

Biosecurity Council of Western Australia

Annual Report



2020/2021

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Preface: Biosecurity in Western Australia

What is biosecurity?

Biosecurity is the protection of our economy, environment and community from the impacts of pests, weeds and diseases entering, emerging, establishing or spreading. Western Australia (WA) has a reasonably successful history of preventing pests, weeds and diseases that threaten our \$8.5 billion agriculture and fisheries industries and \$11 billion tourism industry.

Why is biosecurity important

Biosecurity is fundamental to preserving and enhancing the lifestyle, livelihoods and environments unique to WA. In doing so, we can:

- maintain market access
- maintain industry profitability, especially for our primary industries
- preserve our existing social amenity for the enjoyment of future generations
- sustain our environmental assets and ecosystem services; and
- maintain our all-important food security.

However, the risks to our biosecurity system are increasing.

What are the key biosecurity challenges facing WA?

Excluding human-related biosecurity emergencies, WA has been in a state of biosecurity emergency since 2017. In 2020 there were five plant biosecurity incidents and one animal incident being addressed concurrently in the State. By way of comparison, there were four plant/animal biosecurity incidents in the six years to 2014 and 17 in the following six years. This is a step-change in the frequency and scale of biosecurity incursions.

Furthermore, incursions over the past five years have included several high-impact pests and diseases, including tomato potato psyllid, brown marmorated stink bug, citrus canker, Russian wheat aphid, Queensland fruit fly, cucumber green mottle mosaic virus, green snail, *Dickeya dianthicola*, fall armyworm and red imported fire ants. Whilst many of these were successfully managed through the Department of Primary Industries and Regional Development (DPIRD), including successful eradications, the road to recovery for affected producers can be lengthy.

The increase in biosecurity risk is not just a WA phenomenon. A report produced by the CSIRO, 'Australia's Biosecurity Future – Unlocking the next decade of resilience (2020–2030)', highlights increasing trends in terms of the number of incursions of pests, weeds and/or diseases into Australia from overseas. However, it is not just the increasing number of biosecurity incursions that is a concern – it is also the increasing complexities putting pressure on the system.

The WA biosecurity system is under pressure, and the pressures are only increasing. Challenges include:

- the rapid expansion of international and domestic travel and trade
- reduced levels of financial and human resources
- climate change
- social licence
- changing land use; and
- declining ecological resilience.

Considering these complexities, a 'system re-think' is necessary. WA must reposition itself to deliver a fit-for-purpose, future-focused biosecurity system. Decisive policy is needed; transparent and justifiable prioritisation is critical; and all Western Australians need to participate.

With collaboration, cooperation, communication and contribution across industry, community and government, the biosecurity of WA can be strengthened and maintained into the future



Chair's report

I'm pleased to present the Biosecurity Council of Western Australia's 2020/2021 Annual Report. The year was a busy one for the Council as it started building its position on shared resourcing of Western Australia's biosecurity system.

In August, we began discussions with stakeholders to better understand their biosecurity challenges and expectations of Western Australia's biosecurity system going forward. At the heart of these discussions were concerns about our ongoing ability to deliver effective biosecurity. The issues were wide-ranging – from short-term funding arrangements to inadequate monitoring and evaluation systems; and the 'who pays?' question continued to be a source of frustration.

These discussions led to more targeted engagement with community, industry and government stakeholders directly involved in the legislated mechanisms for funding biosecurity in Western Australia. The purpose of this was to gain a thorough understanding of how each funding mechanisms is being used to deliver biosecurity benefits, including the strengths and challenges of each approach.

The research provided Council with much to consider from the perspective of resourcing and delivering effective biosecurity for Western Australia. In some respects, Western Australia is in a fortunate biosecurity position, being an 'island within an island', but we are challenged by vast, sparsely populated geographical areas, diverse ecosystems and the ever-increasing biosecurity risk. Our biosecurity system needs to be able to cope with these challenges into the future.

Although funding is critical to maintaining an effective biosecurity system, the biosecurity risk is increasing at such a rate that investing more and more financial resources will not solve the problem. Indeed, a recent report by the CSIRO shows that tripling investment to 2025 will still result in increased residual biosecurity risk and that 'transformational change in approaches and responsibilities to generate greater efficiencies and effectiveness' is needed.

Understanding this operating environment is critical, and continuing to do the same thing as we have always done is not an option. The Council will progress its work in this area and look forward to helping re-shape the Western Australian biosecurity system through our advice and recommendations.

On a final note, I would like to thank all the stakeholders that took the time to engage with the Council in its work during the year, as well as my fellow Council members for your support, commitment and professionalism – particularly, Dr David Bowran and Cr Cliff Winfield whose terms on the Council ended during the year.



Prof. Simon McKirdy
Chair, Biosecurity Council of Western Australia





The Biosecurity Council of Western Australia

Overview

The Biosecurity Council of Western Australia (the Council) was established in 2008 as a specialist advisory group to the Minister and Director General with responsibility for the *Biosecurity and Agriculture Management Act 2007* (BAM Act) – currently, the Minister for Agriculture and Food (the Minister) and the Director General of the Department of Primary Industries and Regional Development (DPIRD). Establishing a Biosecurity Council is a requirement of the BAM Act.

The principal role of the Council is to provide advice to the Minister and the DPIRD Director General on any biosecurity matter, whether referred to the Council by the Minister or Director General, or of its own motion.

The Council operates at a strategic level, with a long-term vision for effective biosecurity in Western Australia that considers national and international treaties and obligations

The advice provided by the Council is based on sound assessment and balances the needs of industry, community and government.

Some of the matters on which the Council may provide advice are:

1. the requirements of a comprehensive and effective biosecurity system for WA
2. significant gaps in, or necessary improvements to, the biosecurity system
3. opportunities to improve industry and public awareness and support for biosecurity objectives
4. opportunities to improve government, community and industry cooperation and collaboration on biosecurity matters; and
5. matters referred to the Council by the Minister or the Director General.

The Council's instrument of appointment can be found at Appendix 1.



Membership

Council membership consists of the Chair and seven ordinary members. Membership is drawn from people who are experienced or actively involved in agriculture, silviculture, fishing, aquaculture, pearling or related commercial activities; natural resource management; environmental protection; or regional communities. Appointments are made by the Minister.

Prof. Simon McKirdy (Chair) has a long history in the biosecurity/quarantine area. He is currently Professor of Biosecurity at Murdoch University and Pro Vice Chancellor of the Harry Butler Institute. Prior positions held include the Biosecurity Science and Risk Manager for Chevron Australia and Chief Executive Officer of the Plant Biosecurity Cooperative Research Centre. Simon has worked on various biosecurity-related committees including seven years with the Plant Biosecurity Quadrilateral Scientific Collaboration Working Group, which included representatives from Australia, Canada, New Zealand and the United States of America.

Dr Regina Flugge (Deputy Chair) has a long history in natural resource management (NRM), including as a member of the Rangelands Regional Assessment Panel for the Natural Heritage Trust in the late 1990's. Regina has over 30 years of experience in environment and sustainable development roles and has worked in the education, government, not-for-profit and corporate sectors. Regina was Chair of Rangelands NRM, the largest natural resource management region in WA, to the end of April 2019. Regina also has a keen interest in environmental biosecurity following previous Ministerial appointments to the Conservation and Parks Commission, Conservation Commission of WA, Coastal Planning and Coordination Council and the Air Quality Coordinating Committee. Regina currently chairs the Ningaloo Coast World Heritage Advisory Committee.

Mr Bradley Adams is a third-generation fisherman who has been involved in the commercial abalone industry all his life. Brad was a commercial abalone diver for many years and pioneered sea-based abalone culture technology. He is the founder and Managing Director of Ocean Grown Abalone Ltd, an ASX listed seafood company based in Augusta. Brad has a keen interest in aquatic biosecurity as healthy marine ecosystems are essential to the future of sustainable fishing and aquaculture production of seafood. Brad was also a Director of the Western Australian Fishing Industry Council (2009-2011) and the Chair from 2011-2013. He currently serves as President of the Abalone Association of Australasia and is a director of the Aquaculture Association of Western Australia.

Ms Nicole Batten is a Director of Batten Farms – an 8000 hectare broadacre grain and livestock property 500km north-east of Perth. She has worked in natural resource management and community development in the northern agricultural area of Western Australia for many years, and is a Councillor for the Shire of Chapman Valley. Nicole also sits on the Rabobank Local Client Council as well as the Grower Group Alliance board, and is the former National and State Chairperson for Partners in Grain (now known as Rural Edge). She is an Australian Institute of Company Directors member and heavily involved in her local grower group.

Mr Justin Bellanger (from March 2021) is the current Chief Executive Officer for South Coast NRM. Justin has over 26 years' experience in environmental, agricultural and aquatic biosecurity, at a senior level, and currently represents Australia's NRM organisations on the national Environmental Biosecurity Advisory Group. With a strong focus on aquaculture, his past roles in the Department of Fisheries saw him working across WA in various research and development roles, providing him with in-depth knowledge and understanding of the state's biosecurity challenges. Justin has chaired, and is a representative on numerous State and national Boards and advisory groups, where his active involvement, enthusiasm and strong leadership skills has earned him many recognition awards.

Dr David Bowran (until February 2021) is a graduate of the University of Western Australia having completed his Bachelor of Science in Agriculture in 1978 and his Doctor of Philosophy (Agronomy) in 1990. David joined the WA Department of Agriculture in 1985 and spent 30 years working in a diverse range of roles with the Department. While primarily a Research Officer in the Weeds section for his early career, he went on to manage the Integrated Weed Management project and then became the Manager for the Grains program. David was also Acting Executive Director for Plant Industries within the Department for 15 months, with responsibility for Plant Biosecurity during that period. David has a strong interest in plant breeding, climate change and climate forecasting and how these disciplines interact in improving crop production. David currently has a small farm at York.

Prof. John Mackenzie has had a long involvement in biosecurity and global health security, with a strong background in human and animal viruses. Over recent years, John's interests have broadened to encompass global outbreak alert and response activities, including the development of international surveillance within the International Health Regulations, chairing the Steering Committee of the World Health Organisation's (WHO) Global Outbreak Alert and Response Network and participating as a member of the WHO's Emergency Committee for COVID-19, instituted by the WHO Director General under the International Health Regulations. John is an advocate of the 'one health' concept that recognises that the health of people, animals and the ecosystem are inextricably woven together. He initiated the international One Health Congress and is currently the Vice-Chair of the One Health Platform foundation. He co-wrote the proposal and served as the interim Chief Executive Officer of the Australian Biosecurity Cooperative Research Centre, was a member of the Commonwealth Biosecurity Advisory Council and has undertaken various consultancies for the Commonwealth Health Department and Australian Quarantine and Inspection Service.



Dr Kelly Pearce has had an 18-year career in Agricultural Research, with a focus on farming systems. She continues to coordinate a number of regional science and innovation projects through her role as the Facey Group Executive Officer. Kelly holds a number of industry positions including Grower Group Alliance Director, Deputy Chair of the Western Australian Meat Industry Authority and Member of the Sheep and Goat Industry Funding Scheme Management Committee. Kelly is a 2012 Nuffield Scholar, Graduate of the Australian Institute of Company Directors and a Research Fellow with the Australian Farm Institute. Kelly is also a grain and sheep producer from Yealering in Western Australia with her family.

Mr Cliff Winfield (until February 2021) is a third generation primary producer. He has held positions across the State in the Department of Agriculture and Department of Parks and Wildlife predecessors. He then moved to Manjimup to develop a vineyard and pulpwood plantation, and currently a citrus orchard. He has a long involvement in biosecurity management from local government, conservation agency and primary producer perspectives. Cliff is a keen advocate for community involvement and using interpretation to communicate science objectives. Cliff is a Member of Manjimup Shire Council, a board member of the South West Catchments Council NRM, community member of the Geographic Names Committee, committee member of WA Citrus and a member of the Australian Institute of Company Directors. Cliff was appointed to the Biosecurity Council as a WA Local Government Association representative.

The membership of the Biosecurity Council is summarised in Table 1.

Table 1. Biosecurity Council membership terms

Name	Position	Expiry of term
Prof. Simon McKirdy	Chair	30 June 2021
Dr Regina Flugge	Deputy Chair	30 June 2023
Mr Bradley Adams	Member	30 June 2021
Ms Nicole Batten	Member	31 December 2021
Mr Justin Bellanger	Member	30 June 2023
Dr David Bowran	Member	27 February 2021
Prof. John Mackenzie	Member	30 June 2023
Dr Kelly Pearce	Member	31 December 2022
Mr Cliff Winfield	Member	27 February 2021

The membership terms of Dr Regina Flugge and Professor John Mackenzie ended on 27 February 2021. Dr Flugge and Professor Mackenzie were both reappointed for a second term. Professor McKirdy and Mr Adams were also reappointed for terms commencing 1 July 2021.

Council activities in 2020/2021

Overview

Understanding the needs and challenges of industry, community and government is key to ensuring relevant and constructive advice to government. During 2020/21, the Council continued to monitor biosecurity-related developments at national and State levels and proactively engaged with industry, community and government on biosecurity matters. The key areas of advice that were progressed during the year were:

- mechanisms for funding biosecurity in WA
- the effectiveness of WA's border biosecurity system
- how Western Australians perceive 'biosecurity' and their role in pest, weed and disease prevention, surveillance and response; and
- the quadruple bottom line of biosecurity.

Biosecurity funding mechanisms

The Council has kept a watching brief on the biosecurity funding mechanisms used in WA since it provided advice in this area in 2016. In 2019/20, it reviewed and updated its position on one of these funding mechanisms, Declared Pest Rates (DPR), recommending the current DPR approach be reviewed in terms of its strategic intent, how it is being implemented, the operational (on-ground) delivery and the return on investment the approach is delivering to the State.

With the imminent review of the BAM Act, it is timely to review WA's legislated biosecurity funding mechanisms to identify gaps and opportunities. Additionally, the Minister requested Council address the recommendations it made in relation to the DPR approach.

During the 2020/21 year, desktop studies were undertaken to identify/document:

- the legislated funding mechanisms currently available to address WA's biosecurity
- the cost-sharing principles being applied in WA; and
- funding mechanisms used elsewhere in Australia and internationally.

Data were also collected from stakeholders that were directly involved in delivering the legislated biosecurity funding mechanisms. This was to help Council better understand how WA's legislated biosecurity funding mechanisms operate. Information was gathered through questionnaires and semi-structured discussions, with a total of 25 stakeholder groups participating in the process.

The information was collated into a five-part paper addressing:

- the governance/management structures for biosecurity in WA
- cost-sharing principles
- biosecurity funding mechanisms
- biosecurity expenditure; and
- alternatives/solutions.

Council will finalise its work in this area during the 2021/22 reporting period.

Border biosecurity

WA's long history of border controls and other biosecurity activities, coupled with the State's geography, has provided a relatively bio-secure State free from many pests and diseases found elsewhere in Australia. However, maintaining our biosecurity is becoming increasingly complex. With ever-increasing pressures, our border biosecurity system needs to be able to adapt to the changing environment. Further, resource constraints mean it is more important than ever to ensure an efficient, yet effective, border biosecurity system.

In 2019/20, the Council commissioned an evaluation of the efficiency, effectiveness and appropriateness of the WA border biosecurity system. The evaluation utilised desktop reviews and stakeholder interviews involving more than 56 people. The evaluation report was delivered to Council in early 2020.

During the 2020/21 year, the Council considered the findings and recommendations presented in the evaluation report. Through these deliberations, the Council identified areas in which questions remain and worked on ways in which to answer these questions. The Council expect to complete this work during the 2021/22 reporting period.



Biosecurity perceptions

As highlighted by previous work undertaken by the Council, biosecurity awareness is a critical factor influencing community and industry support for and compliance with WA's biosecurity system. However, no study has been undertaken to date to determine what 'biosecurity' means to Western Australians and their knowledge of the major pest and diseases of concern.

Biosecurity-related communications deployed by government often focus on the tactical/operational business (e.g. what to do about specific pests and/or diseases – that is, the 'here and now'); however, communications need to take a long-term focus. Various studies have shown that this is necessary to increase compliance, build engagement and improve public acceptance (social licence). Understanding how Western Australians perceive biosecurity is critical to inform policy and underpin biosecurity communication/extension/education/engagement strategies that, when implemented, will have impact.

During 2020/21, the Council continued to develop the process for undertaking this area of work; however, action in this area was suspended to focus more fully on the biosecurity funding mechanism work described above.

Quadruple bottom line of biosecurity

It is important to understand the value proposition of a bio-secure WA. This information can be used to help build biosecurity understanding across government, industry and community, improve attitudes toward biosecurity and aid in resource allocation.

Analyses often focus primarily on the economic costs and benefits. However, in terms of biosecurity, the other less tangible aspects are just as important to understand and potentially more meaningful to much of the community. Being able to confidently articulate the social, environmental, cultural and economic (quadruple bottom line) value of WA's biosecurity system is critical.

During 2020/21, the Council continued to develop the process for undertaking this area of work. This included liaising with experts in the field to discuss potential methodologies/processes that may be applied. Similar to the work on biosecurity perceptions, activities for this area of work were suspended as Council focused on finalising its advice on biosecurity funding mechanisms.



Engagement

Interactions with Government

Biosecurity Senior Officers Group (BSOG)

The Biosecurity Council continued to liaise with the BSOG throughout 2020/21.

The two-way engagement allowed the Council to keep up to date with State and National biosecurity issues and opportunities, whilst providing State Government agencies a forum to discuss areas in which independent advice from the Council might be sought

The BSOG is comprised of senior staff from agencies that have biosecurity responsibilities including DPIRD (Chair), Department of Biodiversity Conservation and Attractions (DBCA), the Forest Products Commission, the Department of Health and the Department of Water and Environmental Regulation. The WA Local Government Association (WALGA) also sits on the BSOG, and the Department of Defence (Commonwealth) participates as an *ex officio* member.

Throughout 2020/21 the Council kept the BSOG informed of its work. Similarly, the BSOG, via its Chair, actively participated at each ordinary Council meeting to provide Council with updates on the key issues and biosecurity activities at State and national levels.

Other

Regular meetings were held between the Council Chair and/or Deputy Chair and senior staff from DPIRD and DBCA during the year. The purpose of these meetings was to discuss the work being undertaken by the Council, enabling issues to be discussed and to get feedback into the processes being used by Council. The meetings also provided valuable opportunities for the agencies to brief Council on key biosecurity-related challenges and achievements.

In June 2021, the Council was invited by DPIRD to provide comment on the draft Terms of Reference for the panel that will be overseeing the review of the BAM Act. The Council made several suggestions and anticipate further engagement with government on the BAM Act review process into 2021/22.

Engagement with industry and community

Over the course of the year, the Biosecurity Council was invited to present at or participate in various industry and community events. The Council used these opportunities to highlight the role of the Council, the work being undertaken and, where appropriate, its recommendations on key issues. During 2020/21, this included:

- participated on the WA Feral Cat Working Group
- provided an update at a 'Landcare Checks In' (August 2020); and
- presented at a meeting of the South West Zone of WALGA (November 2020).

Website

Up-to-date information about the Biosecurity Council continues to be freely available on the [Biosecurity Council's webpages](#) on the DPIRD Agriculture and Food website. This includes a link to the Invasion Curve Animation – a short video commissioned by the Council in 2015 to explain the invasion curve and its relevance to WA's biosecurity system. The video has received almost 9000 views to date, and is being used by organisations across Australia and internationally.

Regional meeting

Each year the Biosecurity Council holds one of its meetings in a regional location. The intent of the regional meetings is to:

- engage with local/regional stakeholders on biosecurity
- build networks/relationships with key biosecurity stakeholders; and
- provide a conduit to government/agencies for local/regional stakeholders.

The Council visited Augusta for its second regional meeting in August 2020. Biosecurity is paramount to the ongoing prosperity of the South West Region of WA, in which Augusta is located. The region is home to a large and diverse horticultural sector, various aquaculture enterprises as well as a thriving livestock industry. It is also a biodiversity hotspot with large tracts of natural bushland and aquatic environments making environmental biosecurity paramount. Furthermore, declared pest rates were recently introduced in parts of the region to provide funding for community-driven activities targeting established pests – with mixed responses from the rate-payers.

The visit enabled the Council to meet with a number of biosecurity stakeholders to discuss their views on the status of biosecurity in WA and biosecurity concerns. Council also took the opportunity to tour DPIRD's Pemberton Freshwater Research Centre, Newton Orchards apple packhouse, Bendotti Exporters (potato processing), Manjimup Truffles (nursery and grading facility) and Ocean Grown Abalone. In addition to allowing the Council to see the on-ground operations first-hand, the visits facilitated valuable discussions on the biosecurity opportunities and challenges of these diverse industries of the south-west.

The issues raised with the Council during its time in Augusta were discussed with DPIRD and the Minister. Importantly, the visit helped Council better understand the needs and challenges of the industries and community of the region.



Meetings

The Biosecurity Council formally convened four times during 2020/21. It also held four half-day workshops during the year. The Deputy Director General (Sustainability and Biosecurity, DPIRD) and the DPIRD Biosecurity Executive Director, were invited to attend each meeting.

In addition to the ordinary meetings and quarterly workshops, the Council working groups for the various areas of work also met during the year. These meetings were, in general, held by videoconference to discuss and progress advice to government.

Table 2 documents Council member meeting attendance.

The Council should be aware of changing industry, community and environment needs and give appropriate consideration to national and international treaties and obligations

To support this, Council meeting agendas included presentations that address key biosecurity activities and issues. Table 3 lists the presentations made to the Council during 2020/21.

In addition to these, the Chair of the cross-agency BSOG provided an update on current biosecurity activities, advances and issues from both national and State perspectives at each meeting.

Table 2. Biosecurity Council member meeting attendance (2020/21)

Name	Meetings attended	Workshops attended
Mr Brad Adams	4	4
Ms Nicole Batten	4	4
Mr Justin Bellanger ¹	1	1
Dr David Bowran ²	3	3
Dr Regina Flugge	4	4
Prof. John Mackenzie	4	3
Dr Kelly Pearce	4	4
Prof. Simon McKirdy (Chair)	4	4
Mr Cliff Winfield ²	3	3

¹ Appointment term commenced 28 February 2021

² Appointment term ended 27 February 2021

Table 3. Presentations to the Biosecurity Council during 2020/21

Date	Title	Name	Organisation
5 August 2020	Biosecurity in the WA dairy industry	Jess Andony	Western Dairy
5 August 2020	Aquatic animal health and biosecurity	Katie Webb	DPIRD
5 August 2020	Biosecurity in WA's forestry sector	Paco Tovar	Plant Health Australia
20 November 2020	Horticulture in WA – successes and constraints	Andrew Taylor	DPIRD
19 February 2021	Operations and Compliance – DPIRD	Bruno Mezzatesta, Nigel Schofield, Tim Green	DPIRD
14 May 2021	Biosecurity scorecard	Simon McKirdy	Murdoch University
14 May 2021	Developing a biosecure brand	Simon McKirdy	Murdoch University

Governance

As a government board, the Biosecurity Council is mindful of the need for good governance. The governance framework that shaped the operations of the Council during 2020/21 encompassed a number of critical documents, processes and procedures including:

- the BAM Act
- instrument of appointment
- code of conduct
- duty statements
- disclosure of interest procedures
- decision-making processes
- annual reporting; and
- monitoring and evaluation.

During the 2020/21 financial year, the Council reviewed its systems and processes to ensure ongoing good governance. The Council also evaluated its performance.

This enabled members to be constructively critical of the Council's operations and, thereby, identify areas for improvement to enhance its effectiveness

Progress on past Council recommendations

This section reports on Government activities to address the unresolved recommendations made by Council over the past three years.

Declared pest rates and recognised biosecurity groups (RBGs) (2020)

Following its previous work in this space and ongoing concerns being raised with Council members, the Council prepared and delivered an issues paper on the approach being used to deliver on-ground activities funded from the Declared Pest Account (known as the DPR/RBG approach). Nine strategic issues were identified by the Council relating to three areas:

- the strategic intent of the DPR/RBG approach
- implementation of the approach; and
- issues relating to on-ground delivery.

The paper recommended that an independent review of the DPR/RBG approach be undertaken and the return on investment to the State be identified.

Implementing the recommendations

The Minister asked the Biosecurity Council to implement the recommendations. Through its work on Biosecurity Funding Mechanisms, Council is coordinating an independent review of the DPR/RBG approach and investigating the return on investment for the State.

In addition, DPIRD has launched a project ('Strengthening Community Action to Manage Declared Pests') to improve the public value of the DPR/RBG model and ensure it contributes to the State's strategic intent for biosecurity. The project, which is due to be completed by 30 June 2024, has four focus areas:

- engagement with all stakeholders
- RBG practices
- the legislative framework for community action; and
- community pest management activities.

Declaration of non-agricultural species (2020)

Concerns were raised with the Council about the process of declaring non-agricultural pests under the BAM Act – specifically, the length of time it takes to make a declaration, and perceived biases against declaring organisms that do not have a primary impact on agricultural industries. The Council engaged key stakeholders and, following these discussions, put forward four recommendations to DPIRD and DBCA. The recommendations focused on improving 1) understanding of the declaration process; and 2) opportunities for cross-agency collaboration.

Implementing the recommendations

As a first step, DPIRD is reviewing its policy for the declaring pests under the Act. Broader consideration of the strategic intent and roles and responsibilities regarding species declaration and subsequent activity will be addressed through DPIRD's Biosecurity Futures Initiative, which includes reviewing the BAM Act and developing a Biosecurity Roadmap.

Biosecurity research and development (2019)

Research and development (R&D) is crucial to managing WA's biosecurity risks and threats. There is, however, a perception that these risks and threats could be better recognised nationally to provide opportunities to access funding for R&D activities relevant to WA's biosecurity. The Minister requested Council advice on opportunities to enhance biosecurity R&D funding in the State.

The Council delivered its report on 'biosecurity R&D' to the Minister and Director General of DPIRD in November 2019.

Implementing the recommendations

The report made two recommendations:

1. WA, through DPIRD, establish, coordinate and drive a biosecurity R&D network across WA.
2. DPIRD establishes a baseline for its science capability that extends beyond 'response readiness' to engaging in biosecurity research and innovation.

The Council also identified seven opportunities to build WA's biosecurity science capability and enhance its R&D opportunities (Appendix 2).

The BSOG generally agreed that establishing, coordinating and driving a biosecurity R&D network across WA is an important endeavour that should provide long-term benefits; however, this is not currently resourced.

Sustaining a biosecurity response (2019)

The Minister for Agriculture and Food requested the Council investigate the ability of the then Department of Agriculture and Food to sustain a high-level biosecurity response while retaining the integrity of its budget and other functions. With the amalgamation of the Department of Agriculture and Food into DPIRD, this work was expanded to help shape change in an agency with a larger biosecurity function and with broader skills, resources and regional presence.

In June 2019, the Council delivered its report to the Minister and Director General of DPIRD. The report included seven recommendations:

1. DPIRD develops a strategy that clarifies the expectations for biosecurity response in DPIRD.
2. Implement a multi-layered approach to stakeholder engagement as part of DPIRD's preparedness planning.
3. Formalise cost-sharing arrangements with stakeholders.
4. Establish a State Government biosecurity contingency fund.
5. Develop and maintain resources, including external resources, to ensure DPIRD is operationally ready for pest/disease incursions.
6. Develop and implement an active intelligence gathering and analysis network.
7. Provide staff with opportunities and incentives for innovation, research and development.

Implementing the recommendations

DPIRD has made progress towards the findings in the report as part of a Departmental restructure and resultant change in reporting lines and composition of its Incident and Emergency Management area.

A DPIRD-wide Emergency Management Strategy has been finalised, including Departmental governance of emergency management, and a Learning and Development framework is being developed. DPIRD continues to put in place actions and processes to support its ability to sustain a biosecurity response, including discussions with Treasury and the BSOG regarding establishing a State Government biosecurity contingency fund. Multiple biosecurity incursions since the report was delivered have provided further opportunity for the department to assess outcomes, review the suitability of structures and processes and identify areas in which further work is required.

Environmental biosecurity (2018)

In late 2016, the Council resolved to further its work on cross-agency collaboration by focusing on how environmental biosecurity is being addressed in WA. The Council delivered its report on environmental biosecurity to the Directors General of DPIRD and DBCA in February 2018. The report was later provided to the Minister for Agriculture and Food and the Minister for Environment.

The report made five strategic recommendations to ensure the integration of environmental biosecurity as a core function of DPIRD, with effective cross-agency collaboration and resources to drive it:

1. Environmental biosecurity is integrated as a core function of DPIRD and resourced accordingly (financial and human resources).
2. A dedicated cross-agency entity/group is established to drive environmental biosecurity across all terrestrial and aquatic land tenures and provide strategic coordination.
3. DPIRD, in collaboration with DBCA, (or the cross-agency entity/group — see recommendation 2) prepare a business case to justify a sufficient contingency fund from Treasury for environmental biosecurity response.
4. The agency responsible for environmental biosecurity (or the cross-agency entity/group — see recommendation 2) develop and implement a robust process to clearly define the 'who, what, why and how' in terms of community/industry engagement in environmental biosecurity.
5. Appropriate data-sharing arrangements and systems are developed and implemented within the State and with the Commonwealth.

Implementing the recommendations

DPIRD and DBCA continue to work together to facilitate greater collaboration on research, operations and funding opportunities related to environmental biosecurity. In addition, environmental biosecurity has been integrated as a core function of DPIRD through its Invasive Species and Environment Biosecurity branch. Through this branch, DPIRD delivers ongoing control and eradication programs for environmental and social pests of significance such as red imported fire ant and browsing ant. DPIRD has also partnered with the Commonwealth Government on Indian Ocean Territory projects that address weeds and species of environmental and social concern, as well as on projects to improve data sharing arrangements.

Questions remain as to who is driving environmental biosecurity from a whole-of-state perspective. Without this, the other strategic recommendations by Council are unlikely to be fully addressed.

Cost of Council operations in 2020/21

The direct costs of the Council's operation during the 2020/21 reporting year amounted to \$144 974 (Table 4).

Executive Officer and administrative support was provided by DPIRD, as well as other services to the Council such as accounting and general support.

Table 4. Biosecurity Council of Western Australia expenditure for 2020/21

Description	Cost (\$)
Board member fees	117 854
Travel expenses	15 772
Meeting/workshop expenses	3 971
Advertising	3 038
Professional services – consultancies	2 500
Stakeholder engagement	1 258
Printing/consumables	279
Fees and registrations	180
Repairs and maintenance	100
Communications	20
Total	144 974

Notes:

1. Data sourced from the accounting records of DPIRD.
2. Costs of executive, accounting, administrative and other general support are not included.

Direction for 2021/2022

The Council's immediate priority for the 2021/22 reporting period will be to finalise its advice to government in two areas: mechanisms for funding biosecurity in WA and the effectiveness of WA's border biosecurity system. These are important pieces of work that are anticipated to contribute to the review of the BAM Act and assist decision-makers in developing a roadmap for the future of WA's biosecurity system.

Council is also looking forward to progressing its work on biosecurity perceptions, to better understand how Western Australians perceive 'biosecurity' and their role in pest and disease prevention, surveillance and response. It will also progress work to identify the value proposition of biosecurity actions for invasive species in WA ('quadruple bottom line of biosecurity'). As highlighted by previous work undertaken by the Council, biosecurity awareness is a critical factor influencing community and industry support for and compliance with WA's biosecurity system. These two areas of work will deliver fundamental evidence to inform policy and underpin biosecurity messaging that will help build biosecurity understanding across government, industry and community, improve attitudes toward biosecurity and aid in resource allocation.

With the BAM Act review now underway, Council anticipate that this will be a key feature of its 2021/22 agenda. In addition to providing feedback on the operation of the BAM Act, the Council look forward to advising on the review's scope, terms of reference and implementation.

The Council's 2021/22 regional meeting will be held in Carnarvon. The region is home to a variety of industries, from pastoral production, to horticulture and aquaculture, each with their own set of biosecurity challenges. The Council look forward to engaging with the stakeholders to discuss the ongoing biosecurity of the region into the future.



Acronyms

BAM Act	<i>Biosecurity and Agriculture Management Act 2007</i>
BSOG	Biosecurity Senior Officers Group
DBCA	Department of Biodiversity Conservation and Attractions
DPIRD	Department of Primary Industries and Regional Development
DPR	Declared pest rate
NRM	Natural resource management
R&D	Research and development
RBG	Recognised Biosecurity Group
WA	Western Australia
WALGA	Western Australian Local Government Association
WHO	World Health Organisation



Appendix 1. Instrument of Appointment

BIOSECURITY AND AGRICULTURE MANAGEMENT ACT 2007 INSTRUMENT ESTABLISHING AND APPOINTING MEMBERS OF THE BIOSECURITY COUNCIL

1. This instrument replaces the instrument signed on 18 January 2021, and comes into effect on 5 July 2021.
2. As required by section 48(1) of the *Biosecurity and Agriculture Management Act 2007*, the Biosecurity Council is established and the following persons are appointed as members of the Council for the term specified.

Members	Term
Professor Simon McKIRDY (Chairperson)	for a term expiring on 31 December 2022
Mr Bradley ADAMS	for a term expiring on 31 December 2023
Mrs Nicole BATTEN	for a term expiring on 31 December 2021
Mr Justin BELLANGER	for a term expiring on 30 June 2023
Dr Regina FLUGGE	for a term expiring on 30 June 2023
Professor John MACKENZIE	for a term expiring on 30 June 2023
Dr Kelly PEARCE	for a term expiring on 31 December 2022
Mr Brian PIESSE	for a term expiring on 30 June 2023

3. Set out below are the matters on which the Council is to give advice and other matters relating to the operation and procedures of the Council.

MATTERS ON WHICH COUNCIL IS TO GIVE ADVICE

The Council is to give advice to the *Biosecurity and Agriculture Management Act 2007* (the Act) Minister and Director General on any matter related to biosecurity and in particular:

1. The requirements of a comprehensive and effective biosecurity system for the State of Western Australia and necessary linkages to other biosecurity systems (national and international).
2. Significant gaps in, or necessary improvements to, the biosecurity system.
3. Opportunities to improve industry and public awareness and support for biosecurity objectives.
4. Opportunities to improve Government, community and industry cooperation and collaboration on biosecurity matters.
5. Matters referred to the Council by the Minister or the Director General.

MATTERS RELATING TO THE OPERATION OF THE COUNCIL

The Council should:

1. Be strategic by adopting a long-term perspective for biosecurity in Western Australia and by giving appropriate consideration to national and international obligations.
2. Be aware of changing industry, community and environment needs and of options for balancing the demands of different interests.
3. Provide advice to others, including to other Ministers and Directors General, only when specifically permitted.
4. Act and be seen to act with integrity, as set out in the Western Australian Public Sector Code of Ethics.

On or before 30 November of each year, the Council must prepare and submit to the Minister an annual report on its activities throughout the preceding financial year in accordance with section 50 of the Act.

MEETINGS AND CONDUCT OF THE COUNCIL

The Council is to hold four ordinary meetings each year. For consideration of issues out-of-session, agenda papers will be directed to all members by the Secretariat and the outcome of any decision will be communicated to all members.

The Chairperson may convene special meetings of the Council if it is necessary to deal with any urgent matters requested by the Minister or Director General.

The Council must maintain a formal record of its proceedings and make that record available to the Minister and the Director General or their nominees.

Signed by the Minister on 8 July 2021

Appendix 2. Opportunities for WA to engage in national biosecurity research and innovation

Opportunity	Notes
<p>Tailor application of next generation sequencing to DPIRD policy and regulatory responsibilities, including validating emerging environmental DNA (eDNA) use by third parties. Engage with, and determine how the Australian National Phenome Centre can be effectively utilised for biosecurity</p>	<p>With DNA sequencing and ‘omics’ methodologies now widespread and affordable as a research tool, there is an ongoing challenge of how it is applied in a regulatory and trade sensitive environment. The new frontier of eDNA detection of invasive species is a particular challenge. WA has now opened the Australian National Phenome Centre, which is unmatched for capability in the southern hemisphere and arguably the world</p>
<p>Explore the possibility of a new collaborative entity in biosecurity risk assessment that commits to an ongoing risk assessment and prioritisation program suited to WA</p>	<p>While priority pest lists might usefully serve a national purpose, there is a widespread view that such lists have limited utility in WA. A better but not fully developed approach is to investigate and model categories of threats for a region/industry or the State</p>
<p>Explore how DPIRD can engage with: the National Biosecurity Committee working group’s national list of biosecurity research and innovation priority projects; relevant ‘innovation centres’; and with innovators in technology development</p>	<p>Biosecurity is on the cusp of a digital revolution. DPIRD has the opportunity to join this technology unfolding. This could be through direct partnerships, or it could be a role taken on by a State-based university</p>
<p>Accelerate the roll-out of MyPestGuide and consolidate this with a vision for strategic and targeted application to priority pest pathways</p>	<p>Among the various tools and apps in the name of citizen science, DPIRD’s MyPestGuide Reporter stands out. There is a larger, unfulfilled potential of the app</p>
<p>Commit science and resources for ongoing applied research in the areas of prevention, disinfestation and eradication techniques, for high priority biosecurity risks</p>	<p>This will help attract and retain quality scientists whilst also delivering positive biosecurity outcomes</p>
<p>Consider a small grants program that partners industry with innovators to transform biosecurity hygiene and control options</p>	<p>Research and innovation in the areas of prevention, disinfestation and eradication is very much in the industry’s best interest and largely a private good. This could be administered through the Industry Funding Schemes or as an ‘innovation challenge program’</p>
<p>Explore a collaborative program with national reach for research and innovation in safekeeping threatened native species</p>	<p>WA’s success at protecting native species from invasive plants and animals provides a strong foundation WA has a comparative advantage to lead nationally and engage globally, given the unique ecosystems and species that exist here</p>