Australian Government

Australian Government response to the Environment and Communications References Committee report:

Environmental Biosecurity

June 2017

Glossary

ABARES	Australian Bureau of Agricultural and Resource Economics and Sciences
AHC	Animal Health Committee
ALOP	appropriate level of protection
ANAO	Australian National Audit Office
AWS	Australian Weeds Strategy
BICON	Biosecurity Import Conditions database
Biosecurity Act	*Biosecurity Act 2015* (replaced the *Quarantine Act 1908*)
CITES	Convention on International Trade in Endangered Species of Wild Flora and Fauna
Committee	Senate Environment and Communications References Committee
CSIRO	Commonwealth Scientific and Industrial Research Organisation
EADRA	Emergency Animal Disease Response Agreement
EPBC Act	*Environmental Protection and Biodiversity Conservation Act 1999*
EPPRD	Emergency Plant Pest Response Deed
HACCP	Hazard Analysis Critical Control Point
IGAB	Intergovernmental Agreement on Biosecurity
IPAC	Invasive Plants and Animals Committee
MCAS-S	Multi-criteria Analysis Shell for Spatial Decision Support
MPSC	Marine Pest Sectoral Committee
NAQS	Northern Australia Quarantine Strategy
NBC	National Biosecurity Committee
NBMCC	National Biosecurity Management Consultative Committee
NBMG	National Biosecurity Management Group
NBS	National Border Surveillance
NEBRA	National Environmental Biosecurity Response Agreement
NESP	National Environmental Science Programme
NIPSF	National Invasive Plants Surveillance Framework
NLP	National Landcare Programme
NPPP	National Priority Plant Pests
NRM	Natural Resource Management
OIE	World Organisation for Animal Health
PHC	Plant Health Committee
SBQI	Stronger Biosecurity and Quarantine Initiative
TAP	Threat Abatement Plan
WoNS	Weeds of National Significance

Introduction

On 26 June 2014 the Senate referred the adequacy of arrangements to prevent the entry and establishment of invasive species likely to harm Australia's environment to the Senate Environment and Communications References Committee for inquiry and report. The Committee's report, released on 13 May 2015, made 26 recommendations and included a minority report by the Australian Greens which made a further eight recommendations.

Summary

The biosecurity system is complex and operates in an environment characterised by the continual movement—in and out of the country—of living things and goods. It is not possible or desirable to manage biosecurity risks to one sector, in isolation of other sectors, or without a strong network that includes all levels of government, industry, non-government organisations and the community working to achieve a common objective—one biosecurity.

The Australian Government supports, or supports in principle, the majority of the Committee's recommendations, and agrees that some aspects of the management of environmental biosecurity pose unique difficulties. The Australian Government considers the most effective approach to addressing these unique difficulties is to continue to strengthen the existing biosecurity system, which is designed to manage biosecurity risks to all sectors.

The Australian Government's commitment to strengthen biosecurity is reflected through a range of biosecurity initiatives, such as those outlined in the Intergovernmental Agreement on Biosecurity (IGAB), the White Papers on Agriculture Competitiveness and Developing Northern Australia. Regular review of any system is needed to ensure that processes are effective, efficient and delivering the desired outcome. Since the release of the Committee's report, the Australian Government has progressed a range of activities that address a range of recommendations, including:

- implementing new biosecurity legislation
- implementing biosecurity initiatives in the Agricultural Competitiveness White Paper
- the possible incorporation of a transition to management framework into the National Environmental Biosecurity Response Agreement
- the identification and endorsement of 43 National Priority Plant Pests that pose a potential risk to Australia's ecosystems and agricultural productivity
- enhancing Australia's Biodiversity Conservation Strategy
- improving national marine pest biosecurity arrangements
- enhancing the Australian Government's biosecurity surveillance approach
- implementing the ornamental fish import risk reform project

Arrangements are in place for biosecurity partners to work together—the National Biosecurity Committee (NBC) and its supporting committees deliver national biosecurity policies and programs to strengthen the biosecurity system—underpinned by the IGAB. Nationally, there is a well-developed capacity and capability across all sectors—animal and aquatic health, plant health and the environment—to prepare for, and respond to pest and disease incursions. The Australian Government will continue to work with all jurisdictions, industry partners, stakeholders and the community to implement these activities, including considering the effectiveness of current arrangements with respect to environmental biosecurity.

The Australian Government does not support the majority of the minority report recommendations.

Australian Government response

Recommendation 1

The committee recommends that, once established, the Inspector-General of Biosecurity conduct a systematic review of how effectively high-risk environmental biosecurity concerns are addressed within the broader biosecurity system, with a particular focus on identifying gaps in pathway and risk analyses and on improving information gathering and sharing between jurisdictions.

Supported in Principle

The Inspector-General of Biosecurity may review the performance of functions, or exercise of powers, by biosecurity officials under one or more provisions of the *Biosecurity Act 2015*. As such, the Inspector-General of Biosecurity may undertake reviews of environmental biosecurity under their powers prescribed under the Act. The Department of Agriculture and Water Resources will bring the Committee's recommendation to the attention of the Inspector-General.

Recommendation 2

The committee recommends that the Commonwealth Government work with state and territory governments to revise the National Environmental Biosecurity Response Agreement such that disagreement by a single party need not prevent a response under the agreement from going ahead.

Not Supported

Consensus decision-making in emergency responses remains a core tenet underpinning the partnership approach to decision making promoted by the National Environmental Biosecurity Response Agreement (NEBRA), other emergency response deeds and the IGAB. While under the current consensus approach to the NEBRA there is a possibility that a single party could vote down a response, the NEBRA does not prevent the remaining supporting parties from reaching agreement on a cost-shared eradication response.

The Australian, state and territory governments recently commissioned the first five-yearly review of the NEBRA, which is being undertaken by an external third party (KPMG). The NBC will consider any recommendations for improvement following the finalisation of the report in the second half of 2017.

Recommendation 3

The committee recommends that the Commonwealth Government work with state and territory governments to include in the National Environmental Biosecurity Response Agreement an explicit precautionary principle which states that a lack of full scientific or technical certainty regarding the feasibility of eradication must be weighed against potential biosecurity risks when determining whether to mount a response.

Not Supported

The purpose of the NEBRA is to establish national arrangements for responses to nationally significant biosecurity incidents where there are predominantly public benefits. Although the NEBRA does not explicitly incorporate the precautionary principle, it includes appropriate mechanisms to take into account scientific or technical uncertainty. The National Biosecurity Management Consultative Committee (NBMCC) must assess the pest or disease based on its national significance; whether it is "likely" to be eradicable and whether it is cost beneficial to mount a national biosecurity incident response.

This assessment considers the potential economic, environmental and social amenity impacts, drawing on information from a variety of sources including peer-reviewed scientific papers, personal communications from people with experience with the species under assessment and anecdotal data from non-experts. Information sources used for the assessment are considered according to a determined level of confidence (for example, information from general reference books is given a medium confidence rating).

If there is a lack of scientific or technical certainty about a disease or pest, an assessment based on the best available evidence is presented for the National Biosecurity Management Group (NBMG) to consider.

The NEBRA guidelines for risk assessment (Schedule 2 of the NEBRA) provide a balance between allowing for uncertainty in technical data and still meeting the requirements for the response to be technically feasible and cost beneficial to be mounted. This approach is consistent with the Emergency Animal Disease Response Agreement (EADRA) and the Emergency Plant Pest Response Deed (EPPRD).

The Australian, state and territory governments recently commissioned the first five-yearly review of the NEBRA, which is being undertaken by an external third party (KPMG). The NBC will consider any recommendations for improvement following the finalisation of the report in the second half of 2017.

Recommendation 4

The committee recommends the Commonwealth Government work with state and territory governments to develop a nationally consistent methodology for incorporating environmental impacts into cost-benefit analyses under the National Environmental Biosecurity Response Agreement.

Supported

The Australian Government will work through the NBC, which consists of representatives from each state and territory, to consider a nationally consistent methodology for incorporating environmental impacts into cost-benefit analyses as part of its review of the NEBRA.

The Australian, state and territory governments recently commissioned the first five-yearly review of the NEBRA, which is being undertaken by an external third party (KPMG). The NBC will consider any recommendations for improvement following the finalisation of the report in the second half of 2017.

Recommendation 5

The committee recommends that the Commonwealth Government work with signatories to the National Environmental Biosecurity Response Agreement to include in that agreement a transition to management framework to clarify the responsibilities of the parties for ongoing management activities if eradication is deemed to be no longer feasible.

Supported

The Australian Government recognises the importance of transition to management frameworks and how they assist in clarifying parties' responsibilities for ongoing management activities when eradication is deemed to be no longer feasible. For example, transition to management programs were piloted for myrtle rust, branched broomrape and Asian honey bees after the eradication of each was concluded to be no longer technically feasible. These pilot programs provided funding for activities that allowed industry and/or the community to adapt to living with the particular pest or disease and to set up systems for management within affected jurisdictions.

Transition to management arrangements were recently included in the EPPRD. Under the EPPRD, transition to management programs can only be considered if an incursion is no longer technically feasible or cost beneficial to eradicate. Signatories to the EADRA and NEBRA have agreed to explore options to incorporate transition to management frameworks into those agreements.

The Australian, state and territory governments recently commissioned the first five-yearly review of the NEBRA, which is being undertaken by an external third party (KPMG). The NBC will consider any recommendations for improvement following the finalisation of the report in the second half of 2017.

Recommendation 6

The committee recommends that the Department of the Environment review targets contained in *Australia's Biodiversity Conservation Strategy 2010-2030* and develop measurement methodologies to ensure that Australia's progress can be meaningfully assessed.

Supported

The Department of the Environment and Energy has undertaken a review of the first five years of *Australia's Biodiversity Conservation Strategy 2010-2030* in conjunction with all state and territory governments and the Australian Local Government Association.

The review assessed implementation of the Strategy, including the national targets. It also considered opportunities to improve the Strategy, including the robustness and durability of objectives, responsibility and accountability for the delivery of outcomes, monitoring and reporting systems, and alignment with other national and international obligations.

The review was presented for consideration at the Meeting of Environment Ministers on 25 November 2016. It found there were opportunities to build on good outcomes achieved so

far including by enhancing partnerships to take practical and focused action to implement the strategy.

As the Strategy supports Australia's implementation of the United Nations Convention on Biological Diversity, Ministers agreed that it should be updated to meet current and emerging challenges.

Recommendation 7

The committee recommends that the Australian National Audit Office conduct a performance audit of the Department of the Environment's implementation of *Australia's Biodiversity Conservation Strategy 2010–2030* with a particular focus on how progress towards targets is measured.

Noted

The Department of the Environment and Energy will bring the Committee's recommendation to the attention of the Australian National Audit Office. It should be noted that implementation of the Biodiversity Conservation Strategy is the responsibility of all jurisdictions.

Recommendation 8

The committee recommends that the Department of Agriculture and the Department of the Environment review processes for allocating funding under their natural resource management programs with a view to minimising delays for time-sensitive projects.

Supported in Principle

The Australian Government is committed to minimising delays for time-sensitive projects. It does so through a number of mechanisms, not limited to natural resource management (NRM) programs, including as a signatory to response agreements, implementation of the Stronger Biosecurity and Quarantine Initiative (SBQI) and initiatives funded through the White Papers on Agricultural Competitiveness and Developing Northern Australia.

Arrangements for responding to exotic pests and diseases that are detected within Australia and have the potential to impact on animal, plant or human health or the environment are set out in the NEBRA, EADRA, and the EPPRD, to which the Australian Government is a signatory. The effectiveness and implementation of these agreements is reviewed every five years.

In addition to being a signatory to the response agreements, the Australian Government has committed $20 million over four years to enhance rapid response capability to address urgent biosecurity issues through the SBQI. The SBQI includes dedicated resources to support a pool of skilled and experienced personnel and a best practice national network for diagnostic and response management expertise. It is available to assist with an incursion in the early stages to reduce adverse impacts, including to the environment.

The SBQI does not replace normal commitments undertaken by state and territory governments but complements their efforts, particularly in the initial stage of an incursion.

The commitment also includes a range of preparedness activities to build national capability and provide long term benefits beyond the completion of this initiative. Under the Agricultural Competitiveness White Paper, the Australian Government has committed $50 million over four years (starting 1 July 2015) to support nationally significant agricultural and environmental pest and disease eradication programs and enhanced response capability.

The Australian Government delivers NRM programs to assist with the management of established pests and diseases in line with Australian Government priorities and grant administration policy. This includes providing NRM funding for the community to achieve the strategic objectives of the National Landcare Programme (NLP) through investment of more than $450 million over four years (2014–18) with the 56 regional NRM organisations across Australia.

These regional NRM organisations have been allocated funding under this investment until 2018. The funding is provided on a yearly basis through the state (where the regional bodies are state-based entities) or direct to community-based regional organisations (regional NRM groups and entities). The regional NRM organisations act as delivery agents under the program and address Australian Government outcomes and regional priorities such as weed and pest control, uptake of sustainable farming practices and biodiversity conservation. Planning, management and timing of activities associated with this funding is decided by the regional body in consultation with the Australian Government and their communities. Regional bodies are required to allocate a minimum of 20 per cent of their annual Australian Government NLP funding to local, on-ground projects and related activities that are delivered by, or directly engage with, the local community. This funding is available over short (one year) and longer-term timeframes, and contributes to providing outcomes for projects that can be regarded as time-sensitive.

The Australian Government will continue to review NRM program delivery arrangements with a view to simplifying arrangements so it can quickly and easily respond to emerging issues. Stakeholder feedback is sought and reviewed following program funding rounds to ensure that future processes minimise administrative costs and avoid unnecessary delays. The Australian Government will continue to take into consideration lessons learnt and opportunities for improvement in the development of future funding rounds to improve efficiency.

The management of established pests is primarily the responsibility of state and territory governments and land managers. However, the Australian Government does make some strategic investments in pest and weed management where it is in the national interest. For example, as part of the Department of the Environment and Energy's Threatened Species Strategy, more than $10 million has been mobilised for projects committed to reduce the threat of feral cats.

Through the Agricultural Competitiveness White Paper, the Australian Government is providing funding to state and territory governments to deliver projects to build the skills and capacity of landholders, industry and community groups in managing established animal pests and weeds on the ground. Funding is also available to develop and improve better technologies and tools to tackle established pest animal and weed species.

Recommendation 9

The committee recommends that the Department of the Environment work with the Department of Agriculture to develop and publish a national priority list of pests and diseases not yet established in Australia that are of environmental biosecurity concern.

Supported in Principle

The Australian Government, state and territory governments and industries maintain a range of pest and disease lists for a variety of purposes. For example, there are a range of notifiable pest or disease lists to meet domestic or international reporting obligations or to prioritise action, such as surveillance, diagnostic or intervention effort.

In July 2015, the Department of Agriculture and Water Resources commenced working through the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) to identify potential invasive species and diseases that have predominately environmental impacts, and to develop processes to better differentiate between weed threats that have environmental versus production impacts. This work will strengthen existing national biosecurity arrangements to manage the risk of entry to Australia of exotic weeds and better inform preparedness and eradication arrangements to respond to exotic weeds and environmental biosecurity threats if they arise.

The Plant Health Committee (PHC) has endorsed a Plant Pest Prioritisation Framework which provides a generic and systematic approach to prioritisation of exotic plant pests, including those pests that impact on the environment, to enable governments and other decision makers to focus their biosecurity investment.

The framework applies the national significance and national interest principles developed by the NBC, and sets out the policy objectives and criteria for prioritisation. Through a national expert elicitation process which applied the principles and criteria set out in the framework, 43 National Priority Plant Pests (NPPP) have been identified and endorsed by the PHC. A complete list of the 43 NPPPs is available from: www.agriculture.gov.au/pests-diseases-weeds/plant. Of these individual pests or groups of similar pests, 16 are expected to have a significant negative impact on Australian native plants, animals and/or the environment.

The NPPP will be used to guide government effort, investment and national action, and the PHC will review the pests to identify gaps in prevention and preparedness. The Department of Agriculture and Water Resources will use the national priorities to focus preparedness activities, including with funding provided through the Agricultural Competitiveness White Paper.

The Invasive Plants and Animals Committee (IPAC), a sub-committee of the NBC, is currently developing a list of national surveillance targets for exotic vertebrates. The ten species on the list are intended as leading examples of amphibians, reptiles, birds, mammals and fish that could become established in the Australian environment either through an accidental pathway to Australia (for example, stowaways) or a likely illegal deliberate introduction (for example, smuggled or illegally kept). Each of the ten species would pose nationally significant impacts, and could form the basis of surveillance, education and preparedness activities coordinated amongst governments and with industry and the wider community.

The Animal Health Committee (AHC) maintains the National List of Notifiable Animal Diseases to facilitate disease reporting and control of terrestrial animals. The list includes key diseases on the World Organisation of Animal Health (OIE) list of notifiable diseases as well as endemic diseases of national significance. The requirement to report a notifiable disease is contained in state and territory legislation and occurrences of diseases on this list must be reported to state or territory authorities. The list is regularly reviewed and updated by the AHC – it was last reviewed in 2013 and is currently under review.

In relation to marine pests, the Marine Pest Sectoral Committee (MPSC) is currently developing the Australian Priority Marine Pests List. This list will include both established and exotic species and will form the basis of Australia's reporting system for marine pests, and will also facilitate responses to marine pest emergencies. Exotic marine pests will be included if they meet the national significance criterion outlined in the NEBRA. Environmental impacts are included in the national significance criterion.

A National List of Reportable Disease of Aquatic Animals has also been developed to identify priority aquatic animal diseases of importance to Australia, many of which could affect both industry and/or the environment. This includes both exotic and endemic diseases.

While these lists will assist in prioritising high impact pests, the Department of Agriculture and Water Resources continues to conduct activities at the border for all exotic pest incursions.

Recommendation 10

The committee recommends that the Department of Agriculture review and update the Northern Australia Quarantine Strategy by mid-2016, and that this review specifically examine the adequacy of resources available to implement the strategy and suggest changes that can be made to improve environmental biosecurity outcomes under the strategy.

Supported

The Northern Australia Quarantine Strategy (NAQS) will continue to monitor for incursions of new pests and diseases establishing in the north and potentially moving south. The Australian Government has committed to strengthen biosecurity in northern Australia as part of its commitment to ensure that biosecurity risks in the north continue to be appropriately managed through the White Papers on Agriculture Competitiveness and Developing Northern Australia. For example, under the Agriculture Competitiveness White Paper, the Australian Government has committed over $60 million to design, implement and promote collaborative biosecurity surveillance practice and technologies for priority pests, diseases and/or locations in northern Australia. An additional $12.4 million in funding for Indigenous Ranger groups to expand surveillance and compliance activities in northern Australia was also announced in the White Paper on Developing Northern Australia.

Recommendation 11

The committee recommends that both the Department of Agriculture and the Department of the Environment conduct reviews to assess whether their existing resources can be better targeted to address known areas of environmental biosecurity risk. In particular, the committee recommends that the Department of the Environment examine whether resources can be directed towards effective implementation of existing threat abatement plans under the Environment Protection and Biodiversity Conservation Act.

Supported

Biosecurity is the management of the risks to the economy, the environment and the community, of pests and diseases entering, emerging, establishing or spreading—it is not possible or desirable to manage biosecurity risks to one sector in isolation of another. The Australian Government is considering a range of initiatives to better target risk management activities and strengthen the management of environmental biosecurity, including the development of an environmental biosecurity policy statement, and progress reports on the Australian Government's management of biosecurity. This work will include examining the Australian Government's effort in relation to environmental biosecurity.

The NRM programs implemented by the Department of the Environment and Energy and the Department of Agriculture and Water Resources target Australian Government priorities, including known areas of environmental biosecurity risk. For example, under the Green Army Program a number of Green Army teams used bait stations to control yellow crazy ants next to the Wet Tropics World Heritage Area.

Under the regional stream of the NRM funding under the NLP, over $450 million is being spent to support local action by local communities. These actions are expected to address a range of priorities including environmental biosecurity risk. Examples include:

- a project spending over $1 million to control woody Weeds of National Significance in the Lake Eyre catchments of Queensland
- the Natural Resources Kangaroo Island's project *Too Good to Spoil, Too Precious to Lose: a better biosecurity future for Kangaroo Island*, which is addressing environmental biosecurity risks through a community education and surveillance program to build frontline defence against new and existing land and marine infestations.

The outcomes of these programs reference Australia's relevant national and international obligations, such as the Convention on Biological Diversity, and protecting and conserving matters of national environmental significance under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Outcomes also contribute to actions identified under existing threat abatement plans (TAPs).

NRM programs such as the Green Army and 20 Million Trees Programme include assessment criteria relating to the extent to which projects contribute towards the implementation of relevant national and regional environmental or conservation management plans. These plans may include TAPs.

Recommendation 12

The committee recommends that the Department of Industry, Innovation and Science develop a strategy to address the current, and projected, decline in the level of scientific expertise in areas relevant to biosecurity.

Supported in Principle

In September 2014, Australia's Chief Scientist released *Science, technology, engineering and mathematics:* Australia's future, which made 24 recommendations in the areas of Australian competitiveness, education and training, research, and international engagement. The Australian Government has already taken actions to address many of the areas highlighted for attention, through the National Innovation and Science Agenda, announced December 2015.

As part of the National Innovation and Science Agenda, the Australian Government has addressed many of these issues. This includes funding to get students more excited by science, for example through science and mathematics Olympiads, Maker projects, attendance at science events and competitions, and supporting National Science Week.

The Australian Government is committed to ensuring Australia continues to develop and support scientific expertise in areas relevant to biosecurity. For example, the Australian Government has committed $20 million over five years, from 1 July 2017, to boost research and development aimed at eradicating invasive pest species by supporting the transition of the Invasive Animals Cooperative Research Centre into the Centre for Invasive Species Solutions in 2017.

Recommendation 13

The committee recommends that the Department of Industry, Innovation and Science, in cooperation with the Department of Agriculture and the Department of the Environment, conduct a review to prioritise Australia's biosecurity research needs, both environmental and industry-focused, and determine what long-term institutional structure will best address these needs.

The committee also recommends that this review specifically investigate whether Australia possesses sufficient research capacity to examine the effects of climate change on invasive species and, if not, how this can be addressed.

Supported in Principle

There are a number of Australian Government initiatives that include review processes to prioritise research, including research capacity and research to examine of the effects of climate variability. The Australian Government has established a set of science and research priorities and associated practical research challenges. The priorities have been implemented by the National Science, Technology and Research Committee of the Commonwealth Science Council, led by the Chief Scientist, Dr Alan Finkel AO, and considered input from researchers, industry leaders and government representatives.

The science and research priorities are: food; soil and water; transport; cyber security; energy; resources; advanced manufacturing; environmental change; and health. These

priorities will likely address many areas relevant to biosecurity and climate variability, particularly through the food, soil and water and environmental change priorities.

The Department of the Environment and Energy administers the National Environmental Science Programme (NESP), which funds world-class environmental and climate science research to inform decision making.

The NESP is delivered through six multidisciplinary Hubs, each with distinct research objectives. Research themes include threatened species recovery, climate change, the sustainable development of northern Australia, marine biodiversity, water quality in the Great Barrier Reef, and air quality and liveability in urban landscapes.

The NESP encourages a collaborative approach to developing and delivering research objectives. Over the six years of the NESP, the Department of the Environment and Energy will work with the Minister for the Environment and Energy to determine research priorities for NESP hubs to guide annual updates of the Hub Research Plans. Input will also be sought from other government departments, levels of government, environment non-government organisations, Indigenous groups and industry in developing their Hub Research Plans.

A range of Australian Government research initiatives inform biosecurity management and natural resource management through climate projections, research on climate variability impacts and modelling of the potential distribution of exotic pests. CSIRO is establishing a new Climate Science Centre to be based in Hobart; a new decadal climate monitoring and forecasting capacity within the new Hobart Centre, which represents a $37 million investment over 10 years, and 15 new positions within the new CSIRO Climate Science Centre, which represents an increase on current staffing levels of approximately 13%. The centre will bring together the core of CSIRO's capability in climate modelling and observations of the atmosphere and ocean. It is being developed in close collaboration with existing research programs and with research partners including the Bureau of Meteorology, Australian universities and overseas institutions. The projections are the most comprehensive ever released for Australia and were prepared with an emphasis on informing impact assessments and planning in the natural resource management sector.

The Australian Institute of Marine Science (AIMS), Australia's tropical marine science agency, operates monitoring programs contributing to the sustainable use and development of the tropical marine environment. For example, AIMS has the only long-term, comprehensive dataset covering the health of the Great Barrier Reef, spanning three decades and including monitoring of reef organisms and environmental monitoring of water quality, weather and sea temperatures. AIMS also undertakes interdisciplinary research to provide managers and policymakers with the best understanding of the vulnerability of tropical marine ecosystems to climate change, ocean acidification and local environmental stressors. Its National Sea Simulator (SeaSim) also plays a key research role by replicating future climate scenarios to better understand the impact of complex environmental changes on tropical marine ecosystems.

ABARES has developed Climatch, a web-based application for comparing climate characteristics between regions. This program is typically used for predicting the potential spread of introduced or invasive species by using known geographic distributions of exotic pests and diseases to model potential distribution in Australia based on climatic parameters (temperature, rainfall). The Multi-Criteria Analysis Shell for Spatial Decision Support (MCAS-S) is another software and mapping package developed by ABARES that provides a

powerful tool for spatial information assessment in decision-making contexts. Climatch and MCAS-S can be combined in a preparedness context to model the potential distribution of exotic pests, based on climatic and land use data.

Recommendation 14

The committee recommends that, following the example of the New Zealand Marine Invasive Taxonomic Service, the Commonwealth Government work with state and territory governments to establish a coordinated taxonomic identification service that utilises existing scientific expertise, particularly that present in natural history museums.

Noted

Taxonomic services are currently provided on an ad hoc basis by state and territory museums, universities and independent experts.

The Australian Biological Resources Study, administered by the Department of the Environment and Energy, has coordinated taxonomic research in Australia for more than 40 years and is a recognised world leader in making authoritative taxonomic information widely available through internationally recognised scientific publications, identification tools and publicly accessible online biodiversity information databases.

The Department of Agriculture and Water Resources recently conducted a review of National Marine Pest Biosecurity arrangements, which considered input from a range of stakeholders. Some stakeholders expressed the need for a coordinated approach to marine pest taxonomy. The review report and recommendations are available at agriculture.gov.au.

The review made a number of recommendations toward a new focus on prevention activities, such as better relationships between researchers, marine based industries, government and the community. It also recommends the development of stronger response arrangements for dealing with incursions.

The recommendations will be implemented over 2015–18. This work will involve working closely with stakeholders to strengthen national marine pest biosecurity arrangements to reduce the risk of marine pests from establishing in Australian waters.

Recommendation 15

The committee recommends that the Department of Agriculture undertake enforcement activities against internet retailers and marketplaces that repeatedly breach Australia's plant and seed import requirements and work with these businesses to ensure warnings are displayed when customers attempt to purchase prohibited plants and seeds.

Supported in Principle

Under Australia's Biosecurity Act, the Australian Government's regulatory (enforcement) reach only extends to Australian-based entities. The Australian Government has a very limited ability to take enforcement action against entities that operate beyond the Australian

jurisdiction. Generally enforcement action in places outside of Australia can only be achieved through requests for mutual assistance via the Attorney-General's Department.

The Department of Agriculture and Water Resources currently uses cooperative arrangements with a number of common internet marketplaces where warnings are published when Australian purchasers attempt to buy items of biosecurity concern.

It is not possible to achieve such cooperative arrangements with all internet marketplaces due to the number and lack of visibility of such marketplaces, and as a result these approaches often have only partial effect. At the request of the Department of Agriculture and Water Resources, eBay Australia has closed down a number of sellers of biosecurity risk products. This does not stop sellers re-opening on other sites or under new identities.

The Department of Agriculture and Water Resources also uses a combination of alternative measures to improve compliance and minimise the incidence of risk items sold via internet marketplaces passing through the Australian border. This includes information sharing between Australia and foreign jurisdictions through the International Plant Protection Convention network and the improved used of intelligence and targeting of known offenders.

The Department of Agriculture and Water Resources recently completed a review of current mail pathway 'profiles'. The department uses 'profiles' to determine risk pathways and manage intervention practices. As a result of the review, updated passenger profiles have been implemented and a periodic review will be conducted at appropriate intervals.

Recommendation 16

The committee recommends that the Department of the Environment work to ensure that the measures described in the Tramp Ant Threat Abatement Plan are fully implemented.

Supported

The 2012 review of the tramp ant TAP identified six fully implemented actions in the plan; the remaining nine have been partially implemented. The TAP sunsetted on 1 October 2016 and the Minister for the Environment and Energy will consider whether a new TAP should be made.

Each financial year, the Australian Government funds TAP development and implementation as part of a broader budget outcome related to biodiversity conservation. The funding provided by the Department of the Environment and Energy for the implementation of individual TAPs may vary from year to year as a range of biodiversity conservation priorities are addressed.

Recommendation 17

The committee recommends that, within the next 12 months, the Department of Agriculture review its cargo surveillance measures with the aim of achieving better detection rates of invasive species in general and of tramp ants in particular.

Supported in Principle

To ensure that ongoing activities are targeted to areas of risk, the Department of Agriculture and Water Resources agrees that there is value in reviewing the broad surveillance approach at the border (not just limited to cargo) to consider the types of pests to be targeted, the times and terms of surveillance, the potential for additional off-shore surveillance and the best form of data capture (and sharing).

This review will consider specific groups of pests, plant diseases and weeds which will influence decision making for effective surveillance methods at specific locations throughout the year and will be ongoing. It will also consider general and targeted surveillance activities undertaken by the states and territories; obligations under the IGAB; and the Australian Government's role in undertaking surveillance activities at premises operating under an approved arrangement and/or government-owned and operated land and facilities.

The Department of Agriculture and Water Resources has developed a National Border Surveillance Policy (NBS) to ensure coordination of biosecurity surveillance activities conducted at border locations, and establish principles for undertaking these surveillance activities. As NBS is brought into effect, there will be three main products. These are:

1. a list of priorities for border surveillance
2. a description of relative efforts towards each priority
3. resourcing for specific surveillance activities

The purpose of NBS is to facilitate the timely detection of opportunistic or hitchhiking pests that might have entered Australia on import pathways and present on lands or at facilities that are in the broad sense part of the Australian border. The information collected will be used to:

1. enable a timely response to a potential incursion and establishment event
2. provide performance information and feedback on quarantine pathways
3. monitor trends in arrival/escape of biosecurity risk
4. monitor changes to trends in respective air and sea pathways to inform business improvement and NBS deliberation
5. identify established species in specific environments as a baseline
6. assist in targeting and prioritising post-border surveillance activities

Initial work is focused on border management (first points of entry) activities but will then extend into an integrated offshore, onshore and at border surveillance program. Involvement of state and territory governments will continue to be an important component of an effective and integrated surveillance approach and is an ongoing point of discussion through the NBC.

The Department of Agriculture and Water Resources performs a range of activities designed to minimise the likelihood of an incursion of exotic pests and diseases. The department's biosecurity activities include inspections of imported commodities for the presence of biosecurity risks commonly associated with those commodities—and surveillance of vessels, aircraft, cargo and places for hitch-hiker pests that are not specifically associated with an import commodity.

Current surveillance activities conducted by the Department of Agriculture and Water Resources take several forms and includes visual surveillance targeting locations or arrival pathways where imported cargo is handled, stored or unpacked, rather than targeting particular organisms or types of biosecurity risk.

Specialist surveillance activities are conducted in Northern Australia under NAQS where proximity to Indonesia and Papua New Guinea, sparse settlement and a tropical environment necessitate special surveillance activities that typically extend well beyond port areas.

The Department of Agriculture and Water Resources uses vector monitoring (traps or lures) to detect the presence of specific pest types – at airports, seaports, container terminals and premises operating under approved arrangements– including extensive mosquito trapping conducted in collaboration with the Department of Health.

Surveillance activities to target various pests may also differ between regions. Some of the differing approaches arise from lower levels of risk associated with the various pests in each location (Asian Gypsy Moths are not trapped at Darwin port, for instance, as Darwin is not a risk port due to the incompatible environment) or from lower risks associated with the particular pathway(s) specific to each location.

State departments of agriculture and/or health also conduct surveillance for a variety of organisms, both in port areas and more broadly. The Department of Agriculture and Water Resources has provided funding for state departments of agriculture to deliver some of these activities (for example, a trapping program for Asian Gypsy Moth and exotic fruit flies near first points of entry). Ongoing liaison between the Department of Agriculture and Water Resources and state and territory agencies responsible for biosecurity ensures effective resourcing, trap placement and reduction in duplication.

Recommendation 18

The committee recommends that the Commonwealth Government work with state and territory governments, and the horticulture industry, on establishing standardised labelling, weed identification, and sales tracking protocols across the industry.

Supported

The Australian Government supports this recommendation, noting that domestic trade requirements are a state and territory government responsibility. The Australian Government actively supports harmonisation of interstate trade protocols for plants and plant products through a subcommittee of the national PHC – the Subcommittee on Domestic Quarantine and Market Access, which is the national government group with responsibility for interstate trade arrangements.

The ability to appropriately identify and trace horticultural products through the supply chain is essential. Some mechanisms already exist and are integrated into emergency response arrangements and existing programs such as the Nursery and Garden Industry Australia Biosecure HACCP (Hazard Analysis Critical Control Point) initiative. The Australian Government will continue to work with other governments and industry to strengthen these mechanisms.

The Australian Government applies an integrated national approach to the prevention and management of issues associated with weeds through its participation in the Invasive Plants and Animals Committee (IPAC). The IPAC oversees the implementation of the Weeds of National Significance (WoNS) initiative, the Australian Weeds Strategy (AWS) and the Nationals Invasive Plants Surveillance Framework (NIPSF).

- The WoNS initiative coordinates national effort against 32 of Australia's invasive plants. It benefits Australia by increasing accessibility to weed information and strengthening networks from national to local levels to increase the sharing of information, experiences and resources as well as regulatory consistency.
- The AWS is the national strategy for weed management in Australia. Following a review of it in 2012, a new weed strategy has been developed by IPAC and was endorsed by NBC on 7 June 2017.
- The NIPSF aims to increase Australia's post border capability for early detection of, and rapid response to, new invasive plant incursions and range expansions of existing plants. The IPAC is currently developing an implementation plan for the NIPSF.

The Australian Government also works with the Atlas of Living Australia website, which publishes weed information and a weed identification tool.

The Australian Government is committed to working with state and territory governments and the horticulture industry to harmonise weed identification and sales tracking protocols across the industry through these initiatives.

Recommendation 19

The committee recommends that the Department of Agriculture review and, where appropriate, strengthen current regulations governing private aviculture imports, given the high rate at which privately kept birds escape into the wild.

Noted

The Australian Government regulates the international movement of wildlife. Legally imported exotic wildlife, including birds, are the responsibility of the relevant state and territory governments.

The import of live animals, such as exotic birds, into Australia is controlled under the Biosecurity Act, administered by the Department of Agriculture and Water Resources and the Department of Health, and the EPBC Act, administered by the Department of the Environment and Energy.

The Department of the Environment and Energy has responsibility for assessing applications to amend the List of Specimens taken to be Suitable for Live Import (the Live Import List) under the EPBC Act to include a new species.

Each new animal species proposed for inclusion on the live import list is the subject of a detailed risk assessment by the Department of the Environment and Energy. This assessment focuses on the potential impacts on the Australian environment of the organism to be listed. To apply for any animal specimens (excluding biocontrol agents) to be included on the live import list, the applicant must submit a draft assessment report that addresses the potential impacts of the species on the Australian environment.

The standard terms of reference for this report are designed to account for Australian conditions. They include requirements for information regarding: whether the species has previously established feral populations anywhere in the world; any previous risk assessments carried out in Australia or overseas; an assessment of the likelihood of the

species establishing a breeding population in Australia; the potential impacts of the species should it become established in Australia; and relevant state/territory legislative controls. In order to be eligible for import into Australia, a species must be listed on the Live Import List and meet all requirements relevant to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) under the EPBC Act and the biosecurity requirements set out under the Biosecurity Act.

Current import policies limit the import of live birds to certain species of pet birds from New Zealand, providing current import requirements are fully complied with. Only a small number of birds enter Australia this way. Between 2012 and 2015, 18 birds were imported from New Zealand. On 2 May 2016, the Department of Agriculture and Water Resources announced a review of the biosecurity risks associated with importation of pet and non-commercial psittacine birds (parrots). The Australian Government notes that many exotic bird species are bred in Australia.

Recommendation 20

The committee recommends that the Department of Agriculture identify the pathways by which exotic birds are entering the country, including illegal pathways, and work to better regulate or close these pathways.

Supported in Principle

There are initiatives in place to identify the pathways by which exotic birds enter the country and combat illegal importation through those pathways. The Australian Government is committed to continuing to regulate these pathways across a range of agencies.

The Department of Immigration and Border Protection is primarily responsible for identifying and regulating illegal pathways into Australia such as smuggling. This includes the illegal pathways through which exotic birds might enter Australia. However, the Department of Agriculture and Water Resources actively targets the illegal importation of all animals into Australia, including avian species. Investigations and intelligence collection and sharing are ongoing as are relationships with other border agencies and international partners. The smuggling of fertilised eggs is also an area of focus for the Department of Agriculture and Water Resources and work on identifying pathways and high risk individuals is ongoing.

In addition, the Department of Agriculture and Water Resources develops import conditions to meet Australia's appropriate level of protection (ALOP), under which legal trade in animals and their products can occur.

As previously mentioned, the Department of Agriculture and Water Resources has announced a review of the biosecurity risks associated with importing pet and non-commercial psittacine birds (parrots). It has been proposed that providing for managed, legal imports is one way to reduce the likelihood and impacts of smuggling.

The Department of the Environment and Energy is responsible for implementing Australia's obligations under CITES. Australia is one of 181 Parties to CITES that cooperate to ensure that wild species, including a number of bird species listed in the Convention, are not threatened by international trade.

The Australian Government is committed to continuing the initiatives in place that identify the pathways by which exotic birds enter the country in order to combat illegal importation through those pathways.

Recommendation 21

The committee recommends that the Department of Agriculture work with relevant state and territory agencies to develop a national database of seized exotic wildlife.

Supported in Principle

The Australian Government supports, in principle, a number of the reforms that are being progressed under Schedule 3 of the IGAB to develop a collaborative approach to collecting, collating, analysing, storing and sharing biosecurity information to improve decision making and enhance efficiency of biosecurity operations. However, a singular database may not be practicable.

The IPAC has developed reporting systems to share information between the Australian and state and territory governments on detection of new pest animals including stowaway, smuggled, seized, escapes/releases and field detections. IPAC has been annually collating and sharing the detection data between jurisdictions for over five years. Over time, the national dataset will provide vital information for scientific analysis on trends in the type, location, pathway and propagule pressure of new vertebrate detections at the border and post-border.

To improve timely data sharing, the NBC is developing agreements for sharing information and the development of national biosecurity minimum data sets to facilitate the exchange of agreed information between jurisdictions as a priority under IGAB. Minimum data sets have been drafted for emergency response and surveillance for pests and diseases.

The Department of the Environment and Energy currently maintains a database of exotic wildlife, seized under Part 13A of the EPBC Act. The Department of the Environment and Energy works collaboratively with the Department of Agriculture and Water Resources to provide information on seized exotic wildlife to state and territory agencies.

Recommendation 22

The committee recommends that, following the completion of the current review of national maritime pest policy by the Department of Agriculture, the Commonwealth Government amend biosecurity legislation to incorporate a national mandatory biofouling management regime.

Noted

During the recent review of National Marine Pest Biosecurity arrangements, the Department of Agriculture and Water Resources released issue and discussion papers and held stakeholder workshops in each state capital city. Through these consultation mechanisms, it explored stakeholder views on the need for, and nature of, regulation and risk management controls of biofouling on vessels.

The review made a number of recommendations toward a new focus on prevention activities, such as better relationships between researchers, marine-based industries, government and the community. It also recommends the development of stronger response arrangements for dealing with incursions.

The recommendations will be implemented over 2015–18. Implementation will involve working closely with stakeholders to strengthen national marine pest biosecurity arrangements to reduce risk of marine pests from establishing in Australian waters. The review report and recommendations are available at agriculture.gov.au.

The Biosecurity Act provides broad powers for the Australian Government to assess and manage biosecurity risks for incoming vessels. These powers are flexible and would enable management of biofouling.

Recommendation 23

The committee recommends that the Department of Agriculture conduct more regular ship inspections targeted at biofouling.

Noted

The recent review of National Marine Pest Biosecurity arrangements, explored stakeholder views on the need for, and nature of, regulation and risk management controls of biofouling on vessels.

The review made a number of recommendations toward a new focus on prevention activities, such as better relationships between researchers, marine-based industries, government and the community. It also recommends the development of stronger response arrangements for dealing with incursions.

The recommendations will be implemented over 2015–18. Implementation will involve working closely with stakeholders to strengthen national marine pest biosecurity arrangements to reduce risk of marine pests from establishing in Australian waters. The review report and recommendations are available at www.agriculture.gov.au.

Recommendation 24

The committee recommends that the Commonwealth Government work with state and territory governments to establish a national monitoring and data sharing regime for freshwater fish incursions.

Supported in Principle

Freshwater fish incursions requires co-operation between all levels of government to monitor, noting that there are a range of difficulties in collecting data at the species level for fish imports. The Australian Government will work with state and territory governments to consider the possibility of establishing a national monitoring and data sharing regime for freshwater fish incursions, noting there are related initiatives currently underway that would achieve this outcome.

Under Schedule 3 of the IGAB, a number of reforms are being progressed to facilitate a collaborative approach to collecting, collating, analysing, storing and sharing biosecurity information to improve decision making and enhance efficiency of biosecurity operations. IPAC is promoting the maintenance of a national freshwater fish list for species that are identified as noxious across jurisdictions and is developing a nationally agreed risk assessment methodology to assess species whose potential is not yet known and have yet to be assessed. It is also developing a communication strategy to raise awareness in the community and industry about the management, control and regulation of ornamental fish, as well as raising awareness of pest fish and their management with key stakeholders.

Recommendation 25

The committee recommends that the Department of Agriculture improve border surveillance of freshwater fish imports, review the relevance of its risk assessments for Australian conditions and implement as soon as practicable the on-arrival fish health monitoring program.

Supported in Principle

The import of live animals, such as fish, into Australia is regulated by a number of agencies under the Biosecurity Act, administered by the Department of Agriculture and Water Resources and the Department of Health, and the EPBC Act, administered by the Department of the Environment and Energy. An import permit is required to import live ornamental fish to Australia. Only certain permitted species may be imported from approved countries. The live fish import conditions, including the list of permitted species and approved countries, is specified in the Department of Agriculture and Water Resources Biosecurity Import Conditions system (BICON).

The Australian Government will work with state and territory governments to consider the possibility of establishing a national monitoring and data sharing regime for freshwater fish incursions as discussed under recommendation 24.

The Australian Government, through the Department of Agriculture and Water Resources, is implementing the ornamental fish import risk reform project, which is aimed at improving the department's capacity to conduct on-arrival disease surveillance of freshwater and marine ornamental fish species imported into Australia[1]. Current approaches for border surveillance of freshwater fish imports are being strengthened to manage risks associated with asymptomatic diseases of biosecurity concern (for example, iridovirus).

On 1 March 2016, the Department of Agriculture and Water Resources implemented new pre-export iridovirus free certification requirements for imported freshwater ornamental fish that belong to the gourami, cichlid and poeciliid groups. It recently conducted four on-arrival surveillance trials as part of the reform project. The purpose of the trials were to:

- identify key biosecurity risk pathways for iridoviruses
- test the operational feasibility of, and make appropriate changes to, the fish health surveillance and pathway analysis system prior to full implementation.

The test results of the trials have been provided to the relevant overseas competent authorities of approved exporting countries to help them target the highest risk areas of their freshwater

[1]For further information see www.agriculture.gov.au/biosecurity/risk-analysis/animal/ornamental-finfish

ornamental fish export industry. Results have also been provided to importers to help them source fish free of iridovirus.

Recommendation 26—The committee recommends that the Commonwealth Government work with state and territory governments to establish a national framework for managing biosecurity on Australia's islands.

Supported in Principle

The Australian Government considers that it more effective to strengthen management of biosecurity on Australia's islands within the existing biosecurity framework, rather than creating an additional framework for this purpose.

Regulation of the movement of pests and diseases between Australia's islands, and management of established pests and diseases on Australia's islands, is primarily the responsibility of the states and territories (except for the islands that are under Commonwealth control). The Australian Government contributes to biosecurity activities within Australia, in partnership with state and territory governments, industry and other stakeholders where there is a discernible national interest.

The Australian, state and territory governments are working through the NBC to improve how the effects of established pests and diseases of national significance on Australia's economy, environment and way of life are managed. This work would also be relevant for biosecurity management on islands.

In July 2016, the NBC endorsed the National Framework for the Management of Established Pests and Diseases of National Significance, which was a key deliverable under Schedule 5 of the IGAB. The framework outlines a new approach to managing weeds, pest animals, plant and animal pest or diseases that become established in Australia and have a significant impact at the national level. It provides for:

- activities to be undertaken by the most appropriate party
- appropriate prioritisation of EPDNS based on risk
- effort to be targeted where the greatest biosecurity outcomes can be achieved in the national interest
- investment return to be optimised
- adoption of national investment principles involving beneficiaries and risk creators
- minimisation of regulatory burdens associated with containment of established pests and diseases.

In addition to this work, the Australian Government has committed $50 million over four years under the Agricultural Competitiveness White Paper to improve the way established pest animals and weeds are managed.

Further, a key action area in the Australian Government's Threatened Species Strategy is to establish safe havens for species most at risk. This includes islands from which all invasive animals and plants are eradicated to provide long-term protection to threatened species. Within these areas, species are able to thrive and increase their numbers without the pressure of threats. Another action in the Strategy is to limit the impact of feral cats. One of the targets under this action is the eradication of feral cats from five Australian islands within five years.

Australian Government response: Australian Greens Minority report

Recommendations 1-6

These recommendations all relate to the establishment of a new national body, Environment Health Australia.

Not Supported

The Australian Government agrees with the Committee's (majority) conclusion that the establishment of a new body along the lines suggested in the Environment Health Australia proposal would not be the best use of the limited resources available for biosecurity measures.

The Australian Government considers a more effective approach is to continue to integrate environmental issues into existing governance structures, functions and activities and to strengthen collaboration and consultation with relevant stakeholders, including community members. This approach builds on already strong arrangements through the NBC, its sectoral committees and other relevant organisations, rather than creating a separate system.

Recommendation 7

The Australian Greens recommend that the federal government implement the key recommendations of the Beale Review, in particular the creation of a separate Biosecurity Agency, with a Director that is separate from the Secretary of the Department of Agriculture.

Not Supported

The Australian Government has implemented many of the key recommendations of the Beale Review and is committed to support the delivery of effective and efficient biosecurity services as a core function of the Department of Agriculture and Water Resources.

The Australian Government does not consider it necessary to create a separate Biosecurity Agency. The Biosecurity Act provides a strong decision-making framework with explicit statutory requirements for the Director of Biosecurity. This includes section 541 of the Act, which provides that, in performing functions or exercising powers under the Act, the Director of Biosecurity must have regard to the objects of the Act.

Recommendation 8

The Queensland or federal governments should urgently allocate at least $1.3 million per year for at least 10 years towards the eradication program for yellow crazy ants before more time is lost to delay.

Partially supported

The Australian Government has committed $8.8 million over three years to tackle yellow crazy ants in Far North Queensland. This comprises $7.5 million for action within and adjacent to the Wet Tropics World Heritage Area and $1.3 million to build skills and

capabilities among farmers and landholders to assist with control of tramp ants such as yellow crazy ants.

In addition to this new funding, funding from the Green Army Program has supported ten teams contributing to addressing the problem of yellow crazy ants, including the use of bait stations to control yellow crazy ants next to the Wet Tropics World Heritage Area. The Queensland Government has also committed $3 million over three years to the program. The Australian Government will seek an additional $4.5 million from the Queensland Government as matching funding.