reduce damage to the natural environment and primary production caused by feral animals.[43]

> It aims to provide and stimulate investment in integrated, strategic and innovative management of feral animals.[44]

5.46 The Queensland Government submitted that there could be benefit in the national declaration of invasive pest animals and that national leadership, with a framework of cooperation with States, may help achieve more consistent delivery of new vertebrate pest prevention.[45] This could be coordinated within the structure of a Vertebrate Pests Strategy. Mr Craig Walton from the Queensland Department of Natural Resources, Mines and Energy told the Committee:

> Unfortunately, there is no national plan for, say, vertebrate pests. So it is going to be very hard under the current funding arrangement to get strategic actions on vertebrate pests if there is no idea already of what a strategic action may be because there is no plan for what could happen. We are a bit concerned that, because we do not have a national vertebrate strategy or even a bigger national invasive strategy, it would be hard to have those regional activities being strategic and delivering as well as they can, because there is no overseeing of that process.[46]

5.47 The ACT Government stated that the focus of the Vertebrate Pests Committee is on the impact of vertebrate pests on rural production.[47] It proposed a change in focus to include the impact of invasive vertebrate pests on the environment, with reference to their impact on native species, as it would be beneficial to the protection on biodiversity.

5.48 However, if the current inconsistencies across jurisdictions is not resolved, and the States and Territories do not show the necessary political will to harmonise legislation, the impact of invasive vertebrate pests will continue to have a devastating impact on both the environment and biodiversity. The Nature Conservation Society of South Australia argued:

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42 Bureau of Rural Sciences, *Submission 62a*, p. 8.

43 Environment Australia, *Natural Heritage Trust Annual Report 2001-02*, Canberra 2003, p. 38.

44 ibid.

45 Queensland Government, *Submission 43*, p. 21.

46 Mr Craig Walton, Queensland Department of Natural Resources, Mines and Energy, *Committee Hansard*, Brisbane, 14 April 2004, pp. 10-11.

47 ACT Government, *Submission 44*, p. 8.

> There are currently significant inconsistencies in policies and legislation between the states. A species identified as a problem in one state might not be identified as a problem in another state. However as we have seen, species are able to move around the country via various vectors. This is particularly important for commercial species. A species that might be banned in one state can be ordered over the phone or internet from another state. Such inconsistencies undermine any state measures to limit the movement of species that have been identified as being invasive.[48]

Recommendation

That the Commonwealth Government place on the agenda of the Natural Resource Management Ministerial Council, as a matter of urgency, the issue of progressing development of a National Strategy for Vertebrate Pests.

Nursery and market trade in invasive species

5.49 The garden sector is the major pathway for new weeds invading Australia, through the importation and distribution of exotic plant species. Of the over 27,000 introduced plant species in Australia, 25,360 (94%) were intentionally introduced into Australia as garden or ornamental plants. Of these, over 1,360 (5%) are agricultural, noxious and natural ecosystem weeds, compromising 70% of all introduced weed species.[49] Escaped garden plants also make up the vast majority of new weeds invading the environment. Between 1971 and 1995, 65% of the 295 plant species and sub-species that naturalised in the environment were intentionally introduced into Australia as ornamental species.[50]

5.50 Many serious invasive plants continue to be commercially available including one species on the Northern Australian Quarantine Strategy target list, 6 species on the national Alert List of Environmental Weeds, and 5 on the Weeds of National Significance list.[51]

5.51 The ongoing retail trade in invasive plants is a complex issue which is controlled through fragmented and inconsistent State and Territory government legislation. The sale of most potentially invasive plants is not restricted by any legislation. As the Weeds CRC submitted:

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48 The Nature Conservation Society of South Australia, *Submission* 76, p. 6.

49 Randall cited in A Glanznig, K McLachlan, O Kessal, *Garden Plants that are Invasive Plants of National Importance: an overview of their legal status, commercial availability and risk status*, 2004, WWF Australia, Sydney.

50 R H Groves, *Recent Incursions of Weeds to Australia*, Technical Series No. 3. 1998, Cooperative Research Centre for Weed Management Systems, Adelaide.

51 A Glanznig, K McLachlan, O Kessal, *Garden Plants that are Invasive Plants of National Importance: an overview of their legal status, commercial availability and risk status*, 2004, WWF Australia, Sydney, p.v.

> There is no consistent Australia-wide legislation controlling the trading and planting of listed potentially invasive plants (Randall 2001). Legislation controlling the sale and use of invasive plants is predominantly a State responsibility, is inconsistent on a national scale and is limited to prohibiting the sale and planting of declared noxious weeds. The Weeds CRC and Nursery Industry Association of Australia have produced lists of potentially invasive plant species. The sale of these potentially invasive, non-declared plants, in the nursery and market trade is not restricted by any legislation.[52]

5.52 The Australia's nursery and garden industry is valued at over $5.7 billion (at retail), it comprises more than 20,000 businesses, and employs over 60,000 people.[53] The industry's peak body, the Nursery and Garden Industry Australia (NGIA), is working to educate its members and the wider community in regard to the sale and propagation of weedy plants (for an example see the brochure entitled: *Grow me instead*). However, the association represents less than half of the industry and has no control over non-members such as large national retail chains, hardware stores and home prorogation businesses who trade at weekend markets. Mr Geoffrey Fuller from the Nursery and Garden Industry South Australia (NGISA) told the Committee that:

> It is the non-members we have problems with. We get a lot of reports that such and such a supermarket or hardware chain is selling. The problem we have there is that they are not buying through accredited nurseries. I do not believe that the accredited or member nurseries—it would be in the minority—would be growing a problem plant.
>
> The problem we do have is that we might speak to them and say that such and such is banned in South Australia or is proclaimed in South Australia but, because we deal with so many Victorian, New South Wales and Western Australian nurseries, they could come over in those shipments. We have no real controls on the border to stop that because we do not have a weed police officer, so to speak. So they can come in and go straight to the nurseries or the garden centres that have purchased them.[54]

Recommendation

The Committee recommends that the Commonwealth, States and Territories provide funding to enable the Australian Weeds Committee to engage the CRC for Australian Weed Management to produce a scientifically credible and robust national list of invasive plant species.

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52 CRC for Australian Weed Management, *Submission* 22, p. 8.

53 Nursery and Garden Industry Australia, *Submission* 69.

54 Mr Geoffrey Fuller, Nursery and Garden Industry South Australia, *Committee Hansard*, Adelaide, 28 June 2004, p. 20.

Recommendation

The Committee recommends that the Commonwealth in consultation with the States and Territories promulgate regulations under section 301A of the EPBC to prohibit the trade in invasive plant species of national importance, combined with State and Territory commitment to prohibit these same species under their respective laws.

Recommendation

Produce a list in legislation of taxa that prevents their sale and spread for each state or region. Nominations for each taxon on a state or regional basis can be developed in consultation with natural resource management agencies, state herbaria and members of the general public.

5.53 Once established managing and removing escaped garden weeds is frequently left to groups of volunteers who give their unpaid time to address this issue. The Committee heard from a number of these volunteer groups who argued the need to ban the sale of invasive plants from nurseries.

> As a member of a friends group, working with our core of 15 volunteers in a suburban area, we spend our time pulling out invasive weeds. These weeds have happened here direct from adjacent home gardens. They were originally purchased from plant nurseries…. Our group firmly believes that nurseries should not be allowed to sell plants species that are invasive by nature.[55]

5.54 The Bend of Islands Conservation Association called for greater local control over the illegal sale of invasive plants including the ability of local authorities to declare and enforce locally banned plants.[56] A number of submitters raised the issue of prosecution and compensation. Ms Debbie Reynolds argued:

> Stop commercial nurseries from selling invasive weeds. Farmers will thank you and the consumers will hardly notice. Educate nurserymen and household as to what is a weed and issue warnings to remove the weed then fine and remove if not done. Prosecutions need to be done to make people take the weed seriously.[57]

5.55 Similarly, Mr Robert Fallon argued that there was a need for greater community and nursery industry awareness with regard to costs of invasive weed species.

> Awareness of the threat posed by weed invasion is still low in the community. I submit that a nationally based campaign be introduced via print and television media, promoting awareness amongst nursery owners

55 Mrs Dale Morgan, *Submission* 16, p. 1.

56 The Bend of Islands Conservation Association, *Submission* 23, p. 1.

57 Ms Debbie Reynolds, *Submission* 12, p. 1.

> and customers of the true cost of the sale of an invasive plant. I further submit that penalties be considered as a way to support behavioural change amongst the sellers and buyers of invasive weed species.[58]

5.56 Mr Andrew Dell, an ecologist, submitted:

> Financial gains to the nursery industry from selling environmental weeds does not justify the acceptance of environmental losses that we are currently undergoing. There are also significant financial burdens to all levels of government and the private sector that can be avoided with minor changes to existing legislation.[59]

5.57 The Invasive Species Council submitted:

> There is no condition that importers pay for the costs of control and repair should a plant become a weed. This runs contrary to "polluter pays" principles which are generally applied to other sectors.[60]

5.58 The Committee believes that the financial burden of managing invasive weeds should be borne by those who are responsible for the importation and sale of plants known to be weedy.

Recommendation

Investigate the imposition of a 'polluter pays' principle where importers pay for the cost of control and repair should a plant become a weed.

5.59 The Committee heard evidence that self-regulation and voluntary compliance by the industry has not been successful in reducing the trade in invasive plants. While there is no effective national post-border regulatory regime currently in place, a national voluntary measure, a draft *Garden Plants Under the Spotlight: an Australian strategy for invasive garden plants* was developed by the CRC for Weed Management Systems and the Nursery Industry Association of Australia in the late 1990s. The Strategy states that its program "should result in a better-informed and educated Australian gardening public, industry and government, together with an expected reduction in the sale, distribution, promotion and demand for invasive garden plants in Australia and increased sales and use of non-invasive plants."

5.60 One element of the Strategy focussed on selecting a core list of 52 serious invasive garden plant taxa - *Garden Thugs* – in consultation with nursery industry associations and working with and educating the plant industry and horticultural media about these invasive garden plants.

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58 Mr Robert Fallon, *Submission* 28, p. 1.

59 Mr Andrew Dell, *Submission* 14, p. 1.

60 Invasive Species Council, *Submission 33*, p. 6.

5.61 A WWF Australia report assessed the extent to which the Strategy program achieved 'an expected reduction in the sale' of the 52 garden thugs. It found that nationally there was absolutely no change in the number of garden thug taxa available for commercial sale from nurseries from the baseline year of 1999 to 2002: 22 garden thug taxa were recorded for sale in 1999 and while there was some turn-over of species, 22 garden thug taxa were recorded for sale in 2002. The change at a State and Territory level has been variable with the range of garden thug species available for sale increasing in South Australia, Western Australia and the Northern Territory, and decreasing in New South Wales, Queensland, Tasmania and Victoria.[61]

5.62 Given this evidence, WWF Australia submitted that:

> Voluntary approaches to reduce the trade in invasive ornamental plants have failed both in New Zealand (where they subsequently introduced statutory controls) and Australia, where the joint CRC for Weed Management Systems and Nursery Industry Association of Australia's Australian Strategy for Invasive Garden Plants has had no impact in substantially reducing trade in invasive ornamental plants.[62]

5.63 In response to this claim Mr Fuller, Chief Executive Officer, NGISA told the Committee:

> We have recognised the problem. Nothing is going to happen overnight. The WWF is an organisation that I respect. I have been in the industry for 30 years and this is the first time that I know of that it has made a comment against the industry. I have no problems with that. But I think where they are getting their facts from needs to be looked at. I reject that notion. We have been responsible; we are working towards it. There is certainly still an enormous amount of work to go, but we are looking at it.[63]

5.64 Mr Fuller suggested the need for a nationally consistent and coordinated listing of invasive plants.

> Regarding the WWF comments, we have looked at it very seriously because it is affecting our industry. We get a lot of feedback. The gardening shows and the radio programs are very responsible in what they are doing; they have made a lot of people aware of what is invasive. They love to tell you what is wrong. We look at that; we take it very seriously. But the list side of this requires a national coordinated approach that sets guidelines on what is an invasive and what is not, and how that is looked at. We do not need something frivolous put on it for no reason; we need a list that is serious and can be worked through.[64]

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61 A Glanznig, K McLachlan and O Kessal, *Commercial Availability of "Garden Thug" Plants*, WWF Australia, Sydney, 2004, p. 3.

62 WWF Australia, *Submission 30*, p. 4.

63 Mr Geoffrey Fuller, *Committee Hansard*, Adelaide, 28 June 2004, p. 26.

64 ibid, p. 27.

5.65 A number of witnesses acknowledged the possible need for regulations. Dr Lonsdale, Assistant Chief, CSIRO Entomology, told the Committee that:

> We can try and win hearts and minds, but in the end it is possible that the only solution will be regulation.[65]

5.66 The Committee heard that one of the difficulties in regulating nursery industry is that it is not a unified industry. Dr William Lonsdale, Assistant Chief, CSIRO Entomology, told the Committee of the difficulties encountered in attempting to self-regulate the ornamental plant industry in the United States:

> The US have made some good progress in working with the ornamentals industry to self-regulate, and the industry is very nervous about regulation, but the reality is … it is just not sufficient. In the end, it is a very disorganised industry with a lot of small players. It is very hard to actually get them all to sign up to some sort of self-regulatory mechanism.[66]

5.67 WWF Australia advocates increased regulations to control the trade of invasive species, and to prohibit the sale of invasive species of national importance such as those on the WONS list. Mr Glanznig told the Committee that:

> … there are well-documented examples where one pot plant has led to a new invasive plant being taken from an area where it is not invasive to an area where it is invasive and then escaping into the environment. That very much underscores the reason why we are calling for national regulation. You need a level playing field to ensure that nurseries doing the right thing by not selling invasive plants of national importance are not going to be disadvantaged by the nursery down the road thinking that they have a comparative advantage by still selling these nasty weeds.[67]

5.68 The Committee was told that most operators were not members of the Nursery and Garden Industry Association and therefore voluntary codes of conduct are very difficult to apply allowing:

> … a lot of the operators are mums and dads—small-time operators. They do not have the administrative machinery in place to ensure due diligence. You would get a lot of breakdown with any national voluntary approach. In fact, there is the failure of, say, the previous national approach, which was 'garden thugs', to make any significant dent on stopping the sale of the 52 'garden thugs'..[68]

5.69 WWF Australia argued that the dispersed nature of the industry, comprising of numerous small family operations, means that:

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65 Dr William Lonsdale, *Committee Hansard*, Canberra, 26 November 2003, p 17.

66 ibid.

67 Mr Andreas Glanznig, *Committee Hansard*, Canberra, 18 June 2004, pp 29 - 30.

68 ibid, p. 28.

> From a policy point of view, that really leads you down an education and regulation approach. In Australia, I know the previous CRC worked up a draft strategy to undertake a voluntary approach, but from what I can see, it has had very little impact on restricting or reducing the sale of invasive garden plants.[69]

5.70 The Committee acknowledges that the Nursery and Garden Industry (NGIA) has invested considerable resources in educating its members and non-members. The Committee applauds the NGIA development of voluntary lists and publications such as *Grow Me Instead* which recommends alternatives to native and non-native invasive plants. However, it is recognised that non-members jeopardise the NGIA's efforts. Mr Fuller told the Committee that:

> We have got a huge education process happening in our nurseries, particularly the wholesale nurseries, of growing. While we can control our industry and put submissions to the nurseries who are members and to responsible nurseries, our problem is that our industry is also a cottage industry—Paddy's Market, the council markets and the whole lot—and this is where we get what we call the garden escapes.[70]

5.71 The NGIA argued that any endeavour to place a blanket ban on plants could have significant consequences and therefore plants should be assessed on an individual basis.

> If we go ahead and do the carte blanche banning of plants, then we have got a problem in our industry. It is one where we have got to go through it, plant by plant, and work out just how invasive it is, in which area it is invasive and in which states it is a problem. It is not going to be a short-term project.[71]

5.72 The Weed Management Society of South Australia took a stronger view on this issue to argue that:

> A proactive approach with the garden industry to remove invasive, unproclaimed garden plants from sale needs to be funded and enforced.[72]

5.73 Evidence overwhelming demonstrates that there is broad community support for measures to restrict the sale of invasive plants by the nursery industry. There is also consensus that self-regulation is not effective.

5.74 While, as discussed in chapter 2, responsibility for management of the environment primarily rests with the States and Territories and therefore enforcement aspects are mostly a State and Territory responsibility, the Commonwealth has a critical role to play in establishing uniform national regulatory frameworks. A good

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69 ibid, p. 28.

70 Mr Geoffrey Fuller, *Committee Hansard*, Adelaide, 28 June 2004, p. 19.

71 ibid, p. 19.

72 Weed Management Society of South Australia, *Submission 35*, p. 5.

example in this regard is the Commonwealth's role in fostering a national regulatory framework for the management of threatened species.

5.75 The Committee considers that the NGIA should continue its education efforts and seek financial assistance through the NHT to assist it in its endeavours.

5.76 Mandatory labelling of plants to educate consumers about the invasive qualities of invasive plants has been proposed.

> One is trying to prohibit the supply of the worst invasive species in Australia. The other is trying to reduce the demand for other species through an education—that is, mandatory labelling—approach. That has worked in a number of other areas. The Commonwealth and states and territories have developed mandatory labelling schemes for energy efficiency and water efficiency and we are saying that this is a fantastic candidate for the next cab off the rank.[73]

5.77 The Committee notes the limited success of voluntary labelling schemes for water efficiency, and the rationale for the subsequent introduction of a mandatory labelling scheme:

> A voluntary water efficiency labelling scheme has been in existance sine 1988…The coverage of the existing program is limited. Because the scheme is voluntary, few suppliers have chosen to label, and those that have tend to label only there better performing products – for obvious reasons. Consequently, despite being a *comparative* labelling program it has developed some of the attributes of an *endorsement* label, which assists water utilities and their customers to identify models for rebate purposes, rather than as a purely comparative label, which encourages and enables buyers to compare the water efficiency of different models.[74]

5.78 Notwithstanding the expense associated with such an activity the Committee considers that there would be benefit in such actions as they would raise awareness and educate consumers of the characteristics of the species and also encourage shifts in purchasing patterns away from invasive plant species to the many that are benign. There are also strong precedents of inclusion of useful consumer information on products for health reasons, ranging from information on cigarettes to the composition of foods, including additives.

5.79 Additionally, the Committee encourages the NGIA to take a leadership role in raising awareness. It encourages members of the industry to seek assistance in raising awareness.

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73 Mr Glanznig, *Committee Hansard*, Canberra, 18 June 2004, p. 33.

74 George Wilkenfeld and Associates Pty Ltd et al. *A Mandatory Water Efficiency Labelling Scheme for Australia*. Final Report to Environment Australia. 2003. P.2.

Recommendation

The Committee recommends that the Commonwealth, States and Territories, the NGIA and other stakeholders, including conservation NGOs, establish a process under the proposed National Weeds Action Plan to examine the merits of a mandatory labelling scheme on invasive garden plants.

Recommendation

The Committee recommends that the nursery and gardening industry give consideration to labelling of all invasive plants which, while able to be sold legally, may have invasive characteristics and should be managed responsibly.

5.80 The Committee heard that the trade in invasive weedy species is encouraged and promoted by popular gardening and lifestyle television programs. Ms Renae Laverenz submitted:

> Irresponsible media representation should be controlled and regulated. The February 1999 issue of Burke's Backyard magazine recommended one of Australia's worst environmental weeds, blue thunbergia ('blue trumpet vine'), as a great climber to grow in northern regions. In fact, this rampant forest-invader has been banned as noxious by the northern shires of Hinchinbrook, Cook, Cardwell, Douglas, Johnstone and Mulgrave, making it illegal to grow across much of north Queensland. Other serious weeds encouraged by the magazine include Spanish lavender - declared noxious in most of Victoria; and the Western Australian bluebell creeper (Sollya heterophylla) - which happens to be the most invasive weed in Arthurs Seat State Park near Melbourne. The magazine does put in the occasional warning: a January 1999 article promoting gloriosa lily (Gloriosa superba) warned of its weediness in north Queensland, but failed to explain that it is even more invasive in southern Queensland and northern New South Wales.[75]

5.81 Similarly, Dr Rachel McFadyen from the CRC for Australian Weed Management told the Committee that:

> In the March issue of Gardening Australia, which is a generally responsible gardening magazine widely sold throughout supermarkets, Mexican feather grass and two other weedy grasses were promoted as suitable plants for a water-saving, prairie style garden. The magazine quoted four nurseries in New South Wales and Victoria as possible sources for the plants. I do not mean by that that they are sources for Mexican feather grass. The article had a picture of the garden, gave the name of Mexican feather grass—*Stipa tenuissima*—among other plants and gave four nurseries where you could source plants.[76]

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75 Ms Renae Laverenz, *Submission 27a*, p. 84.

76 Dr Rachel McFadyen, CRC for Australian Weed Management, *Committee Hansard*, Brisbane 14 April, 2004, p. 21.

5.82 The Committee considers that every effort should be made by the media to ensure that it is providing correct information.

Recommendation

Gardening and lifestyle programs should be required to include warnings about the appropriateness of the plants suggested on there shows. Such warnings could require an indication of the country of origin of the plant, the areas it is indigenous to, and whether it has proven invasive elsewhere.

Holistic response plans

5.83 Due to the often conflicting economic, environmental and social impacts of invasive species, it is essential that plans for the management of invasive species are holistic and look at the interactions of introduced and native species before action is taken.

5.84 Every action has a reaction and the Committee heard evidence that the interaction of pest animals, such as fox-rabbit-cat interactions need to be understood if they are to be effectively managed. Dr Tony Peacock, CEO, Pest Animal Control CRC, told the Committee that:

> That [the interaction of pest animals] is very important, because if you knocked out foxes, cats come up and they do not prey on the same species, so you need to understand the ecosystem effects.[77]

5.85 A project to restore habitat and reintroduce native species, called Operation Bounceback, has been conducted in South Australia since 1992. It is an ecological restoration program in the Gammon and Flinders Ranges National Parks. Operation Bounceback is working towards the restoration of ecosystems to protect native species and to reintroduce some native species. The project has not focussed on addressing single species problems but taken a landscape scale approach to management and considered all elements of the ecosystem.

> The goal of the program has been to link integrated feral animal control to natural recovery processes, weed control and strategic revegetation and fauna recovery initiatives. [78]

5.86 The success of the program can be seen through the recovery of Yellow-footed Rock-wallaby populations, dramatic reductions in introduced animals and the return of native perennial grasses. Mr Edward MacAlister told the Committee that the reintroduction of the Yellow-footed Rock-wallaby is:

> one of only nine percent of reintroduction projects for macropods on the mainland which would be regarded as being successful, and it is being used as a model for other such projects.[79]

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77 Dr Tony Peacock, *Committee Hansard*, Canberra, 18 June 2004, p. 17.

78 Bounceback 2000 website at: *www.nrm.sa.gov.au*.

5.87 A case study on Project Eden, a commendable initiative by the State Government of Western Australia, is detailed below.

Case Study: Project Eden[80]

Project Eden is an arid-zone conservation program set in the Peron Peninsula of the Francois Peron National Park, which is part of the Shark Bay World Heritage Area in Western Australia. It is a project of the Western Australian Department of Conservation and Land Management (CALM).

The intention of the project is to reconstruct and rejuvenate the ecosystem, by reintroducing endangered wildlife, to the 1050 square kilometre Peron Peninsula. This area has suffered predation by foxes and cats and competition from introduced grazing animals such as rabbits, goats and sheep. While Peron's journals and other historical relics suggest that, despite its harsh and arid climate, the area had supported over 20 species of land mammals, within 200 years less than a third of these species could still be found inhabiting the degraded landscape.

The groundwork for Project Eden, which officially commenced in 1995, was the purchase in 1990 of the Peron pastoral station by CALM. Within five years, more than 15000 sheep and 11000 feral goats were removed, principally using mustering supplemented with aerial and shooting programs.

A 3.4 kilometre fence has been constructed to keep out feral animals. In its first stage, the project involved the use of many diverse and inventive techniques, including baiting with 1080 (monofluoroacetate). By the end of 2001, foxes had all but been eradicated and around 70 per cent of feral cats had been removed. Difficulties with the willingness of feral cats to take the dried baits containing 1080 led to the development of innovative lures using sound and smell. These cats are providing CALM with a database of biological information, which will be an invaluable aid to research into the lifestyle and behaviours of the feral cat.

The second stage is aimed at re-establishing, through re-introductions, long term viable populations of species lost from Peron. Woylies, bilbies and malleefowl have already been released while species such as the red-tailed phascogale, rufous hare-wallaby, western barred bandicoot and chuditch may soon be reintroduced.

The Western Australian Government is to be commended for its efforts to reverse the long process of ecological destruction and to seek to return the Peron Peninsula to a more natural state. Much will depend on the extent to which the habitats recover, but the key is that a determined start has been made.

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79 Mr Edward McAlister, *Committee Hansard*, Adelaide, 28 June 2004, p. 60.

80 Information from: *www.naturebase.net/national_parks/previous_parks_month/peron.html; www.sharkbay.org/terrestial-environment/page_06.htm and www.sharkbay.org/terrestial-environment/page_09.htm*.

Commonwealth action

5.88 As noted above, the Commonwealth's role in relation to invasive species within Australia is ubiquitous, although its involvement is closely tied to the States' and Territories' primary responsibility for land management matters within their respective jurisdictions. It provides national leadership, for example in relation to WONS. It is involved in incursion management. It administers the bioconservation aspects of the EPBC Act. It provides funding for research and specific on-ground activities, and convenes national consultative committees. It is also responsible for management of Commonwealth lands, including national parks. In the sections that follow, the Committee examines each of these roles.

Environment Protection and Biodiversity Conservation Act 1999 (EPBC)

5.89 As discussed in Chapter 2 the EPBC Act administer by the Department of Environment and Heritage, is the key Commonwealth legislation dealing with the conservation of biodiversity by providing protection for:

- listed species and communities in Commonwealth areas (this includes listed threatened species and ecological communities, listed migratory species and listed marine species);
- cetaceans (all whales, dolphins and porpoises) in Commonwealth waters and outside Australian waters;
- protected species in the Territories of Christmas Island, Cocos (Keeling) Islands and Coral Sea Islands; and
- protected areas (World Heritage properties; Ramsar wetlands; Biosphere reserves; Commonwealth reserves; and conservation zones.
- wildlife species and wildlife products subject to international trade.

5.90 The Act provides for:

- the identification of key threatening processes;
- the protection of critical habitat;
- the preparation of:
  - recovery plans;
  - threat abatement plans;
  - wildlife conservation plans;
  - bioregional plans;
- conservation agreements;
- the issuing of conservation orders and
- the regulation of exports and imports of live animals and plants, wildlife specimens, and products made or derived from wildlife.

5.91 The EPBC Act essentially comprises two parts:

- i) a process for assessing proposed 'actions';
- ii) biodiversity conservation through listing endangered species and communities.[81]

5.92 DEH told the Committee that:

> The two key elements [of the Environment Protection and Biodiversity Conservation Act 1999] relevant to invasives are that the legislation allows for the identification and listing of key threatening processes and, should the minister consider it appropriate, the development of a threat abatement plan. The second part of the legislation's most relevant provisions in relation to invasives concerns import controls, which allow for the assessment of plants or animals to be imported into Australia and placed on two schedules.[82]

5.93 However, the Invasive Species Council stressed in its submission:

> The damage to biodiversity brought about by invasive species is not expressly acknowledged as a matter of national environmental significance within the EPBC Act. Under the current EPBC Act, the Commonwealth has restricted its own ability to assertively take on an effective regulatory role in the control and management of invasive species.[83]

Identification and listing of key threatening processes

5.94 The EPBC Act deals with biodiversity conservation principally through listing endangered species and communities. Recovery and threat abatement plans and management plans for those species listed as endangered fall under this part of the EPBC Act. DEH submitted:

> The current EPBC Act arrangements concerning the development of national threat abatement plans are adequate and effective in developing the initial framework for identifying the range of research, education and on-ground control activities required to manage a national key threatening process. The EPBC Act requires that each national threat abatement plan must be reviewed within five years.[84]

5.95 Section 183 of the EPBC Act allows the Minister to publish a list of key threatening processes. A process is defined as a threatening process if it threatens, or may threaten, the survival, abundance or evolutionary development of a native species or ecological community. A threatening process could be treated as a key threatening

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81 Invasive Species Council, *Submission* 33d.

82 Mr Jonathan Miller, Department of Environment and Heritage, *Committee Hansard,* Canberra, 26 November 2004, p. 2.

83 Invasive Species Council, *Submission 33*, p.2 of Attachment 2.

84 Department of Environment and Heritage, *Submission* 61, p. 8.

process if it has an adverse impact on a native species or ecological community listed as a threatened species or ecological community.

5.96 Submitters were critical that listing only occurs when a species is close to extinction and when action to reverse this may be costly or ineffective. For example:

> In doing so, however, its provisions to "protect native species" are only concerned with being able to "prevent the extinction, and promote the recovery, of threatened species". Once again, the main focus is on remnant populations and the final extinction events. The long-term processes that have led to species rarity and vulnerability in the first place are given "no countenance".[85]

5.97 The Invasive Species Council submitted:

> In other words, it is only when the threatening process puts at risk the very existence of a threatened species or ecological community will the process be recognised as a 'key threatening process' warranting specific action. The Minister has listed the following 'key threatening processes' relating to invasive species:
>
> - Competition and land degradation by feral Goats
> - Competition and land degradation by feral Rabbits
> - Dieback caused by the root-rot fungus (Phytophthora cinnamomi)
> - Predation by feral Cats
> - Predation by the European Red Fox (Vulpes vulpes)
> - Predation, Habitat Degradation, Competition and disease transmission by Feral Pigs;
> - The reduction in biodiversity of Australian native fauna and flora due to the red imported fire ant (Solenopsis invicta).[86]

5.98 All but two of the existing listed key threatening processes have approved threat abatement plans in place. The Committee believes that this approach is limited as overwhelmingly the evidence to this inquiry argues the need for early intervention in addressing invasive species or threatening processes.[87]

5.99 Under this process the Minister must decide whether a 'threat abatement plan' should be made within 90 days of the listing of a key threatening process. However, section 270B(6) provides that the Minister must not make a threat abatement plan for a key threatening process which occurs wholly or partly outside a Commonwealth area unless the Minister can be satisfied that it is reasonably practical to make the plan jointly with each of the States and self-governing Territories in which the process

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85 Ms Renae Leverenz, *Submission* 27a, p. 27.

86 Invasive Species Council, *Submission* 33, p. 3.

87 CRC for Australian Weed Management, *Submission* 22.

occurs within 3 years of deciding to develop such a plan.[88] This issue of lack of jurisdictional coordination was raised by a number of submitters:

> Even if, by some stroke of luck, the Minister chose to adopt a threat abatement plan to address growing destruction caused by invasive species, there would still be a significant problem: threat abatement plans only bind the Commonwealth and Commonwealth agencies - States and Territories are not necessarily bound to co-operate.[89]

5.100 The lengthy timeframes associated with listing and plan approval was seen to undermine the effectiveness of the threat abatement plans (TAP). The Queensland Government contended that:

> The primary tool for co-ordinated action on environmental pests by DEH is the threat abatement planning process provided under the EPBC Act. The existing TAP framework may have limited capacity to assist in co-ordinated action for the early eradication of a pest such as the Fire Ant. In theory a TAP could have been used to establish a plan for the eradication effort agreed by funding partners. However, the capacity to co-ordinate quick action for this type of species is crucial to any attempt at eradication. The statutory timeframes associated with listing and approval of such a plan, are unworkable in these circumstances.[90]

5.101 The World Conservation Union (IUCN) contended that there is a continuing lack of political will to act in a timely manner on TAP and recovery plan processes:

> In 1996, the Spotted Handfish became the first marine fish to be listed as endangered by the Commonwealth, following its listing under Tasmanian Fisheries legislation the year before. In the same year, it was listed as Critically Endangered by IUCN. It is found in only three small colonies of less than 200 adult fish each….
>
> Ms Milne (from IUCN) has called on the new federal Environment Minister, Hon. Ian Campbell to release a five-year Recovery Plan and allocate adequate funding to conduct the research, toxicity trials, survey work and public awareness needed to secure the species. The 2002-2006 Spotted Handfish Recovery Plan has been with the Commonwealth for the past two years but has yet to be implemented.[91]

5.102 Similarly, the Committee was informed that at a State and Territory level, government action in regard to identified threatening process is also protracted.

> Current Commonwealth, state and territory statutory and administrative arrangements are failing to address the threat posed by invasive species.

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88 Invasive Species Council, *Submission* 33, p. 3.

89 Ms Renae Leverenz, *Submission* 27a, p. 29.

90 Queensland Government, *Submission* 43, p. 19.

91 The World Conservation Union, *Critically Endangered Spotted Handfish May Become The First Australian Marine Fish To Go Extinct*, media release, 28 July 2004,at: http://www.iucn.org/info_and_news/press/pr-spotted-handfish.pdf.

> Greater political commitment to the principles of weed related policy and legislation is required. For example, the invasion by *P.undulatum* into habitats outside its natural range in Victoria was listed as a 'potentially threatening process' in 1994 under Schedule 3 of the Victorian Flora and Fauna Guarantee Act 1988. An Action Statement has not yet been developed for this listing, despite the legislative requirement that this occurs as soon as possible after the listing process.[92]

5.103 Current funding arrangements were seen as a barrier to the effectiveness of TAP in managing invasive species. Dr Cas Vanderwoude, a technical advisor to the Invasive Species Specialist Group (ISSG) of the World Conservation Union (IUCN), submitted that while regional approaches to managing invasive species are highly effective the current funding arrangements for TAP makes a regional approach difficult:

> Any threat abatement plan for invasive species should start at regional levels as this is a sound method of moving risk off-shore. Current Australian legislation does not consider this strategy and as a result there is no funding mechanism through which planning and implementation of regional plans for preventing incursions of Red Imported Fire Ants and other invasive ant species can be implemented.[93]

5.104 Similarly, the Queensland Government argued:

> Treat Abatement Plans (TAPS) under the EPBC Act provide a national plan, however they are often not fully implemented. It is our perception under current Commonwealth resourcing it is likely that the development of more TAPS may result in less money for the implementation of current TAPS. Therefore if more funds are not assigned for national invasive species management less activity is likely on these species.[94]

5.105 CSIRO submitted that the current Act had the potential to deal with invasive species but that regulations under the Act had not as yet been used:

> The Act certainly provides for regulations to control invasive species, but it appears not yet to have been invoked to this end. The potential for development of regulations under the Act should be explored. It is also not clear whether the EPBC Act provides for dealing with potential threats such as invasive species that have not yet arrived in Australia, as opposed to more immediate threats.[95]

5.106 In the Committee's view the Government is not using the TAP process in a timely manner nor adequately funding the process to address the issues of invasive species.

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92 Dr Trudi Ryan, *Submission* 26, p. 3.

93 Dr Cas Vanderwoude, *Submission* 19, p. 1.

94 Queensland Government, *Submission* 43, p. 20.

95 CSIRO, *Submission* 34, p.23.

Recommendation

The Committee recommends that the Threat Abatement Process (TAP) be reviewed to enable threatening processes to be listed prior to threatened species reaching a critical stage.

Section 301A

5.107 Section 301A of the *Environment Protection and Biodiversity Conservation Act 1999* allows for the control of non-native species through the listing, prohibition of importation and prohibition of trade in members of a species included in the list.

5.108 The regulations may:

(a) provide for the establishment and maintenance of a list of species, other than native species, whose members:

- (i) do or may threaten biodiversity in the Australian jurisdiction; or
- (ii) would be likely to threaten biodiversity in the Australian jurisdiction if they were brought into the Australian jurisdiction; and

(b) regulate or prohibit the bringing into the Australian jurisdiction of members of a species included in the list mentioned in paragraph (a); and

(c) regulate or prohibit trade in members of a species included in the list mentioned in paragraph (a):

- (i) between Australia and another country; or
- (ii) between 2 States; or
- (iii) between 2 Territories; or
- (iv) between a State and a Territory; or
- (v) by a constitutional corporation; and

(d) regulate and prohibit actions:

- (i) involving or affecting members of a species included in the list mentioned in paragraph (a); and
- (ii) whose regulation or prohibition is appropriate and adapted to give effect to Australia's obligations under an agreement with one or more other countries; and

(e) provide for the making and implementation of plans to reduce, eliminate or prevent the impacts of members of species included in the list mentioned in paragraph (a) on biodiversity in the Australian jurisdiction.[96]

5.109 The Invasive Species Council outlined the regulations under section 301A:

In relation to biodiversity conservation, section 301A gives the Commonwealth the potential to address the issue of species "other than

96 *Environment Protection And Biodiversity Conservation Act 1999* - Section 301a.

> native species" which do or may threaten biodiversity in Australia or which would be likely to threaten biodiversity in Australia if brought into Australia. Section 301A provides that the Regulations may provide not only for the establishment and maintenance of a list of such non-native species, but that the Regulations could provide for the regulation or prohibition of the importation into Australia of such listed non-native species and even the regulation and prohibition of the trade in such species not only internationally but within and between the States and Territories.[97]

5.110 As discussed earlier in this chapter, the Committee heard a substantial amount of evidence which was critical of the on-going trade in invasive weed species between States and Territories. The provision of s301A would allow the Commonwealth to regulate and control this trade.[98] However, the Committee heard that the Commonwealth Government had not utilised the available provisions under section 301A to manage the importation, transportation and sale of known invasive species.[99] The Queensland Government submitted:

> Queensland has not formally requested the Commonwealth to use Section 301, although its possible use has been raised by Queensland and other States but rejected by the Commonwealth in officer to officer discussions.[100]

5.111 Similarly, the Queensland Farmers Federation also questioned the apparent reluctance to use existing powers under Section 301A under the EPBC Act:

> Is the Bill necessary when a current provision of the EPBC Act, section 301A, which provides for regulations to control non-native invasive species and would deliver similar outcomes as the Bill, is not being utilised?[101]

5.112 The Commonwealth Government's hesitancy to implementing section 301A to ban the trade in invasive species appears to be driven by concerns over funding responsibility and cost of monitoring and compliance. DEH's Dr Rhondda Dickson told the Committee:

> Section 301A, if the government chose to, could be used to ban the trade of a list of species that would have to be established under the act. That is one of the options that could be looked at in the reviews of the national framework. It is a matter of looking at which is the most cost-effective and efficient way of doing things…. We need to consider the considerable cost as well of monitoring the compliance with any regulations that may be set

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97 Invasive Species Council, *Submission* 33d, pp. 2-3.

98 Invasive Species Council, *Submission* 33, p.5.

99 Queensland Government, Department of Natural Resources, *Committee Hansard*, Brisbane, 14 April 2004, p. 8.

100 Queensland Government, *Submission* 43a, p. 1.

101 Queensland Farmers Federation, *Submission* 42, p. 6.

> up under the EPBC Act. So, in considering the various options, a key issue is the most effective way of doing things….
>
> The responsibility for compliance and monitoring then would fall to the Australian government. It has also been looked at under the intergovernmental agreement on marine pests and is one of the options for how you might effectively have coordinated state and territory action. But, again, I think it is something that the Australian government needs to work through with the states—to decide whether that is the most efficient option or whether working cooperatively, with the states fulfilling their commitments, might be another way. All these things are open for discussion, but certainly that is one of the options we would be looking at.[102]

5.113 In its report titled, *Invasive Plants of National Importance and their Legal Status by State and Territory*, WWF Australia stated that there is:

> strong evidence of the need for national controls, under the Environment Protection and Biodiversity Conservation Act, 1999, to prohibit the sale of invasive plants of national importance. Without such regulations, efforts by the NRM Ministerial Council and the Primary Industries Ministerial Council to establish "a national framework for preventative action" will be severely compromised.[103]

5.114 The Committee strongly urges the Commonwealth Government to pursue its environmental obligation in regard to invasive species and to continue discussions with the States and Territories to better utilise section 301A of the EPBC Act.

Funding for management

5.115 The Commonwealth provides funds for specific on-the-ground management of invasives species through the NHT. Mr Murnane of the Department of Agriculture, Fisheries and Forestry said:

> the Natural Heritage Trust is essentially a funding program for on-ground environmental works rather than being specifically designed to support research, but there is scope to support particular projects that may have an applied result later on.[104]

5.116 It was submitted that the Commonwealth is under-funding invasive species management in Australia:

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102 Dr Rhondda Dickson, Department of the Environment and Heritage, *Committee Hansard*, Canberra, 18 June 2004, p. 65.

103 A Glanznig and O Kessal, *Invasive Plants of National Importance and their Legal Status by State and Territory*, WWF Australia, Sydney, 2004, p. 4.

104 Mr Simon Murnane, Department of Agriculture, Fisheries and Forestry, *Committee Hansard*, Canberra, 18 June 2004, p. 66.

> The level of national investment to abate the invasive species threat is grossly inadequate relative to current and projected costs. Although there are no estimates of aggregate national expenditure, the Federal government only spends about $3 million per annum on weed control. The Federal government of the USA invests over a billion dollars per year on invasive species prevention and control.[105]

5.117 Similarly, Dr Barry Traill of the Invasive Council told the Committee:

> I have an overarching comment which goes to funding. I am sure that as professional politicians you hear 'more money' all the time. But this is a case where there are demonstrated benefits from acting early and quickly. The recent paper by the weed CRC … really emphasised the economic cost. That is just the economic cost; if we had the resources we could do a similar paper on the environmental cost, which you cannot quantify in terms of a billions of dollars figure but you could quantify in terms of hectares of habitat lost or species lost and so forth, which would be equally scary. Money spent on eradication saves our economy, saves our environment and is an investment that works. It is not a drip-feed forever if we are talking about eradicating new invaders.[106]

5.118 Inadequate funding and poor on the ground coordination were raised as major weaknesses in the development of a coordinated national approach to weed management. The CRC for Weed Management told the Committee that:

> The National Weed Strategy and the focus on the 20 Weeds of National Significance (WONS) is an excellent initiative of this Government but needs better on-ground coordination and continuity. For example, the agreed National Management Strategy (2001) for pond apple, one of the WONS that is rapidly invading swampy areas of far north Queensland, calls for its eradication over a 20 year period. Yet virtually no Commonwealth funds were allocated for pond apple control or management during 2001 or 2002, and as a result its spread is continuing unchecked except where some locally funded groups are functioning. It is still not clear whether funding for management of the WONS will continue after 2004, and there are no alternative sources of Commonwealth funds available for management of environmental weeds. Money for management of the 20 WONS is also allocated to Regional Bodies or community groups on a short-term basis (maximum 3 years) and this does not promote long-term nationally coordinated action to manage even the most serious weeds.[107]

5.119 The CSIRO argued that funding for the management of invasive species is inadequate and that this issue is compounded by the fact that funds delivery via the Natural Heritage Trust (NHT), under the first phase (1996/7 – 2001/02), was generally provided year-to-year or for 18 months at a time, which did not allow for long term

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105 Invasive Species Council, *Submission* 33, pp. 10 – 11.

106 Dr Barry Traill, Invasive Species Council, *Committee Hansard*, Brisbane, 14 April 2004, p. 49.

107 CRC for Australian Weed Management, *Submission* 22, p. 9.

strategic control measures to be planned.[108] Dr McFadyen argued that funding for the Weeds of National Significance program was also negatively effected by the year-by-year or 18 month Natural Heritage Trust funding cycle:

> It is completely ineffective for any strategic work whatsoever. Take, for example, the issue I mentioned of the mimosa pigra outbreak in Queensland. If that is to be effectively managed, money has to be put into it now and kept going for the next five years and possibly 10 years. The WONS system, with year-by-year funding, simply does not allow that. It is not about a year-by-year review; no-one would have a problem with that. It is about committing the funds for five years, even if they are reviewed every year.[109]

5.120 The Committee heard that WONS has been funded for three to four years at about $20 million in total—a million dollars per weed and that the funding is fairly static and often poorly directed. This arrangement appears to narrow the focus and effectiveness of WONS and less populated States claim to have been disadvantaged. Mr Noel Richards from the Weed Management Society of South Australia argued that WONS:

> … has been concentrated in higher population states, as you might expect. But the weed problems are no less severe here. Of course, WONS are limited to those species. Natural Heritage Trust funding, for example, must be addressing WONS or the Commonwealth government's environmental alert list species. So it is quite limited in its focus. Whilst there are a number of WONS species that are an issue here, there are many others that are not WONS that are major issues.[110]

5.121 Similarly, the State Council of Rural Lands Protection Board submitted that:

> Commonwealth funding for feral animal management and control administered through the Bureau of Rural Sciences has significantly declined over the past few years, with the exception of the $1 million Pest Animal Management Grant Program announced as part of the Commonwealth Government's drought assistance contribution in November 2002. Today more than ever, funds need to be made available to assist in coordinated control efforts and to further refine and develop pest and feral animal control techniques.[111]

5.122 The Committee heard that strategic approaches to invasive management are hampered by jurisdictional conflict over forward commitments for funding.[112] And

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108 CSRIO, *Submission* 34, p. 23.

109 Dr Rachel McFadyen, *Committee Hansard*, Canberra, 26 November 2003, p. 13.

110 Mr Noel Richards, Weed Management Society of South Australia, *Committee Hansard*, Adelaide, 28 June 2004, p. 57.

111 State Council of Rural Lands Protection Board, *Submission* 32, p. 5.

112 Tasmanian Weed Society, *Submission* 18, p. 5.

that, as discussed in Chapter 3, current NHT funding arrangements through regional authorities encourages a focus on widespread established weeds which have already damaged the environment and for which eradication cannot be achieved.[113] Mr Tim Low, highlighted the problem associated with decentralising funding to regions which fragments possible responses to national problems:

> One of the problems that have been identified for me through the hymenachne management group is that they have been told that to get funding to control hymenachne they are supposed to go through the NRMs, the regional groups. This is not an appropriate process for a national weed. It depends on those groups deciding that that particular weed is a priority for them, and you are going to get an uneven approach. This is not consistent. If you are saying that this is a national weed, it needs a national response; but then you decentralise the funding.[114]

Funding for research

5.123 Commonwealth funding for research is delivered through funded research institutions such as CSIRO. These research institutions are increasingly being required to seek co-investment from external investment to match core funding. The Committee heard that over the past decade funding to research institutions has been steadily decreasing and is extremely inadequate.

> Despite the huge economic and environmental costs of invasive species, several reviews (including the national State of the Environment report) highlight the grossly inadequate funding being invested in preventing and controlling invasive species problems. In particular, far more committed funding is required for eradication of serious sleeper weed and feral pest species, and committed long term funding (at least 10 years) for the development of new integrated biocontrols for additional serious widespread invasive species.[115]

5.124 The short term nature of research funding cycles was raised as a significant issue. A number of witnesses argued that short funding cycles disallowed the development of new research projects. Dr Nicholas Bax told the Committee:

> This is quite a new area of research. We are looking at potential biological control. We have also considered the option of genetic control of this species [Northern Pacific Sea Star]. At the moment long-term funding has been rather restricted for management and control, so we have not progressed that very far.[116]

5.125 Similarly the Committee heard:

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113 Council of Australian Weed Societies, *Submission* 68.

114 Mr Tim Low, Invasive Species Council, *Committee Hansard*, Brisbane, 14 April 2004, p. 49.

115 WWF Australia, *Submission 30*, p. 57.

116 Dr Nicholas Bax, CSIRO, *Committee Hansard*, Adelaide, 28 June 2004, p. 33.

> The other thing with these short-term funding arrangements is that it is a bit difficult to start a totally new program in biocontrol. It works well in a sense when we are in the delivery phase and engaging the community, but to really start from scratch you would at least need a three-year block to have an idea, for example of surveying and the initial testing and that sort of thing.[117]

5.126 The detrimental effect of short term funding cycles was raised by Dr Louise Morin from the CSIRO who argued that research could become fragment and did not represent value for money as short term funding cycles disallowed the consolidation of work previously completed:

> it has been a challenge every year. To make a proper plan of, say, delivery over three years would be so much more efficient than every year having to rewrite the grant. What I find is that for the same amount of money that we get over the three years we deliver much less because it is so fragmented.[118]

5.127 Dr Peacock from the Pest Animal Control CRC told the Committee that:

> It is almost a study in worst practice research funding. I have done 10 years of research management. No-one funds for one year on long-term projects except EA [Environment Australia]. I do not have any other clients that do that. If that could be fixed, that would be a major step forward in terms of saying, 'These are the important projects. We are going to go. Foxes are not going to go away next year. We need to do some national research.' Then you get buy-in from the states to join the effort.[119]

5.128 Dr Peacock advised the Committee of the effects of short turnaround time for applying for tenders:

> For example, two tenders were let on Christmas Eve last year for a mid-January date for feral goat research. You read that and think, 'What are they thinking?'[120]

5.129 A number of witnesses highlighted that the lack of commitment to long-term funding has a detrimental impact on the ability to attract research students, resulting in a higher staff turn over. The need to encourage and maintain a pool of researcher working on the preservation of Australia's cultural and environmental heritage was highlighted by Mr McAlister who told the Committee that:

> Having post-graduate students and post-doctoral fellows employed by the appropriate C.R.C.'s to undertake both applied and, what is euphemistically called, "blue-sky" research is of paramount importance.[121]

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117 Dr Louise Morin, CSIRO, *Committee Hansard*, Canberra 18 June 2004, p. 5.

118 Dr Louise Morin, CSIRO, *Committee Hansard*, Canberra 18 June 2004, p. 6.

119 Dr Tony Peacock, *Committee Hansard*, Canberra, 26 November 2003, p. 13.

120 ibid.

121 Mr Edward McAlister, *Submission 75*, p. 5.

5.130 The Committee heard evidence that due to its unique environment Australia does not have much in common with the rest of the world in relation to invasive species R&D and therefore must develop its own pool of expert knowledge and possible solutions to indigenous problems. Dr Peacock told the Committee that:

> even when a common problem exists, such as wild horses in the United States, the approach is significantly different that we are unlikely to get any solutions to our problems without doing a lot of work ourselves.[122]

5.131 The Committee believes that research programs should be adequately funded and co-ordinated on at least a three-year cycle; and that greater support should be provided for research into pests that have not yet become established.

Recommendation

That the Commonwealth Government provide certainty of funding to research institutions, such as CSIRO and CRCs, to enable them to undertake long-term research projects.

Incursion management

5.132 While incursion management involves a range of jurisdictional issues, it is clear that a pest incursion arises from a failure of border control, a matter of clear Commonwealth responsibility. DAFF has developed arrangements in conjunction with state/territory and industry stakeholders to manage pest and disease incursions that have the potential to impact on Australia's primary industries. It stressed, importantly, that these arrangements are intended to provide for early and decisive intervention. DAFF provided the Committee with a series of four diagrams which outlined the management roles and responsibilities at a policy, operational and research level in regard to pest animals, pest plants, marine pests and weeds. These useful overviews are at Appendix 4.

5.133 At an operational level, the arrangements are largely directed at supporting national policy councils and advisory committees which:

> …function to ensure there is a coherent, consistent and concerted national approach to the management of those invasive pests and diseases that have the potential to prejudice the competitiveness and sustainability of Australia's agriculture, fisheries and forestry industries.[123]

5.134 Funding of emergency responses is critical. As DAFF pointed out: 'The cost of managing exotic pest species can be many millions of dollars and this can escalate

122 Dr Tony Peacock, *Committee Hansard*, Canberra, 26 November 2003, p. 8.

123 Department of Agriculture, Fisheries and Forestry, Submission 62, p. 5.

rapidly if decisive intervention is delayed'.[124] Mr Willcocks from the Department of Agriculture, Fisheries and Forestry told the Committee that:

> the Commonwealth and the states do have early response arrangements in place for at least three weeds to do exactly what you are talking about, to move quickly to eradicate—for kochia, Siam weed and branched broomrape. Those programs are currently going on, certainly for Siam weed and branched broomrape…. So there is another source of funding that was agreed between the Commonwealth and states for dealing with those sorts of outbreaks quickly.[125]

5.135 Similarly, Mr Roger Wickes, from the Animal and Plant Control Commission told the Committee that both the Commonwealth and States have provided funds for pest incursions:

> The Commonwealth and the states have responded and have put funding on the table. They have made us jump through a lot of hoops, but then I think that is important—because it is a lot of money—in working out where you invest your money and why you should be doing that. Yes, the Commonwealth responded quite well. We had to round up a few states towards the end, but the Commonwealth were beside us all the way. We have funding from the Grains Research and Development Corporation. The Commonwealth government helped us very much in discussing with industry their funding contribution. I think if any issue is being sorted through at the moment it is the industry's response when these incursions happen. I think the state and Commonwealth governments are responding quite well.[126]

5.136 The following is a case study of the effective eradication of a particularly unwanted incursion – the Red Imported Fire Ant.

Case study: Cost sharing arrangements in the eradication of Fire Ants

On 6 April 2004, the Committee visited the Wacol facility of the Queensland Department of Primary Industries and Fisheries for a comprehensive briefing on the National Fire Ant Eradication Program. The visit was undertaken with the approval of the Hon Henry Palaszczuk MP, Queensland Minister for Primary Industries and Rural Communities.

The Committee was hosted by Mr Keith McCubbin, Director of the Fire Ant Control Centre (FACC) and several of the centre's researchers. The group was joined by Mr Ron Beck, Acting Deputy Director-General, Department of Primary Industry and Fisheries. The visit consisted of oral presentations supported by reference to a series

124 ibid, p. 6.

125 Mr George Willcocks, Department of Agriculture, Fisheries and Forestry, *Committee Hansard*, Canberra 18 June 2004 p. 69.

126 Mr Roger Wickes, Animal and Plant Control Commission, *Committee Hansard*, Adelaide, 28 June 2004, p. 6.

of slides, followed by a Q&A session, and concluded with an inspection tour of the research facility.

Mr McCubbin briefed the Committee about all aspects of the Red Imported Fire Ant, including their potentially disastrous social and economic impacts if not eradicated. The fire ant is a native of South America, is extremely aggressive and, when disturbed, attacks en masse. It inflicts a fiery sting that will develop into a pustule. In the United States, fire ants have caused over 90 deaths and thousands have been hospitalised with allergic reactions. They prevent children from playing safely in their backyards, they can kill young animals, and impact on agricultural production.

A Benefit Cost Analysis (BCA) undertaken by the Australian Bureau of Resource Economics (ABARE) into the proposed eradication program estimated that the cost to the Australian economy over the next 30 years if the fire ant was not controlled would be $8.9 billion, especially in relation to negative impacts on tourism and property values. As such, the ant, if not contained, had the potential to be Australia's biggest environmental disaster. The ABARE analysis was based on an eradication program of $123.4 million over five years, providing a BCA of 25:1. This ratio is well above the limit where eradication is considered worthwhile, yet was considered conservative as it had not costed the loss of environment and lifestyle values that the ant would cause.

A key aspect of Mr McCubbin's presentation was the description of the governmental response once the ants had been discovered. The timetable was:

- February 2001 - identification (although it was believed that they could have been in the country for up to five years before discovery)
- February - March 2001 - emergency response phase, including the introduction of movement controls under the *Plant Protection Act 1989*.[127]
- April – August 2001 – scoping phase, including the completion of a Social Impact assessment
- September 2001 – commencement of $123.4 million, 5-year eradication program.

In February 2001 the Queensland Department of Primary Industries (as it was then called) raised an emergency response, having concluded that the pest needed controlling, based on its history as a serious pest of agriculture in North America. The initial emergency response involved several supporting agencies, including the Department of Natural Resources, Mines and Energy and the Environment Protection

127 Upgraded regulation of the movement of materials deemed to be high risk for transporting fire ants was subsequently introduced to take effect from 19 April 2004. The upgraded regulation was under amendments to the *Plant Protection Act 2002*. Source: *Agreement to support extra fire ant fight funding,* Media Statement by the Hon Henry Palaszczuk, 16 April 2004.

Agency. A Queensland Government interdepartmental working group was established in the scoping phase to provide whole-of-government service support.

US scientists briefed meetings of Commonwealth and State/Territory agricultural agencies in Brisbane in June 2001, and three options were considered:

- eradication;
- aggressive containment, focusing on pest suppression to minimise its impact; and
- facilitative management – as undertaken in Texas. Under this approach, the Government adopts the role of providing advice on management options based an government-funded research, but efforts to further control (but not eradicate) are funded by individuals and businesses.

An urgent response to the incursion was considered extremely important. Eradication was agreed as the preferred option, given the opinion of fire ant experts that it was technically feasible and the most cost effective. The US scientists advised that natural spread by winged queen ants would re-commence with the onset of warmer weather and a delay of months in the commencement of the campaign would result in the area of infestation extending out by two or three kilometres. Failure to commence treatments in the spring of 2001 would have effectively doubled the estimated cost of treatment for the first year and significantly reduced the chance of successful eradication.

Following the scoping phase, a National Fire Ant Eradication Program was put together with nationally cost shared funding, with QDPI as the lead agency. The then Standing Committee on Agriculture and Resource Management (SCARM) endorsed this option, and referred it to the Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ) for a decision on budget support for a $123.4 million program over five years. This was given in principle support on 20 July 2001. The overall budget was subsequently increased to $144.9 million in May 2002 to cater for an expanded area as a result of further surveillance, better delimiting the spread.

Because the impacts were recognised to include a potential impact on agriculture beyond the borders of any one State, existing national cost sharing principles were used. These arrangements – first established by the then Australian Agricultural Council in February 1977 – see the costs of approved eradication measures being shared on a 50:50 basis between the Commonwealth and the States, with the sharing of the States' contribution being assessed on the size of the industry at risk in each State.[128] In the case of the fire ant program, all States contribute on a per-capita basis recognising the impact would be on the entire community, not just agriculture or a

128 Department of Agriculture, Fisheries and Forestry, *Submission* 62, p. 7.

specific industry. Thus NSW and Victoria make a greater contribution than Queensland, despite the outbreak being contained within Queensland.

The Natural Resource Management Ministerial Council now has oversight of the program. On 16 April 2004, shortly after the Committee's visit, Mr Palaszczuk announced that the Queensland Government had secured in principle agreement for an extra $37.5 million for the fire ant eradication campaign. On the basis that the extra funding was contingent on individual government budgetary considerations, aggregate funding would total some $175.4 million over six years.[129] By the end of June 2004, some $109.6 million had been expended.[130]

Failure to secure national funding for the eradication program would have placed the Queensland Government under pressure to implement an ongoing facilitative management program to assist industry and the community to manage the pest. The cost of such a program was estimated at $2 million annually, depending on the level of 'subsidisation' of control activities undertaken by industry and the community.

A 2002 study by Moloney and Vanderwoude found that if the fire ant had been allowed to spread throughout Australia unimpeded, it would occupy any land with mean annual rainfall exceeding 510 mm, excepting areas that experience extremes of cold. Predictive modelling of the expected rate of spread showed that at least 600,000 square kilometres and as much as four million square kilometres could be infested by 2035.

Outside Queensland, the National Red Imported Fire Ant Surveillance Program has been implemented, focusing on active surveillance of high-risk sites such as ports and airports. The Program is coordinated in Canberra through the Office of the Chief Plant Protection Officer. States and Territories are required to report their activities through this office.

Mr McCubbin advised the Committee that the first three years of the Program had been spent treating known infestations, detecting any new or previously unknown infestations, and minimising the risk of spread to new areas. The final two years (now extended to three) will be spent monitoring the treated areas and eradicating any remaining small infestations. The emphasis will be placed on locating and eliminating the last nest. It was estimated that 97.5% of properties in the defined treatment zones were clear and, apart from continuing physical checks by the on-the-ground surveillance workforce of some 400 personnel, techniques based on multi-spectoral imaging and the like are also being employed. Modelling of fire ant habitat preferences using satellite imagery has been used to identify areas of land which are unsuitable for fire ants, identifying some 13000 hectares (or half the current

129 *Agreement to support extra fire ant fight funding,* Media Statement by the Hon Henry Palaszczuk, 16 April 2004.

130 AAP, *Fire ant fight has cost nation $109 million so far*, 15 July 2004.

surveillance area) not needing FACC attention, at a saving of some $4 million per annum.[131]

This case study is one of the most impressive examples of what can be achieved when any part of Australia is confronted with a potentially massive ecological and economic threat. It is a remarkable example of intra- and intergovernmental cooperation, demonstrating the effectiveness of the cooperative federalist system when it is confronted with a sufficiently massive threat. In response to questions from Committee members about any concerns he had held with the process, Mr McCubbin spoke of the early period of uncertainty while funding approval was awaited, especially while awaiting confirmation of the financial involvement of the other States. DPI had seen the need to take the lead but there was a reluctance to push too far ahead without guaranteed funding. He noted that there was also some element of 'Russian Roulette' in trying to recruit a large number of personnel in a hurry before funding was assured. He also emphasised the need to recruit good staff, which again limits the speed with which such programs can move from the planning to implementation stages.

Each Committee member was presented with a comprehensive publicity pack about the fire ant threat and the details of the eradication program, containing brochures, fridge magnets, and identification charts. These had been given wide distribution around residents of the affected areas. The success of the program demonstrates the benefits of quick action at a governmental level, supplemented with community education and involvement.

The Committee wishes to express its appreciation to Mr Palaszczuk for agreeing to allow the Committee to visit the Wacol facility and to Mr McCubbin and his dedicated team of staff for their hosting of the Committee and their comprehensive and informative presentations.

5.137 There are a number of common principles in responding to any invasive species regardless of taxon (plant or animal) and these can be applied to assessing the cost-benefit and feasibility of response, particularly once the quarantine barrier has been crossed.[132] In South Australia the Animal and Plant Control Commission has developed the follow protocol to manage incursions.

> The Commission has developed an Incursion Management Protocol to ensure that South Australia has appropriate measures in place to minimise the adverse effects of future incursions of exotic plant and vertebrate animals into South Australia.
>
> In preparation for, or in the event of an incursion, South Australia will have in place measures that:

131 See also: *Satellite assists in fire ant eradication,* Media Statement by the Hon Henry Palaszczuk, 28 April 2004.

132 Bureau of Rural Science, *Submission* 62a, p. 5.

- identify the strategies and actions to be adopted in the event of an incursion;
- define the roles and responsibilities of personnel responding to an exotic vertebrate animal or plant incursion;
- outline operational procedures and plans to evaluate and co-ordinate the response;
- ensure rapid and effective decision making on what specific actions should be taken to manage an incursion;
- provide clear documentation and relevant contact details.

Provide administrative arrangements that will:

- ensure integration and co-operation between the Protocol and other national and state plans and strategies;
- provide appropriate public information and education;
- identify arrangements to ensure on-going management of incursions; define arrangements to ensure effective implementation and review of the Protocol.[133]

5.138 The Commission submitted that:

> Responses to incursions of new pests are often expensive and can be difficult to negotiate, as they require a funding commitment that often extends beyond several electoral cycles. However, the cost of eradicating a pest before it becomes widely established offers significant potential long-term savings. Cost-sharing arrangements and responsibilities between the Commonwealth, states and other stakeholders for incursion management should be clarified and standardised.[134]

5.139 The need for the Commonwealth Government to take a significant role in the management of pest incursions was raised by the Tasmanian Government which submitted:

> The Tasmanian Government considers that some pest incursions represent such a threat to Australia's natural heritage that they must be addressed at the national level. The processes exist to allow this to occur but I do not believe that the Australian government has accepted an appropriate share of the burden of incursion management in such matters of national importance.[135]

5.140 The Nature Conservation Society of South Australia also proposed that:

> It is recommended that the Commonwealth accept responsibility for the coordination of a rapid response program. Such a program would require a comprehensive database of the location of existing invasive species, and a

133 Animal and Plant Control Commission South Australia, *Submission* 15, p. 7.

134 ibid, p. 9.

135 Tasmanian Government, *Submission* 64, p. 1.

> network of people in the field who are able to receive rapid support for eradicating any new incursions. Such a program could utilise many of the volunteer and existing paid staff currently spending much of their time in the field.[136]

5.141 Plant Health Australia submitted that as a result of the absence of an agreed national emergency plan for exotic plant pests the organisation had begun negotiation with key stakeholder to develop an endorsed emergency response plan:

> Plant Health Australia is currently negotiating new cost sharing agreements for the emergency eradication of exotic plant pests. These arrangements will replace the current cost-sharing arrangements between the Commonwealth, state and territory governments and will include cost sharing measures with related plant industries.[137]

5.142 In June 2004 Plant Health Australia launched PLANTPLAN Australia's first national emergency preparedness and response guidelines for the plant industry. In a media release Mr Andrew Inglis the PHA Chairman said:

> PLANTPLAN is a significant milestone which will introduce far greater coordination and consistency in plant pest responses. By adopting common and enhanced emergency response procedures, government, industry and individual producers will benefit from more rapid, consistent and efficient responses to harmful pest incursions.
>
> The new Australian plan outlines the approach to responding to emergency plant pest incursions. The emergency response procedures, roles and responsibilities, and decision making processes described in PLANTPLAN are generic for all plant pest emergencies, and are triggered by detection of an emergency plant pest.
>
> PLANTPLAN provides a description of the general procedures, management structure and information flow system for the handling of emergency plant pest incursions at the national, state/territory and district levels. This includes the operations of control centres, principles for the chain of responsibility, functions of sections within control centres, and role descriptions.[138]

5.143 The Committee is reassured at the adequacy of the emergency arrangements for dealing with incursions that might adversely affect primary industries. It notes, however, that incursions of an environmental impact seem to have slipped through the cracks. Timely action against environmental pest incursions is equally important.

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136 The Nature Conservation Society of South Australia, *Submission* 76, p. 5.

137 Plant Health Australia, *Submission* 9, p. 3.

138 Plant Health Australia, *PLANTPLAN endorsed to manage emergency plant pest incursions,* media release, 8 June 2004.

Recommendation

The Committee recommends that the Commonwealth place on the agenda of the Natural Resource Management Ministerial Council the need for parallel arrangements to be implemented for environmental pest incursions as are currently in place for threats to primary industries.

Cross-agency coordination

5.144 Some of the evidence to this inquiry suggests a lack of cross agency coordination in the management of invasive species. Mr Tim Low from the Invasive Species Council told the Committee that:

> You find that no-one has a whole picture of this. There is no institution, expert or authority you can go to and ask: 'What are all our exotic pests? What exotic insects do we have?' No body is vested with the responsibility for having that information and documenting that. You can certainly find experts on weeds, but it is all compartmentalised, so there are always other pests that no-one seems to know about.[139]

5.145 However, government agencies are now working in a greater coordinated manner to address the issue of invasives. At a federal level DAFF works with a range of key stakeholders including other government agencies and industry in relation to the regulation, control and management of invasive species. By way of example, DAFF submitted that:

> In addition to the close working relationship developed with DEH, DAFF consults with and coordinates its activities with other government agencies in including the Australian Customs Service, the Departments of Health and Ageing (DH&A), Immigration and Multicultural and Indigenous Affairs (DIMIA), Foreign Affairs and Trade (DFAT), Transport and Regional Services (DOTARS), Defence and Australia Post on quarantine issues.
>
> The key agencies engaged in incursion management include DFAT, (in relation to any potential trade implications), DH&A (in relation to any potential public health dimensions) and the Department of Finance (in relation to funding the Commonwealth's contribution). In the management of invasive marine pests DAFF is extensively involved with both DOTARS and the Australian Maritime Safety Authority at a policy level. Depending on the nature of the incident, the Navy, Customs, the Australian Fisheries Management Authority and DIMIA may also be involved at an operational level.[140]

5.146 In South Australia, the Animal and Plant Control Commission is looking at a more integrated and holistic approach to pest management:

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139 Mr Tim Low, Invasive Species Council, *Committee Hansard*, Brisbane, 14 April 2004, p. 43.

140 Department of Agriculture, Fisheries and Forestry, *Submission* 62, p. 8.

> The Commission recognises that anything to do with pest management goes hand in hand with protecting agriculture, protecting the environment and public safety. At the moment we are looking at bringing animal and plant control issues in with other integrated natural resource management issues. Before parliament at the moment we have a bill which will bring animal and plant control, soil conservation and water resources into an integrated framework for South Australia, because you cannot deal with one of these issues without dealing with the others.[141]

5.147 The Queensland Department of Natural Resources, Mines and Energy told the Committee that despite the size and diversity of the State, the department actively works in partnership with a range of stakeholders to address weed and pest management in a coordinated way.[142]

5.148 Mr Edward McAlister also raised the issue of the need for greater coordination between research bodies:

> I suggested that the pest animal CRC work more closely with the weed management CRC, perhaps the tropical ecology CRC and maybe the one that is working with fire. Those are areas which seem to work together to me. If there were some way in which they could communicate more effectively, then it would be something that would be well worth our while.[143]

Governments as neighbours

5.149 The Committee heard from many farmers who claimed that Federal, State and Local governments were negligent neighbours in the control of invasive weeds on Crown or public land. Mrs Denise and Mr Tony Redmond submitted:

> Many Farmers have worked diligently to combat feral animals and noxious weeds however fireweed presents an enormous threat to the agricultural viability of the area. Fireweed is in the National Parks, on Crown Land and has infested land of absentee landlords…. We have witnessed a negligent attitude towards the problem at the Federal, State and Local Government levels…. The State Government has not acknowledged the problem and the roadside remains a constant source of seed.[144]

5.150 The issue of negligent neighbours, whose poorly maintained land is responsible for the spread of noxious weeds, raises the issue of liability. As Mrs Phillipa Foster submitted:

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141 Mr Roger Wickes, Animal and Plant Control Commission, *Committee Hansard,* Adelaide, 28 June 2004, p. 1.

142 Dr Anthony Pressland, Queensland Department of Natural Resources, Mines and Energy, *Committee Hansard*, Brisbane, 14 April 2004, p. 6.

143 Mr Edward McAlister, *Committee Hansard,* Adealide, 28 June 2004, p. 62.

144 Mrs Denise and Mr Tony Redmond, *Submission* 4, p. 2.

> I wish to bring to your attention the increasing possibility that someone will ultimately take another land holder or land manager to court for the costs incurred to them in the control or eradication of invasive weed species. The precedent is the success of fire damages claims, and it will soon become apparent that the costs of weeds, in control/eradication, along with the loss of pasture/native bushland, are probably considerably greater than those of fire.[145]

5.151 In response to claims that governments are poor land managers in regard to invasive species, Mr Con Boekel from the Parks Australia South Branch of the Department of Environment and Heritage told the Committee:

> In relation to Commonwealth reserves I would make quite a strong claim that we are very responsible landowners and land managers…. Where we can, we seek to cooperate with neighbouring communities. We have not been successful with the cane toad, but I would say that in most of the areas that I am personally aware of the level of weed control and the level of pest control of things like foxes and rats are at least equal to or better than what is happening on the other side of the fence from us.[146]

Conclusion

5.152 The Committee believes that the management, funding, community understanding and political will to address the issue of invasive species already within Australia is fragmented and insufficient. Mr Edward McAlister, AO, the Chief Executive of the Royal Zoological Society of South Australia captured both the scale of the problem and the hope that it is not beyond us:

> The problem seems immense and there is certainly no "silver bullet" for all, or perhaps even any, of these pest species, either animal or plant…. Accepting that the problem is immense and certainly widespread, there appears to be a number of things which can be done.[147]

5.153 The Committee acknowledges that the Commonwealth has little direct control over the management of established pest species, however it believes that the problem is so significant that greater Commonwealth leadership and State and Territory partnerships are required. Programs should be outcome-based, they should be strategic, long-term and adequately funded:

> All invasive species programs need to be considered at the landscape or ecosystem level and should be outcome based. This is important for all invasive species- flora and fauna. Simply removing one invasive species may not achieve a positive outcome for biodiversity if the controlled

145 Mrs Phillipa Foster, *Submission* 1, p. 1.

146 Mr Con Boekel, *Committee Hansard*, Brisbane, 14 April 2004, p. 36.

147 Mr Edward McAlister, *Submission* 75, p. 5.

> species is replaced by another invasive species. Therefore an integrated approach that addresses all invasive species is needed.[148]

5.154 While in chapter 7 the Committee finds against the introduction of the Environment Protection and Biodiversity Conservation Amendment (Invasive Species) Bill 2002 at this time, essentially because of the compact between the Commonwealth and State governments on environmental regulation as reflected in the Principal Act, the Committee calls on the several tiers of Government to address the implementation of section 301A, perhaps in a staged approach. Further recommendations will be made in Chapter 8.

148 The Nature Conservation Society of South Australia, *Submission* 76, p. 5.