Australian Government
Department of Agriculture
Department of the Environment and Energy

Environmental Biosecurity Roundtable

Melbourne 2019

Environmental Biosecurity Roundtable – Melbourne 2019

The second Environmental Biosecurity Roundtable for 2019 was held at the SeaLife Aquarium, Melbourne on 30 October, 2019. 64 participants took part in the roundtable, with around 20 joining via videoconference. This provided the opportunity for diverse stakeholders to tune into relevant presentations throughout the day.

The Roundtable was hosted by the Environmental Biosecurity Office at the Department of Agriculture and supported by the Department of the Environment and Energy.

What we heard from participants

- The "What's New" short presentations continued to be a crowd favourite
- There is a continuing desire to hear more pest, weed and disease case-studies
- Streaming of the roundtable was a great addition and allowed those unable to attend in person to tune into relevant presentations throughout the day
- The roundtable provided valuable time for networking for those who were present

Presentations

Item 1: Welcome & update

Ian Thompson, Chief Environmental Biosecurity Officer (CEBO), Australian Government Department of Agriculture

The Chief Environmental Biosecurity Officer, Ian Thompson opened by stating that Environmental Biosecurity is a shared responsibility across government, industry, environment groups and community.

Ian discussed the activities of the Environmental Biosecurity Office in its inaugural year, including the establishment of the Environmental Biosecurity Advisory Group, the development of the National Priority List of Exotic Environmental Pests and Diseases and the completion of numerous projects under the Environmental Biosecurity Project Fund.

CEBO priorities for 2020 include finalising the National Priority List of Exotic Environmental Pests and Diseases, building further linkages with interested community stakeholders, hosting the International Plant Protection Convention (IPPC) Symposium on the spread of contaminant pests, implementation of the National Environmental and Community Biosecurity RD&E Strategy, raising environmental biosecurity awareness and improvement of data management, surveillance, risk mitigation and pest and disease responses.

Item 2: Department of Agriculture update

Shalan Scholfield, Acting Assistant Secretary, Biosecurity Policy and Response branch, Department of Agriculture

Shalan Scholfield delivered an update on environmental biosecurity activities within the department, including the 17 active biosecurity responses currently underway. Australia's biosecurity is a challenging task which is growing in complexity each year. In 2017-18 there were 22.4 million international air and sea travellers cleared, 152 million international mail articles processed and almost 68,000 sea container inspections conducted. Over 295,000 items of significant biosecurity concern were removed from travellers coming into Australia during this time.

Innovation plays a crucial role in allowing us to meet future biosecurity challenges. The Australian Government is working to facilitate innovation in this area by participating in the biosecurity innovation exchange with New Zealand, by supporting research through the Centre for Excellence for Biosecurity Risk Analysis and via the department's Biosecurity Innovation Program.

Innovative technologies are being incorporated into Australia's biosecurity operations to help keep pests, weeds and diseases out and prevent established pests from spreading. These technologies included the Rapiscan Real Time Tomography (RTT) 3D X-ray, CYBERTONGUE® Treatment Verification system, virtual fencing to keep livestock from spreading weeds, weed killing robots developed and thermal imagery for use in vertebrate pest detection.

Item 3: Department of the Environment and Energy update

Daryl Venables, Acting Assisting Director, Environmental Biosecurity Section, Australian Government Department of the Environment and Energy

Daryl Venables informed attendees about the Independent review of the *Environmental Protection and Biodiversity Conservation Act 1999* (The EPBC Act). The review will be led by Professor Graeme Samuel AC and will be presented to the Minister for the Environment within 12 months of commencement.

Daryl also discussed the next round of the National Environmental Science Program (NESP), a long term commitment by the Australian Government to support environment and climate research. Projects currently underway under NESP include the Developing eDNA for Tropical Waters program which is revolutionising aquatic monitoring and field surveys in tropical waters, trialling of new techniques for assessing terrestrial biodiversity in data poor environments and increasing the understanding of how invasive Tilapia are spreading across the north of Australia and their potential impact on biodiversity and fisheries.

An update was delivered on the Year Three Progress Report against the Threatened Species Strategy, including progress on feral cat targets, providing safe havens for species most at risk, improving habitat and undertaking emergency interventions to avert extinctions.

In closing, Daryl discussed the Convention of Biological Diversity (CBD) and the activities planned post 2020. Much of the Convention's work is guided by the CBD's Strategic Plan and its 20 Aichi Biodiversity Targets, which expire in 2020. Formal discussions to design the Convention's new Post-2020 framework have started and are a major focus for the CBD. It is also featuring in other Multilateral Environmental Agreements meetings such as the World Heritage Convention, CITES, plus the IUCN and World Parks Congress.

Item 4: Environmental biosecurity in Victoria

Dr. Nigel Ainsworth, Deputy Director, Invasive Species Science, Department of Jobs, Precincts and Regions, Victoria

Nigel Ainsworth discussed the difficulties associated with managing environmental pest and disease threats, noting that they are comparatively more difficult to identify and prioritise than production pests. This is because uncertainty surrounds the potential impacts of novel pests on Australian species and ecosystems and because impacts may take decades to emerge.

Nigel described the plant, animal and fungal pests which have the potential to seriously impact biodiversity, human amenity and infrastructure in Victoria. These included Japanese knotweed and Sagittaria which can damage both infrastructure and the environment, giant pine scale which impacts upon forestry but also has the potential to effect urban trees and amenity, and the Brown marmorated stink bug which remains a pest of concern nationally.

In Victoria, operational responses to pests unified regardless of whether they affect only plant production industries, only the environment or, as is very common, a combination of both.

Finally, Nigel gave an overview of Victoria's forest biosecurity program - a program that is key to identifying pests that pose a threat to the environment and plant industries. In the last 20 years Victoria has had a number of incursions which have the potential to negatively impact both environment and the forestry industry and Victoria has a targeted surveillance system to ensure early detections of new incursions.

This surveillance program includes sentinel trees for Japanese pine sawyer beetle and Asian longhorn beetle in urban areas. The supply of tree databases by local councils to biosecurity agencies has greatly improved our ability to detect pests and rapidly respond to incursions.

Item 5: 'What's New' in environmental biosecurity

Development of a White-nose syndrome protocol for Naracoorte Caves National Park, World Heritage Site, Renate Velzeboer, Department for Environment and Water, South Australia

Renate Velzeboer discussed the White-nose Syndrome (WNS) biosecurity protocol for Naracoorte caves National Park. White-nose syndrome is a disease of hibernating bats caused by the white fungus *Pseudogymnoascus destructus*. The fungus infects the skin of the muzzle, ears and wings of bats and has been responsible for deaths of more than 6 million cave-dwelling bats in North America and Canada.

WNS is not known to be present in Australia. However, it is predicted to arrive in Australia within the next decade. A quantitative risk assessment has identified that WNS poses a serious threat to the survival of the critically endangered southern bent-wing bat. In light of this information, WNS has been included as a major threat in the national and regional recovery plan for this species and response guidelines have been developed by Wildlife Health Australia.

Renate also discussed the biosecurity protocol for Naracoorte caves National Park, developed by Wildlife Health Australia. This protocol aims to control potential pathways by which the disease could enter Naracoorte Caves, increase education and awareness, and ensure effective response, including rescue and rehabilitation of infected bats by wildlife carers and eradication or containment of potential outbreaks. This protocol will be used as a model for other sites where the southern bent-wing bat is present.

Five year update of the SA Buffel Grass Strategic Plan Michaela Heinson, Principle Biosecurity Officer, Weeds & Aquatic Pests, Biosecurity South Australia

Michaela Heinson delivered a five year update on the South Australian Buffel Grass Strategic Management Plan and discussed the new Strategic Plan which will run from 2019-2024.

Success stories from the previous five year plan included strategic control of over 300ha of Buffel grass outlier infestations, best practice management extension programs and community engagement activities, the survey of 4,600km of roadsides, the development of a geographical information system distribution database and a purpose-built control prioritisation tool to inform decision making.

Michaela discussed the priorities for the next five year strategic plan, including expansion of engagement programs with a range of stakeholders including exploration and mining industries, road and rail corridor managers, National Parks rangers and pastoralists; targeted surveillance and control at key dispersal nodes such as Port Augusta and Coober Pedy; addressing key challenges such as maintaining funding and momentum for on-ground action and containment, better mapping and knowledge of distribution; and developing strategies and tools for managing Buffel grass in remote areas with widespread, extensive infestations.

Recent stakeholder consultation on the South Australia Buffel Grass Strategic Plan 2019-2024 has provided the South Australian Buffel Grass Taskforce with fresh feedback on expectations and goals for coordinated management. Pending approval, the plan will be released before the end of 2019.

Emerging technologies in biosecurity Dr Alexander N. Schmidt-Lebuhn, Research Scientist CSIRO Centre for Australian National Biodiversity Research

Dr Alexander N. Shmidt-Lebuhn discussed exciting emerging technologies in the biosecurity space. In particular, the potential for mobile identification of pests using image recognition and DNA sequencing.

Growing travel, transport, and trade increase biosecurity risks and require future proofing of biosecurity and surveillance work. A key bottleneck is species identification, as there is a limited number of taxonomic experts and a lack of user-friendly, mobile diagnostic tools.

CSIRO's National Research Collections house millions of expertly identified specimens of insects, plants, and vertebrates that underpin research in biodiversity discovery, bioprospecting, environmental services, and biosecurity.

Increasingly the specimens are used for digital imaging and genomic sequencing. This has allowed the development of a prototype smartphone app for mobile identification of weed seeds. This app uses video feed for constantly updated ID estimates and provides information which can be saved with geocode, time stamp and identification estimate. The app can also provide further information on potential species IDS to ensure accuracy.

CSIRO also generate DNA sequences from reference collections to enable molecular species identifications with mobile sequencing, meta-barcoding and eDNA surveys.

Fish translocation in Victoria Tim Curmi, volunteer, Native Fish Australia (Victoria)

Tim Curmi outlined the activities of independent community group Native Fish Australia, including management of native fish hatcheries, construction of fishways and collection of data about native fish populations via surveys and catch and release competitions.

The potential environmental impacts of stocking non-native fish under the Victorian Government's Target 1 Million Program was also discussed. This program which aims to increase the number of Victorian recreational fishers to 1 million by 2020, boost fish stocks to 5 million fish per year and support new infrastructure facilities to support fishers. Risks arising from translocation of fish under this program include spread of disease and predation of native galaxids and other smaller species by non-native fish.

National wildlife health surveillance Rupert Woods, CEO, Wildlife Health Australia

Rupert Woods discussed the importance of national wildlife health surveillance in protecting Australia's environment and amenity.

Wildlife are important indicators of environmental health and may be hosts and or reservoirs for important diseases and disease agents that could affect Australia's biodiversity, human health, trade and tourism.

Detection of disease and disease agents in wildlife, and the lack of evidence of absence of diseases to satisfy trading partners, can have large economic costs. All evidence suggests that the risks to Australia posed by diseases in wildlife will become greater with changing land use, climate change and as societal attitudes bring wildlife, livestock and people into closer contact.

Rupert's presentation introduced Australia's national wildlife health system, discussed future needs and identified some of the benefits the National Priority List of Exotic Environmental Pests and Diseases may provide, for example by assisting in awareness raising, research and development and surveillance. He noted that the wildlife health surveillance system is based on the intelligence cycle; is simple, national and functional; and is embedded in our broader biosecurity system. Approximately 50 agencies or organisations and 800 individuals are involved and the system sees about 50,000 wildlife health cases a year.

Australia's wildlife health system also has a strong One Health focus, and collects and disseminates information of relevance to animal health, public health and environmental management.

The continued presence and further development of this system will be important in future as we continue to address emerging issues of antimicrobial resistance, emerging infectious diseases and environmental biosecurity.

How we can use citizen science to manage biosecurity? Kade Mills, ReefWatch Coordinator,Victorian National Parks Association and representative for the Australian Citizen Science Association's Victoria Chapter

Kade Mills discussed the relevance of citizen science to biosecurity. Citizen science has the potential to be used in the management of biosecurity, however noted that there are a number of factors which will influence its success. In order for citizen scientists to be able to participate in the biosecurity space they must have access to sufficient information about the pests or diseases they should be looking for or could potentially find. Furthermore, organisations should be aware of the time that is required of both the organisation and citizen scientists to collect high quality data and be respectful of this input. This process requires significant relationship building and provision of resources. In particular, organisations should strive to close the loop and inform citizen scientists of the role their information has played in achieving outcomes, even if just in the form of an automated message.

In closing, Kade encouraged organisations to reach out to the Australian Citizen Science Association if they required help to work in the citizen science space.

Environment and Community Biosecurity RD&E Strategy, Dr. Matt Sheehan, Implementation Coordinator, Environment and Community Biosecurity RD&E Strategy, Centre for Invasive Species Solutions

Matt Sheehan discussed the implementation of the Environment and Community Biosecurity RD&E Strategy, initiated under the Intergovernmental Agreement on Biosecurity (IGAB).

The Strategy, released in 2016, aims to establish a national, coordinated and strategic approach to maximise benefits from past and future investments and to generate cost-effective environmental and community biosecurity RD&E. Part of Matt's role is to identify synergies and areas of collaboration between this strategy and others, including the Plant and Animal Biosecurity RD&E Strategies, and to work towards a more central and seamless approach.

Whilst some areas have received considerable attention, including vertebrate pests and weeds, to date there has been limited national coordination and ownership of the Strategy. Matt discussed his tasks as Implementation Coordinator including the initiation of a gap analysis to determine whether the strategy aligns with the national priorities identified in the IGAB review and the evaluation of strategy implementation. Furthermore, Matt discussed the development of a communication and action plan to ensure buy-in and more effective collaboration and the development of the 2020-23 Strategy. A workshop regarding the new strategy will likely be held in March next year to contribute to its development. Interested parties may also wish to contribute by taking part in surveys or by providing documents, publications or reports which could assist in the gap analysis or evaluation components of the process.

Securing Phillip Island as a haven from invasive predators, Dr Duncan Sutherland, Deputy Research Manager, Phillip Island Nature Parks (Victoria)

Dr Duncan Sutherland described a novel integrated model developed to help wildlife managers decide when to declare successful eradication of red foxes from Phillip Island. Dr Sutherland discussed how the model estimates the detectability of foxes using a variety of monitoring techniques and integrates them together with the number of foxes removed each year, and the effort expended, to estimate the number of foxes over time. The model can then be used to project into the future in order to estimate the probability of eradication under the scenario that management continues but no foxes are detected. The optimal time to declare eradication, balancing costs of declaring too early versus maintaining a program unnecessarily, was three years after the last fox detection. The model has been updated to include two new methods: camera trapping and fox detection dogs. The updated model reveals the new techniques improved fox detectability. The last fox was removed from Phillip Island in 2015 and eradication was declared in 2017. The model has informed the design of a monitoring program for detecting any fox reinvasions in the future.

Plant Biosecurity Science Foundation Dr Michael Robinson, Managing Director, Plant Biosecurity Science Foundation

Dr Michael Robinson presented on the activities and projects currently managed by the Plant Biosecurity Science Foundation.

In the last 12 months the organisation has co-invested and collaborated in over 30 projects which aim to increase Australia's plant science capacity. The foundation has recently approved the next round of investments to enhance Australia's plant biosecurity – from raising awareness with school children and testing new diagnostic methods for origins of insects to raising awareness and understanding of myrtle rust in the broader community and indigenous groups on Fraser Island and the Northern Territory. Furthermore, the Foundation has been doing important work improving the understanding of banana blood disease before it enters Australia and developing the organisation's commercial Intellectual Property.

Plant Sure – preventing future biosecurity risks from ornamental plants Hillary Cherry, Weed Management Coordinator, NSW Department of Planning, Industry and Environment

Hillary Cherry discussed Plant Sure, a voluntary certification scheme which encourages the plant industry to promote environmentally safe ornamental plants to consumers.

Over 65 per cent of Australia's weeds were introduced as ornamental plants, including Paterson's curse and Lantana. While stronger pre-border legislation is now in place to prevent known weeds entering, new species and varieties of ornamental plants that are already in Australia continue to pose a biosecurity risk.

Plant Sure is a 'national-ready' voluntary certification scheme that engages relevant ornamental plant industries (breeders, growers, retailers) in promoting environmentally-safe plants and removing or avoiding the use of plants that pose an environmental weed risk. The scheme will be underpinned by a robust plant assessment and categorisation process that will provide confidence for industry and consumers that their plant choices are safe for the environment.

The approach will support the green life industry by showcasing their environmental stewardship and developing a strong brand to support a 'self-sustaining' independent scheme. It will include education and training components to elicit long-term attitudinal and behavioural change in ornamental plant suppliers and consumers, and increase community knowledge and awareness of environmental weed biosecurity risks.

Through these activities, Plant Sure has a vision of decreasing the number of high risk ornamental plants supplied, sold or installed across Australia.

Item 6: Illegal wildlife trade – illegal pets, problem pests

Daryl Venables, Acting Assisting Director of the Environmental Biosecurity Section, Department of the Environment and Energy

Daryl Venables discussed illegal wildlife trade and the risks these species and their associated diseases can pose to our environment and amenity.

Wildlife trade is governed under the *Environmental Protection and Biodiversity Act* (EPBC Act) and the Live Import List. This list is a 'white list', meaning that only listed species are permitted for import into Australia. Contrary to popular belief, it is illegal to keep the offspring of illegally imported wildlife in Australia, regardless of the generational distance from the original wild specimen/s. Many native animals are also not on the live import list, meaning that it is illegal to bring these animals back into the country. Although native, these species still pose a risk to the Australian environment. For example, selectively bred bearded dragons from the United States may bring in novel diseases which could infect wild Australian reptiles or may be hybridised with other lizard species which may behave differently in the Australian environment.

The creation of hybrids in order to meet the pet industry's demands for new, weird and wonderful specimens has the potential to inadvertently breed better feral animals and lead to the establishment of new species. For this reason, hybrids such as Savannah Cats (a cross between a domestic cat and an African Serval) or wolf dogs (which are a hybrid of the domestic dog and any species of wolf) are not permitted into Australia unless specifically listed on the Live Import List.

Item 7: Marine pest management in Victoria

Dr Richard Stafford-Bell, Department of Jobs, Precincts and Regions

Dr Richard Stafford Bell discussed Victoria's marine biosecurity approach across the invasion curve - from prevention and preparedness activities to keep marine pests out of Victorian waters, to the response and management of established marine pests.

Marine pests, which may include marine plants, animals or algae, constitute a serious threat to our marine environments. The introduction and spread of marine species into and around Australian waters through biofouling, or in a ship's ballast water, can have varied and pervasive effects on biodiversity and on the economic and social wellbeing of communities- reducing the beneficial uses provided by marine environments, particularly their productivity, conservation and amenity values.

Victoria is implementing a coordinated approach across government, industry and the broader community to prevent the introduction and spread of marine pests in the state. This includes development of the marine pest plan, enforcement of best practice biofouling and ballast water management by the shipping industry, maintenance of a high level of preparedness by developing emergency response capabilities and completion of risk assessments for potential introductions. Victoria has also developed a surveillance program for local ports and marinas and commercial ports to ensure that any new incursions can be identified and eradicated as early as possible. In instances where eradication is not viable, prevention and asset-based protection activities are undertaken to stop the spread of these damaging species.

Item 8: National plant health surveillance

Dr Susie Collins, Director of National Plant Health Programs, Australian Government Department of Agriculture

Dr Susie Collins described the Australian plant biosecurity surveillance system and the efforts to date in establishing national plant pest surveillance networks and partnerships. Whilst Australia has a comprehensive biosecurity system through the continuum of pre-border, border and post-border activities, protecting Australian agricultural industries, environment and community from exotic pest impacts remains a continual challenge.

The national plant health surveillance system plays an important role in protecting our plant industries and environment. Surveillance may take the form of specific surveys: used by the department to confirm the pest status of identified high risk areas and form part of the early warning/detection system or general surveillance, which seeks to identify whether a pest or disease is present in an area by collating information from a variety of sources. General surveillance is used by the department to support phytosanitary conditions and to detect incursions of exotic pests and diseases.

To support these systems, improvements are continually being made to our data collection, management and sharing mechanisms and to diagnostic tools, allowing us to better identify and share information about potential pests, weeds and diseases.

Susie highlighted the importance of ensuring that our plant health surveillance is comprehensive and not just a focus of agricultural industries, including groups such as botanic gardens and arboreta, environmental groups and the broader community. Plant health surveillance is an essential component of biosecurity risk management across this continuum as it provides early warning and early detection of new and emerging pests, and evidence of pest status.

Item 9: Workshop – National Priority List of Exotic Environmental Pests and Diseases

Dr Heleen Kruger, Assistant Director, Department of Agriculture

Dr Heleen Kruger facilitated a communication workshop about the National Priority List of Exotic Environmental Pests and Diseases to inform the development of the Communications Plan. Attendees developed tailored communication plans focussed on asset protection in order to create awareness of the main species of concern and to encourage reporting of suspect signs and symptoms.

Species on the interim Priority List were divided across the assets that they are likely to impact. Each table was allocated one of the following assets:

- Freshwater ecosystems
- Native animals – birds
- Native animals – non-bird vertebrates
- Native plants – forests
- Native plants – shrub- & grasslands
- Cities & towns

Participants were asked to identify the key target groups for the particular asset, as well as the communication channels, messages and key influencers for these groups. They were also asked to identify special considerations or recommendations related to the asset or the groups involved. A summary of the workshop outcomes are set out below.

Key groups

- NRM/LandCare/Friends of/community groups
- land managers
- schools
- related interest groups (e.g. recreational fishers for freshwater and marine ecosystems)
- arborists (for forests, etc.)
- state/territory governments
- local governments

Key channels

- Social media (Facebook, Twitter, Instagram)
- Working through state & territory governments
- Traditional media – Gardening Australia
- Displays in retail outlets, e.g. Bunnings (on-site displays & identification of pests and diseases)
- Working through peak industry bodies
- Working through local government associations – e.g. their local officers

Key messages

- What to look for - key pest species to report/report anything unusual
- Where to report/what to do with the information
- Importance of early detection (greater chance of eradicating/controlling it)

Key influencers

- Media personalities and celebrities– e.g. Andrew Ettingshousen (Fishing with E.T.)
- Retail outlets, e.g. BCF (Boating Camping Fishing), Bunnings etc.
- Industry leaders
- State & territory government

Item 10: extensionAUS Biosecurity Communities of Practice

Kellyanne Harris, Program Manager for Grains Industry Networks, Agriculture Victoria

Kellyanne Harris discussed the establishment of the extensionAUS Biosecurity Communities of Practice. Communities of Practice (CoPs) are groups of people who share a common pursuit or interest and who, if engaged and enabled can play an active role in biosecurity general surveillance, assisting in the achievement of better biosecurity outcomes.

Kellyanne discussed three projects initiated by Agriculture Victoria which explore the potential for greater community involvement in the national biosecurity system. Each project has established a Community of Practice (CoP) to test the benefits of collaboration and resource sharing between biosecurity and surveillance experts and practitioners with community interest groups to see if they can play an active role in biosecurity general surveillance, and through this help to achieve better biosecurity outcomes. Kellyanne outlined the three pilot networks developed including:

- Botanic Gardens Biosecurity Network – which builds biosecurity knowledge and capacity to protect and preserve the gardens from plant pests and diseases, led by Plant Health Australia.
- Urban Plant Health Network – which connects home and community gardeners with industry and government experts to help identify and manage new or 'exotic' plant pests and diseases, led by Agriculture Victoria and;
- NSW Peri-Urban Environmental Biosecurity Network – which will improve community biosecurity awareness and participation in general surveillance of environmental biosecurity risks. This network is led by NSW Department of Primary Industries.

Item 11: Community-led approach to managing the European rabbit

Michael Reid, Victorian Rabbit Action Network, Agriculture Victoria

Michael Reid from Agriculture Victoria gave an informative presentation about the Victorian Rabbit Action Network.

Rabbits are a serious environmental pest which have spread across the Australian landscape since their introduction 150 years ago. In this time, rabbits have negatively impacted 300+ threatened species and have seriously damaged sites of cultural and historical significance.

Rabbit control is a "wicked problem", an issue which is highly resistant to resolution due to the complex social, cultural and environmental context. Agriculture Victoria established the Victorian Rabbit Action Network (VRAN) in 2014 to combat this issue, by promoting community-led action for more sustainable and effective rabbit management in Victoria. The Network recognises the importance of all people and groups with rabbit management responsibilities and coordinates their efforts to deliver more integrated rabbit control.

Michael discussed the ways in which this collaborative approach draws upon the diverse knowledge and experience of all people with a stake in controlling the impact of rabbits on our landscapes, communities and industries. The learning network has made leaps and bounds since its inception, meeting 3-4 times a year to co-learn and share challenges and running a number of "rabbit boot camps" for industry community and government.

Eighty four per cent of Members noted that the network has helped them to gain knowledge and 84% of people reported that they had changed to a more integrated rabbit control approach since becoming involved, leading to improved environmental outcomes.

Michael concluded with lessons learnt from the VRAN, noting that policy makers need to work for and with people to instigate change. The immense success of the VRAN has been recognised by the United Nations, who awarded the Network a United Nations Public Service Award for their work in 2019.

Item 12: Open Floor Discussion

An open floor discussion between participants took place on 'Strengthening environmental biosecurity networks'

Other topics considered for discussion were:

- illegal wildlife trade and biosecurity
- advances in technology and RD&E
- strengthening environmental biosecurity networks
- general surveillance
- response, and
- use of the National Priority List of Environmental Pests and Diseases.

Strengthening environmental biosecurity was the overwhelming first choice with illegal wildlife trade second.

A highly interactive and interesting discussion occurred. Key themes are summarised below:

Strengthening Environmental Biosecurity Networks

Participants discussed the importance of networks in environmental biosecurity and the potential barriers to effective relationship building, for example the dispersed nature of knowledge across multiple organisations, with each only holding "a piece of the puzzle". In particular, attendees discussed the time sensitive and spatially-dependent nature of biosecurity responses, noting that by the time effective relationships are built between different organisations in response to biosecurity incidents, the incident may already be over. Attendees agreed that effective relationships were central and discussed potential collaborations between sectors - for example in the production space agronomists may be able to undertake active surveillance for invertebrate pests or plant diseases which may impact upon out environment.

Systems mapping may be a useful tool to understand existing and potential networks and to better understand and influence what the community is doing. The discussion also focused on the importance of ensuring that a holistic approach is taken to environmental biosecurity and of ensuring that jurisdictions and agencies are working together and in collaboration with production industries.

An overarching theme of this discussion was the need to ensure that prime industries and the environmental sector treat biosecurity as a continuum rather than by taking discrete approaches. This will lead to a more holistic and effective system which will ensure better outcomes across the board.

Integrating environmental biosecurity with the broader system

Participants discussed the ways in which environmental and agricultural biosecurity systems are working together and the barriers which currently exist that prevent their effective collaboration. Ian Thompson emphasised the importance of a 'One biosecurity' approach. He highlighted that similar response mechanisms exist regardless of whether a pest or disease impacts upon the environment or our agricultural industries.

Participants agreed that the production sector currently has a more complete understanding of potential biosecurity risks to their industry and appropriate responses to incursions than the environmental sector, and highlighted the high degree of uncertainty in the environmental sphere. This uncertainty extends to estimating the cost and return of response activities which can make it difficult for environmental decision makers. Attendees highlighted the issues that may arise with becoming fixated with cost-benefit analysis, noting that the success of a response is often dependent upon timeliness.

Valuing environmental biosecurity

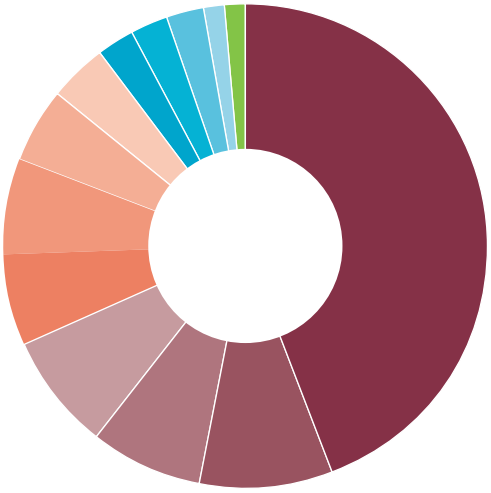
The group discussed the potential for the completion of an "ecosystem services" style analysis of the value of environmental biosecurity responses. Ian Thompson noted that the Centre of Excellence for Biosecurity Risk Assessment is currently completing a study on the value of biosecurity which includes an assessment of its value in protecting the environment.

Attendees were asked to provide suggestions for the theme or focus of the next Environmental Biosecurity Roundtable using an open-response online polling system. Participants returned a number of interesting topics which will be considered for the next Environmental Biosecurity Roundtable including:

- Biodiversity vs Biosecurity
- Climate change and environmental biosecurity
- Engaging community in environmental biosecurity, and
- Invertebrate risks

Representation

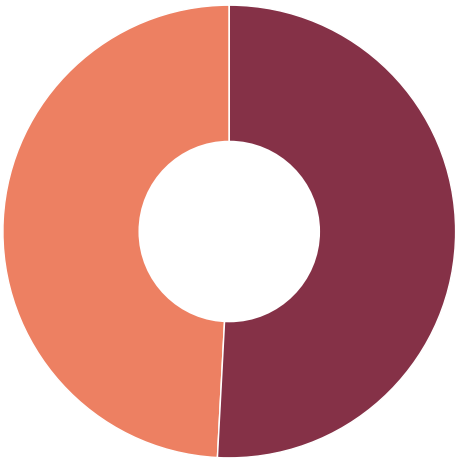
Upon registration, participants were asked to reflect on what their organisation's role and area of focus was in the environmental biosecurity system. The diagram below shows these categories, as reported by participants.



Government	44%	Plant health	3%
Wildlife health	9%	Animal health	3%
Pest and weed	9%	Consultant/service delivery	3%
Landcare/NRM	9%	Business	1%
Academics	6%	Producer	1%
Conservation	6%		
Other	5%		
Marine/aquatics	4%		

Government attendance

Participants were evenly spread across the federal (51%) and state governments (49%). Commonwealth departments in attendance included: the Department of Agriculture, Department of the Environment and Energy, Department of Prime Minister and Cabinet, CSIRO, ABARES and Parks Australia. State or territory government departments represented were: Australian Capital Territory, New South Wales, Queensland and the Northern Territory. No local government participants were in attendance.



Federal	51%
State	49%

Involvement in the environmental biosecurity system

The majority of attendees indicated that their involvement in the environmental biosecurity system was at the national level (49%), followed by state or territory (29%), local/regional (12%) and international (10%).

International	10%
National	12%
State or territory	29%
Local/regional	49%

Melbourne Environmental Biosecurity roundtable 2019 – Wednesday 30 October

Time	Item	Speaker(s)
9:00	Welcome	Ian Thompson & Milena Rafic, Department of Agriculture
9:10	Department of Agriculture update	Shalan Scholfield, Department of Agriculture
9:25	Department of the Environment and Energy update	Daryl Venables, Department of the Environment and Energy
9:35	Environmental biosecurity in Victoria	Dr. Nigel Ainsworth, Department of Jobs, Precincts and Regions
9:50	What's New in environmental biosecurity	
	Development of a White-nose syndrome protocol for Naracoorte Caves National Park, World Heritage Site	Renate Velzeboer, Department for Environment and Water
	Five year update of the SA Buffel Grass Strategic Plan	Michaela Heinson, Biosecurity SA
	Emerging technologies in biosecurity	Dr Alexander N. Schmidt-Lebuhn, CSIRO
	Fish translocation in Victoria	Tim Curmi, Native Fish Australia (VIC)
	National wildlife health surveillance	Rupert Woods, Wildlife Health Australia
10:45	**Morning tea**	
9:50	What's New in environmental biosecurity *session continued*	
	How we can use citizen science to manage biosecurity?	Kade Mills, Victorian National Parks Association
	Environment and Community Biosecurity RD&E Strategy	Matt Sheehan, Implementation Coordinator
	Securing Phillip Island as a haven from invasive predators	Dr Duncan Sutherland, Phillip Island Nature Parks
	Plant Biosecurity Science Foundation initiatives	Dr Michael Robinson, Plant Biosecurity Science Foundation
	Plant Sure – preventing future biosecurity risks from ornamental plants	Hillary Cherry, NSW Department of Planning, Industry and Environment
11:55	Illegal wildlife trade – illegal pets, problem pests	Daryl Venables, Department of the Environment and Energy
12:15	Marine pest management in Victoria	Dr Richard Stafford-Bell, Department of Jobs, Precincts and Regions
12:35	National plant health surveillance	Dr Susie Collins, Department of Agriculture
12:55	**Reflection time** – table group discussion	
1:00	**Lunch – *feel free to walk around the aquarium and visit exhibits***	
2:00	Workshop – National Priority List of Exotic Environmental Pests and Diseases	Dr Heleen Kruger, Department of Agriculture
3:15	**Afternoon tea**	
3:30	extensionAUS Biosecurity Community of Practice	Kellyanne Harris, Agriculture Victoria
3:50	Community-led approach to managing the European rabbit	Dr Kaye Rodden & Michael Reid, Victorian Rabbit Action Network
4:10	Q&A panel session	Nominated participants
4:50	Close	Ian Thompson, Department of Agriculture

Next steps...

The Department of Agriculture and the Department of Environment would like to thank everyone who participated in the Environmental Biosecurity Roundtable for their time and contributions. The discussions from the Roundtable will feed into the agenda for the National Biosecurity Forum, future Environmental Biosecurity Roundtables and other biosecurity governance and communication processes through the National Biosecurity Committee, Environmental and Invasives Committee and other avenues. Additionally, insights from the communications workshop will be used in the development of the Communications Plan for the National priority list of environmental pests and diseases, to help raise awareness of the main species of concern and to encourage reporting of suspect signs and symptoms.

We invite you to participate in our next Environmental Biosecurity Roundtable, to be held in Canberra in May 2020. For an invitation, any contributions including ideas, future themes or presentations, or for more information about environmental biosecurity, contact us at ACEBO@agriculture.gov.au.

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