Department of Agriculture, Fisheries and Forestry

Evaluation of the Indigenous Ranger Biosecurity Program

Final Report

December 2022

pwc

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Acknowledgement of Country

We acknowledge Aboriginal and Torres Strait Islander people have been the traditional custodians of the Australian landscape for over 65,000 years. We pay our respect to their Elders, past, present and future and further acknowledge the vital role Indigenous rangers have in continuing to care for Country.

Through all engagements with Aboriginal and Torres Strait Islander peoples we seek to contribute to their sustainable long term economic empowerment, social development needs and cultural well-being. We respect the rights of Aboriginal and Torres Strait Islander peoples and acknowledge their right to maintain their culture, identity, traditions, and customs.[1]

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[1]Image source: PwC Indigenous Consulting library images

Executive summary

About the program and this evaluation

The Indigenous Ranger Biosecurity Program (IRBP) was implemented in 2015 following the release of the *Agricultural Competitiveness* and *Developing Northern Australia* White Papers, when the Australian Government sought to further integrate and leverage the value of Indigenous cultural knowledge and practice – in concert with informed scientific risk profiles. The IRBP is facilitated by the Department of Agriculture, Fisheries and Forestry (the department) and seeks to strengthen biosecurity management and preparedness in northern Australia while also increasing agency for First Nations people to engage with their land and Country.

The IRBP is predominately funded through a Memorandum of Understanding (MoU), signed in June 2020, between the National Indigenous Australians Agency (NIAA) and the (previous) Department of Agriculture, Water and the Environment. The program has been funded $25.3 million since 2019 through the NIAA, as well as leveraging $12.4 million over four years from Northern Australian Quarantine Strategy (NAQS) Indigenous Ranger Biosecurity Surveillance program.

The network of 65 Indigenous ranger groups engaged in the IRBP spans many different geographic, environmental and cultural regions and play a key role in Australia's biosecurity preparedness and response management in northern Australia. The program is comprised of the following elements and initiatives:

- **Fee-for-service:** contracts for biosecurity surveillance activities to be undertaken across northern Australia with Indigenous ranger groups.

- **Community Liaison Network:** develops and supports high levels of engagement and cooperation between the department, ranger groups and remote Indigenous communities.

- **Capability Building:** provides technical biosecurity training and practical skills development, along with essential equipment to support ranger groups safely undertake biosecurity surveillance activities.

- **Biosecurity Ranger Forum:** provides a forum for rangers from communities across northern Australia to receive targeted training and build networks.

- **Traineeship:** offers Biosecurity Traineeship positions (APS2) within the department for five Aboriginal and/or Torres Strait Islander people.

- **Biosecurity Business Grants:** offers grant funding with the objective to support innovative business opportunities that capitalise on achieving biosecurity outcomes.

- **Torres Strait Arrangements:** The *Torres Strait Regulatory Arrangement* is a service to facilitate collaboration between all parties responsible for biosecurity in the Torres Strait and Northern Peninsula Area of Cape York.

In 2021, two additional initiatives were implemented using the IRBP framework. Specifically, the Director of National Parks has accessed the IRBP fee-for-service arrangement and CLO network to deliver the Indigenous Rangers Coastal Clean-Up Project (also known as the Ghost Nets Initiative) and the Reduction of Feral Pests and Weeds Project has used the CLO network, fee-for-service contracts with ranger groups, grants and capability building initiatives.

This report has been prepared by PwC, under engagement by the department, to assess the effectiveness of the IRBP to date and identify improvements and opportunities to strengthen the program. The evaluation was conducted against a program logic (developed specifically to support the analysis of this review) of the program's appropriateness in the policy landscape, the program's efficiency and its effectiveness against the program outcomes. The evaluation was based on a range of data inputs and included consultation with a number of government, industry and Indigenous ranger stakeholders and a survey capturing the experiences of 106 Indigenous rangers (across individual responses and representatives of ranger groups responding for a number of rangers).

Biosecurity in northern Australia and ongoing appropriateness of the IRBP

Biosecurity is the management of risks to the economy, the environment and the community, of pests and diseases entering, emerging, establishing or spreading. Biosecurity is critical for Australia's economy, environment and way of life, given the importance of Australia's environmental assets, which are valued at $5.7 trillion and support the employment of 1.6 million people across agriculture and tourism.

Northern Australia, with 10,000 kilometres of coastline and over half of Australia's land mass, remains the frontline for many emerging biosecurity threats. Biosecurity work in northern Australia can be challenging due to low population density, diverse and difficult terrain which spans vast geographical areas and conditions suitable for exotic pests and weeds to establish themselves in our environment. This evolving risk profile is exacerbated by a range of factors including climate change, resource constraints, challenging operating environment and changing trade and travel patterns.

When navigating this operating environment, biosecurity activities in northern Australia offer a unique opportunity to leverage the traditional knowledge and practice of First Nations people to address challenges of serviceability. First Nations people have conducted traditional land management practices and adhered to cultural knowledge principles for over 65,000 years. Traditional knowledge is considered paramount to ensuring connection to Country is maintained.

The policy landscape of biosecurity in northern Australia reflects an ongoing commitment by both the Australian Government and state and territory governments to support a risk-based system that mitigates the threat and impact of pests, weeds and diseases. A comparative analysis of the biosecurity strategies across the relevant northern Australia jurisdictions reveals that policy is often scoped towards the focus areas of:

- strengthening and enhancing collaboration and partnerships between all stakeholders
- more effective preparedness and capacity to detect, respond and recover from incursions and threats
- encouraging the continued communication and knowledge across the biosecurity system
- future proofing Australia's system-wide capability through strategic investment.

There was little, to no, focus on integration and the use of technology to support the biosecurity system in the state and territory strategies, but it was seen as a clear pillar and foundation to supporting the system amongst the cross-jurisdictional strategies. Further, the analysis also highlighted a few gaps, in the key goals and actions, amongst most of the strategies:

- capacity building
- Indigenous employment and economic outcomes
- cultural exchange and integration of Indigenous practices

Based on this analysis, the IRBP plays a dual role in providing complementary services and activities to those common focus areas, while also seeking to address the identified gaps. Ultimately, in doing so, the IRBP continues to be appropriate and requires ongoing support to fulfill its important role. In particular, the commitment to care for Country through IRBP is highly valuable to Indigenous communities and is achieving environmental and employment outcomes and contributing to wider social, cultural and economic benefits.

Outputs of the IRBP

An understanding of the outputs of the IRBP to date has been built out from analysing the data collected as part of this evaluation, including survey results, program expenditure and grants, and information gathered during consultations with ranger groups, land councils, program and other stakeholders.

The key insights from the analysis on outputs is that:

- Indigenous rangers are conducting sufficient activities to progress the desired outputs, however there is limited capacity within government to analyse the reporting and surveillance data gathered during those activities.
- There is clear improvement in recent years of completion rates and budget spends on biosecurity activities by Indigenous rangers.

- There appears to be good engagement with capability building initiatives and in terms of efficiency, due to the early stages of a number of these initiatives, there is insufficient data to be able to analyse the effectiveness of the investment.

The enabling program staff have been extremely resource and capacity constrained yet are still able to provide significant support to the production of the current outputs of the IRBP. Acknowledging this strain on the program team also highlighted that the team can be hindered from undertaking additional activities, which could be beneficial to the program and biosecurity outcomes more generally (such as internally driving business improvement initiatives, conducting Ranger App data analysis or increasing fee-for-service engagement with ranger groups).

Achievement of short-term outcomes

Overall, there has been notable achievement against the short-term outcomes and in some areas, a significant growth against earlier data from the beginning of the IRBP. This is reflected in views provided from stakeholders that rangers' biosecurity activities are effective in reducing biosecurity issues and that it would be difficult to undertake biosecurity activities through any other avenue than through Indigenous rangers.

Stakeholder	Outcome	Achievement	Evidence
Impact on ranger individuals or groups	Increased knowledge of biosecurity science by Indigenous rangers	◑	All evidence highlights a growth in rangers' knowledge and skills. Consultations suggested this was a combination of being able to access funding for equipment and the ongoing training and qualification opportunities provided under the IRBP. There is some evidence to suggest that the efforts to support rangers to build a career pathway in biosecurity is having impact as a result of the professional development activities and upskilling initiatives. Evidence was mixed in terms of integrating science-based biosecurity knowledge and risk identification, with that of being able to apply traditional practices in caring for Country.
	Indigenous biosecurity surveillance capacity of Indigenous rangers	◕	
	Improved community engagement skills of Indigenous rangers	◑	
	Increased understanding of biosecurity system by Indigenous rangers	◕	
	Increased business and enterprise skills of Indigenous rangers to execute biosecurity contracts and projects	◔	
	Increased understanding and awareness of Indigenous rangers on how to enhance their career pathway	◑	
	Increased knowledge sharing and application of traditional First Nations environmental practices	◔	
Impact on Australian communities and industries (including agriculture)	Improved quality of biosecurity data and reporting	◑	Evidence suggests that the Ranger App is well received and provides a positive impact to support rangers undertake their surveillance and data collection activities. Effectiveness against these outcomes is intrinsically linked to those above, with similar evidence gathered regarding these. While achievements have been made, further improvements could still be made.
	Increased biosecurity response capabilities in northern Australia	◑	
	Increase and improved surveillance activities, especially in high-risk biosecurity areas	◕	
	Improved protection of the unique and pristine environment of the area from pests and disease travelling between the north and south	Emerging evidence	

Further, there was evidence to suggest that the IRBP has made achievements against the indirect outcome that is targeting 'improved relationships across the biosecurity network'. There was common agreement that the department program staff, including CLOs, have built strong relationships across the north due to their willingness to support and connect with stakeholders, which has resulted in high levels of engagement in the IRBP and facilitated knowledge sharing across the biosecurity system.

Progress on medium-term outcomes

Our analysis shows that, where there is information to assess and is available to measure, there has been less impact against the medium-term outcomes when compared to the short-term outcomes. Furthermore, there are several medium-term outcomes that are currently difficult to measure impact against, due to limited information.

Generally, there appears to be more progress on the medium-term outcomes for the broader community than individual rangers. There is clear alignment between a number of medium-term outcomes with the short-term outcomes above, and as achievement against the short-term outcomes grow, impact on the medium-term outcomes will naturally follow.

Stakeholder	Outcome	Achievement	Evidence
Impact on ranger individuals or groups	Improved utilisation of Indigenous ranger groups	Emerging evidence	The actual use of ranger groups compared to their expectations can currently be measured. However, without knowledge of the total capacity of each ranger group their utilisation cannot be measured.
	Enhanced career opportunities for Indigenous rangers and other members of remote Aboriginal Torres Strait Islander communities	(half)	
	Job opportunities for Indigenous people in biosecurity related roles or other client service delivery / regulatory roles	(half)	There is some evidence to suggest impact on career and job opportunities, with working on, and caring for, Country an appealing aspect of the IRBP.
Impact on Australian communities and industries (including agriculture)	Increased biosecurity preparedness	(half)	The first three outcomes are dependent on the achievement of the short-term outcomes and are not measured separately on their own. As the program matures, evidence on the achievement of those outcomes will build.
	Improved pests and diseases threat identification and risk awareness	(quarter)	
	Improved decision making based on robust data	Emerging evidence	
	Strengthened biosecurity network in northern Australia	(half)	There is some evidence to suggest that the IRBP activities, as a whole, are strengthening the biosecurity system in northern Australia.
	Integration of traditional First Nations environmental practices into biosecurity monitoring and surveillance	(quarter)	Evidence suggests there is improvement to be made around integrating traditional knowledge into current biosecurity activities.

Progress on long-term outcomes

From the evidence available, the IRBP is making some limited progress towards the long-term outcomes identified in the program logic. It is acknowledged that the focus of the evaluation was on the program's impact against the short and medium-term outcomes and therefore it is not unreasonable that there is more evidence to support analysis against the other areas. It is also recognised that the limited progress against the long-term outcomes is a reflection of the fact that that IRBP sits within a large biosecurity and Indigenous rangers' system, and therefore achieving the outcomes sought is reliant on all parties within the system driving and achieving their purpose.

Other key themes and insights

From the range of stakeholder consultations undertaken as part of this evaluation, a number of key themes and insights have been identified, over and above the assessment against the outcomes and outputs outlined in the program logic:

Resourcing

Without an ongoing funding stream and budget allocation, it is difficult for the program to provide certainty in program delivery. The key constraint noted during this evaluation was that the non-ongoing funding model through the NIAA impacts the program team's ability to undertake longer term planning, particularly in relation to optimising grant program schedules and multi-year planning for fee-for-service activities. A greater ability to undertake resource planning across the program team would also help to objectively assess the impact of other funding measures delivered through the IRBP's network. The program team would then be better equipped to understand what additional resources would be required to ensure efficient and effective delivery of any potential future additional initiatives proposed under the IRBP.

Program structure

While the funding model for the IRBP can appear complicated, the activities and outputs outlined in the NIAA MoU clearly align with the outcomes in the Indigenous Advancement Strategy (IAS) and the broader policies and strategies for biosecurity in northern Australia. However, stakeholder perceptions of the program are not as clear, with a variety of explanation provided by internal and external stakeholders providing disparate views on the purpose of the IRBP. This highlights the complex environment the program operates in and appears to have resulted in the misalignment of some elements of the IRBP from its core purpose, particularly as it has evolved to support additional initiatives. It could be argued that these new initiatives have resulted in effort and resources being expended on activities that while valuable, somewhat diverge from the original objective and need.

Fee-for-service model

The fee-for-service model was considered by stakeholders as the most appropriate approach to deliver the biosecurity activities needed and provides ranger groups the opportunity to opt in and out based on capacity. It also empowers ranger groups as they are able to decide what level of engagement they want to have in the program, thereby supporting self-determination. Some stakeholders did question whether the level of investment available through the fee-for-service arrangements is appropriate for ranger groups to ensure their ongoing engagement in activities, when compared to other similar programs. Further, limitations were identified with the fee-for-service approach in terms of assisting rangers in finding (or ranger groups offering) certainty in employment opportunities given the contract values and lengths.

Capability building funding models

It was raised by ranger groups that they often find the administration around grants cumbersome and they also noted the administrative requirements for the third-party procurement is also difficult at times. This was especially relevant when ranger groups were unclear which funding stream was for which piece of equipment they had been provided through the department, and therefore which reporting was required for what. Ultimately, when it comes to the provision of government support, there are always going to be stakeholders that are not entirely satisfied with the framework and distribution method implemented. Based on the evidence gathered in this evaluation, there is no indication regarding an immediate need for the department to reorganise its support provisions and methods.

Opportunities and recommendations

When providing the opportunities and recommendations, it should be reiterated that the primary conclusion from this evaluation is that the IRBP should continue and, based on the evidence gathered, in its current format. It should also be acknowledged that that IRBP operates in a region and landscape which comes with unique geographic and connectivity challenges and that the program covers a range of different speciality areas, that includes cross-jurisdictional considerations. As such, opportunities and recommendations are provided to support refinement of certain areas to ensure the IRBP is delivering against its core purpose and the outcomes sought.

The following opportunities are considered to be where the program is working well but it was considered there are areas for enhancement to build alternative access to resources, drive tailored services for key stakeholders, and consequently, increase the impact against the outcomes sought:

Review the potential to upgrade the functionality of the Ranger App to support data and knowledge sharing across the various activities occurring within wider biosecurity system to help protect Australia's natural environment and industries.

Consider promoting the Community Liaison Officer network as a framework that can be leveraged and/or replicated across other programs and initiatives within the wider biosecurity system.

Review current training initiatives to ensure there is alignment with the priority and target biosecurity activity areas of the IRBP, in a manner appropriate for the audience.

The following recommendations are made based on evidence and analysis that suggests a more substantiative change could benefit the IRBP:

1 The IRBP should continue with a more clearly defined purpose and role within the biosecurity and Indigenous rangers' system and with adequate resources to deliver against this.

2 The Community Liaison Officers are a crucial component to the impact and success of the IRBP and therefore the network should be expanded to ensure appropriate reach and on-ground engagement.

3 Develop an IRBP Communications Strategy that promotes the IRBP amongst the wider community, whilst also including Indigenous Engagement Principles.

4 Consider reviewing the financial model and approach to fee-for-service contracting to refine the process and improve its efficiency and effectiveness.

5 Improve recognition of the importance of cultural connection to better embed cultural knowledge and practices into the IRBP.

Contents

1 Introduction and purpose

1.1 Purpose of evaluation

PwC was engaged by the Department of Agriculture, Fisheries and Forestry (the department) to conduct an evaluation of the Indigenous Ranger Biosecurity Program (IRBP) to assess the effectiveness of the program, identify improvements and opportunities to strengthen the program. The evaluation aims to ensure the IRBP is continuing to contribute to protecting Australia from exotic pests and diseases, whilst maximising employment and economic benefits to Indigenous Australians in northern Australia.

The evaluation has culminated into this evaluation report, including recommendations to inform the future direction of the IRBP.

1.1.1 Scope

The project evaluated the IRBP's impact, appropriateness in the policy landscape and efficiency in order to inform the analysis and key insights presented in this report, which inform the recommendations presented.

The evaluation was conducted through:

- desktop research and review of existing program information, data and literature
- a survey with questions targeted separately towards ranger groups and also individual rangers
- a series of roundtable and individual consultations with various stakeholders (virtual and in person)
- a workshop in Cairns with key IRBP stakeholders
- attendance at the Indigenous Rangers Biosecurity Round Table meeting held in Darwin.

The evaluation has made key assessments of the appropriateness of the program to guide the presentation of opportunities and recommendations.

1.1.2 Scope exclusions

This evaluation has assessed IRBP's impact, appropriateness, efficiency and future opportunities as a wholistic program. While considerations of each individual element within the IRBP have been examined and considered within this evaluation, an in-depth validation and assessment of the specific content, data collected, processes and processing mapping, and outputs of each individual element has not been undertaken. Explicitly, analysis of the following is out of scope:

- outputs and data analysis provided through the Biosecurity Reporting Tool (the Ranger App)
- contents of activity planning, budgets and/or ranger contracts
- full review and evaluation of each of the outputs and outcomes of the individual grant programs to date
- level of scientific biosecurity knowledge and expertise level of the Indigenous rangers and ranger groups.

In consultation with the department, it was agreed that analysis of newly implemented initiatives would not be included in the evaluation scope – namely the Indigenous Ranger Established Pests and Weeds project, Indigenous Rangers Coastal Clean-Up Project ('Ghost Nets') and Biosecurity Business Grants.

The IRBP is not associated with the wider Indigenous Ranger Program (IRP), despite both being underpinned by funding from the National Indigenous Australians Agency (NIAA), thus evaluation of the IRP will remain out of scope. However, analysis of the interaction and alignment between relevant policies that underpin both programs have been included.

1.2 Previous evaluations

In 2019, the IRBP underwent a mid-term evaluation after operating for four years. The evaluation, Indigenous Ranger Biosecurity Initiative – Evaluation: 26 February 2019, was undertaken to assess the IRBP's performance and benefits.

The previous evaluation made 18 recommendations to strengthen of the IRBP and the biosecurity network, to support the continuation of the IRBP. While this evaluation has not reviewed the program's progress against the implementation of these recommendations, as it is acknowledged that not all may have been accepted by the department, the evaluation methodology established for this project acknowledges this previous work. Therefore, where relevant, has incorporated the outputs of the report and/or built on the data available in the previous evaluation.

Additionally, an audit of the risk assessment framework for the Northern Australia Quarantine Strategy (NAQS)[2] animal health surveillance program (for which some of these activities are covered within the IRBP) was also conducted in 2019 by the Australian National Audit Office. While not specific to the IRBP, it was included in the 2019 review more broadly with scope of the audit including the projects that stemmed from the White Papers, that had direct implications on NAQS activities. One of the recommendations from this audit was that the department 'develop a relevant, reliable and complete framework of measures to assess its performance in managing biosecurity risk in northern Australia'.[3]

To support this, an additional project commissioned by the department (Indigenous Ranger Biosecurity Program (IRBP) Business Mapping and Implementation Planning Consultancy – Final Report, 26 June 2020) that sought to develop the following for the IRBP:

- an outcomes and program logic map

- a business map for program operations

- an implementation plan against suggested key performance indicators (KPIs).

The current evaluation project has not sought to analyse the IRBP's progress against the outputs or KPIs from the 2020 report, however, has incorporated the logic map to help inform the evaluation program logic developed for the current evaluation project.

1.3   Evaluation methodology

1.3.1   Objectives and overall approach

The framework for this evaluation was based on four main objectives:

- **Program's impact:** Evaluation of the effectiveness of the IRBP in achieving its objectives; to identify any other outcomes being achieved; and any barriers, issues or external factors influencing the achievement of the IRBP's objectives and outcomes.

- **Program's appropriateness in policy landscape**: Assessment of how effectively the IRBP elements complement and support each other, and how they fit into the range of other government support measures for biosecurity, environment and Indigenous social and economic participation – including the NIAA strategies (including the 'Indigenous Advancement Strategy' (IAS)), Parks Australia strategies and the range of biosecurity strategies, as examples.

- **Future options**: Identification of options for program design changes, assessment of future funding need, including management future cost increases, and provide advice to support future monitoring and evaluation of the impact of the program.

- **Evidence base**: Gathering quantitative and qualitative evidence of the short, medium and long-term environmental, cultural and economic impacts of the program on rangers and ranger groups; Indigenous communities; biosecurity requirements; and of the benefits of engaging Indigenous rangers and ranger groups to deliver biosecurity surveillance.
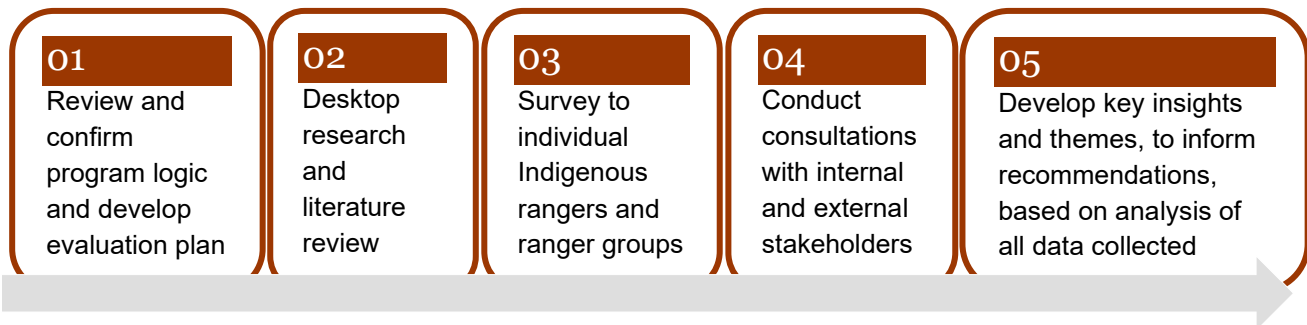
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[2] The Northern Australia Quarantine Strategy was established in 1989 in response to the *Lindsay Review*'s recommendation of establishment of a strategy focused on the unique biosecurity risks in northern Australia. It was originally a combined effort across the three state jurisdictions, along with the Australian Government, however in 1995 the responsibility of the NAQs service delivery transitioned to the Australian Government. Source: https://www.agriculture.gov.au/biosecurity-trade/policy/australia/naqs/significant-events

[3] https://www.anao.gov.au/work/performance-audit/northern-australia-quarantine-strategy-follow-audit

The overall approach to achieve these objectives for the evaluation included activities highlighted in Figure 1 below. While the steps are outlined sequentially, activities were undertaken concurrently.

Figure 1: Evaluation approach

01	02	03	04	05
Review and confirm program logic and develop evaluation plan	Desktop research and literature review	Survey to individual Indigenous rangers and ranger groups	Conduct consultations with internal and external stakeholders	Develop key insights and themes, to inform recommendations, based on analysis of all data collected

1.3.2 Program logic

The purpose in developing a program logic is to present how a program operates by showing the relationship between resources, activities and outcomes. While often presented in a linear approach, it is recognised that in practice there should always be continual feedback and review of the logic, to support continuous business improvement. Therefore, a key element of this evaluation, and the first activity set out above, was to establish a program logic and evaluation framework, including the lines of enquiry. This included reviewing outputs from previous evaluations (noted in Section 1.2), and other relevant documentation provided by the department. Namely the:

- previous logic provided in the *Indigenous Ranger Biosecurity Program (IRBP) Business Mapping and Implementation Planning Consultancy – Final Report (26 June 2020*)

- guiding principles and outcomes stated in the *2020 report*

- outcomes stated in the *Indigenous Ranger Biosecurity Initiative – Evaluation (Final Report, dated 26 February 2019)*

- department internal *Process Mapping (2020) document*

- department's Indigenous Ranger Biosecurity Program: *Report to the Joint Committee, January – May 2022*

- *NAQS Indigenous Rangers and Business Management placemat (July 2022).*

These were then used to draft the program logic which was presented to the department's IRBP program team for review. Following feedback and some iterations, a final version was agreed upon to inform this evaluation. The final program logic was also developed to align to the 'Commonwealth Performance Framework' and approaches to evaluation outlined by the Department of Finance.[4] The key inputs into the draft program logic, and the final program logic itself, are all included in Appendix B.

In presenting the IRBP in a comprehensive program logic, it was intended to highlight the interactions between the different elements of the IRBP and how they worked together to deliver a common set of outcomes (particularly in the medium and long term). However, in developing the program logic, the alignment between the different elements were not always clear, resulting in an elongated program logic development process. This is highlighted by the specific nature and breadth of outcomes detailed below, as it tries to capture all the different, yet not always aligning, aspects of the IRBP – which ultimately presents a complex IRBP logic model despite the simple purpose of the program.

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[4] https://www.finance.gov.au/government/managing-commonwealth-resources/planning-and-reporting/commonwealth-performance-framework/evaluation-commonwealth-rmg-130/when-evaluate

As such, it is recognised that the IRBP does not also operate in the traditional sense of a program but more as a model or framework in order to deliver the different elements, initiatives and/or projects. Therefore, the evaluation focused on the achievement, progress towards and impact on, the outcomes sought by the IRBP as outlined in the final program logic – details in Figure 2 below.

It is important to note that efficiency and effectiveness (i.e., directing program resources to highest need or highest impact or 'value for money') is not specifically a named outcome in the program logic extract above. This is not to reflect that efficiency is not critical (and is in fact a core area in the lines of enquiry); rather, it is because a program logic is the structure in which efficiency and effectiveness can be measured. Further discussion regarding the program logic and potential amendments to this, is discussed in Chapter 8.

Figure 2: Outcomes of the IRBP

	Impact on ranger individuals or groups	Impact on Australian communities and industries
Short-term outcomes *(direct program attribution and responsibility)*	• Increased knowledge of biosecurity science • Increased biosecurity surveillance capacity • Improved community engagement skills • Increased understanding of biosecurity system • Increased business and enterprise skills to executive biosecurity contracts and projects • Increased understanding and awareness on how to enhance their career pathway • Increased knowledge sharing and application of traditional First Nations environmental and cultural practices	• Improved quality of biosecurity data and reporting • Increased biosecurity response capabilities in northern Australia • Increased and improved surveillance activities, especially in high-risk biosecurity areas • Improved protection of the unique and pristine environment of the area from pests and diseases travelling between the north and south • *Improved relationships across the biosecurity network* • *Increased public awareness of biosecurity threats and risks*
Medium-term outcomes *(behavioural change)*	• Improved utilisation of Indigenous ranger groups to achieve meaningful and quantifiable biosecurity and environmental outcomes • Enhanced career opportunities for Indigenous rangers and other members of remote Aboriginal and Torres Strait Island communities • Job opportunities for Indigenous people in biosecurity related roles or other client service delivery/ regulatory roles	• Increased biosecurity preparedness • Improved pests and diseases threat identification and risk awareness • Improved decision making based on robust data • Improved data sharing to assist in biosecurity responses • Strengthened biosecurity network in northern Australia • Integration of traditional First Nations environmental practices into biosecurity monitoring and surveillance • *Enhanced reputation and trust in First Nations traditional stewardship of nature practices*
Long-term outcomes *(system change)*		• Strong, mature and capable biosecurity network to further enhance localised response capability and sure capacity • Whole of government employment objectives realised for Indigenous advancement • Contribution to strengthen biosecurity outcomes in northern Australia • *Contribution to Indigenous self-determination through respect and protection of cultural and environmental practices* • *Enhanced reputation of, and trust in, Australia's biosecurity system*

NB: Outcomes in italics are indirect or unintended but important outcomes for the department

Figure 3 shows how the program logic is a mechanism to answer the core evaluation questions, with this evaluation based on three core concepts:

- appropriateness: the extent to which objectives and desired outcomes align with government priorities, policies and/or client needs

- effectiveness: the extent to which objectives are being achieved by the outcomes

- efficiency: the extent to which inputs are minimised for a given level of outputs, or to which outputs are maximised for a given level of inputs.

Figure 3: Program logic input into core evaluation questions
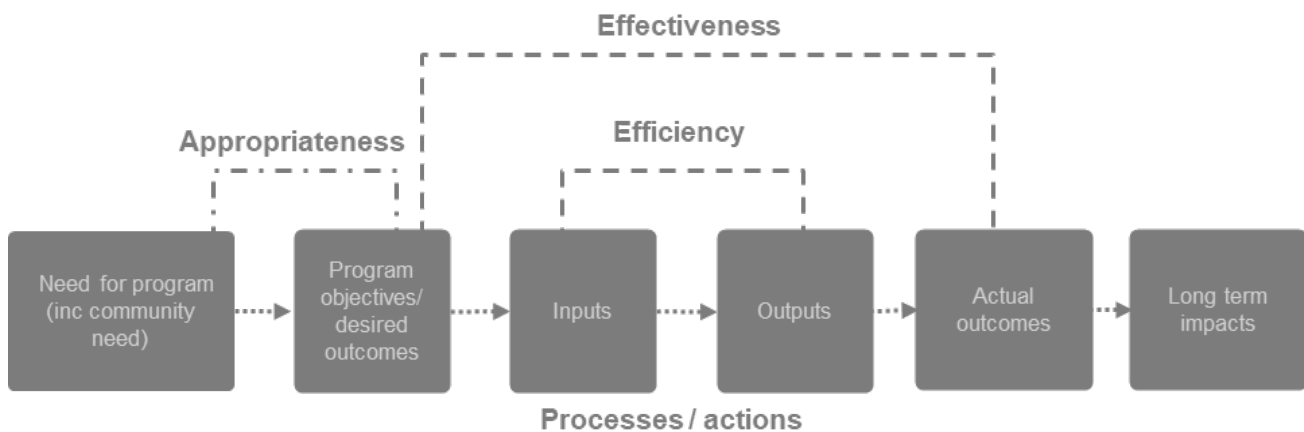
1.3.3 Lines of enquiry

In line with the objectives of the evaluation set out above, the lines of enquiry look to identify where outcomes are being achieved, as well as gaps in achieving those outcomes. The lines of enquiry were categorised against the objectives of the evaluation and developed from a range of input sources, including the request for quote, other documents and input from the department, and the final agreed program logic developed for this evaluation. The specific enquiries investigated as part of this evaluation are in Appendix C.

It is noted that the IRBP is still a relatively new program, having experienced a range of iterations and additions over the past few years (see Chapter 2). Consequently, there are a range of initiatives and elements of the program that are only just being implemented – such as the Biosecurity Business Grants, government traineeships and certain activities within the capacity building aspect of the program – that are not included in the evaluation (as per Section 1.1.2). As such, the lines of enquiry were developed to support the identification of challenges, issues and/or gaps that could be improved through potential future program design and delivery changes.

1.3.4 Stakeholder consultations

The key insights, themes and analysis against the outcomes included in this report are also based on consultations had with both internal and external stakeholders across government, industry and ranger groups (or representatives of ranger groups).

Where possible, the lines of questioning for the different stakeholder cohorts was applied consistently to ensure a suitable baseline for analysis, however there were instances where targeted questions were asked depending on the role of the stakeholder within the IRBP. All questions were consistent with, and asked in relation to, the lines of enquiry that informed overall evaluation.

The evaluation could not have been completed without the input from these stakeholders and their input (and time taken to be involved) is recognised and acknowledged as an essential part of being able to deliver the insights and recommendations made in this report. The full list of stakeholders consulted with can be found in Appendix F.

1.3.5 Survey of Indigenous rangers and ranger groups

The survey conducted in the overarching approach set out above, was developed to gather insights from as many individual rangers and ranger groups as possible, regardless of their level of involvement across the different IRBP elements. Broadly, the survey covered the following topics:

- the level of involvement and experience with the program, including both biosecurity activities and capability building (such as education and training)

- the impact of the capability building activities on the rangers' biosecurity skills and career pathway opportunities, including their experience in engaging with these activities

- the experience of rangers and ranger groups with regard to biosecurity activities and the support provided to undertake these, including the effectiveness of the current fee-for-service model and Community Liaison Officer (CLO) network

- how the IRBP elements, initiatives and activities support connection to Country and incorporate traditional knowledge

- experience with engaging, or working, with the department.

The survey was hosted by PwC and respondents could answer anonymously. It was distributed to all 65 Indigenous ranger groups currently engaged by the IRBP, to be distributed to individual rangers. Along with allowing for individual responses, there was also an option for groups (or an appropriate representative) to respond on behalf of one (or more) individual rangers.

There were 24 substantive responses (from the 65 ranger groups), which captured the experiences of 106 Indigenous rangers (across individual responses and representatives of ranger groups responding for a number of rangers). This represents up to 36 per cent of the ranger groups, which is considered a good response rate for surveys and therefore provides a meaningful sample for which to ascertain insights. Responses were spread across the three northern states and territories, with rangers captured being 51 per cent in the Northern Territory, 31 per cent in Queensland and 18 per cent in Western Australia – with the spread not too dissimilar to that of the IRBP contracted ranger groups across the jurisdictions.

1.4 Structure of this report

The remainder of this report is set out as follows:

- Chapter 2 provides context and details around the IRBP, including examination of how the different elements interact and align. This includes outlining, in more detail, the evolution of the program and its current funding and governance arrangements.

- Chapter 3 provides an overview of the biosecurity system and the linkages to traditional knowledge and the need to incorporate connection to culture and Country when using Indigenous rangers, as to outline the environment and ecosystem in which the IRBP operates. This includes examining the policy landscape and program interrelatedness, and ongoing appropriateness of the program.

- Chapter 4 analyses the outputs of the program to date, to understand progress and efficiency.

- Chapter 5 analyses the achievements against the short-term outcomes of the program to date, to understand the effectiveness of all the elements of the program.

- Chapter 6 analyses the progress against the medium-term outcomes of the program to date, to understand the effectiveness of the program.

- Chapter 7 provides the analysis of the impact against the long-term outcomes of the program to date, to understand the efficacy of IRBP.

- Chapter 8 adds any further insights of themes of the evaluation not captured in the efficiency and effectiveness analysis of the above chapters.

- Chapter 9 concludes the report with opportunities and recommendations for the future on the IRBP.

2   Indigenous Ranger Biosecurity Program overview

2.1   Background and history

The IRBP is an initiative implemented in 2015 and facilitated by the department when the Australian Government sought to further integrate and leverage the value of Indigenous cultural knowledge and practice, in concert with informed scientific risk profiles, to strengthen biosecurity management and preparedness in northern Australia. As highlighted in *the Agricultural Competitiveness and the Developing Northern Australia White papers (June 2015)*, increased agency for First Nations people to engage with their land and Country is likely to result in:

- improved educational and economic outcomes for Indigenous Australians
- more secure and responsive biosecurity network.

Leveraging the funding provided for the NAQS Indigenous ranger biosecurity surveillance (as outlined in Figure 4), the IRBP was established to address northern Australian biosecurity needs and provide pathways to support professional development and diversified career opportunities for Indigenous communities. It provides First Nations people with the agency, skills and support to draw on their intimate knowledge of Country and conservation training to carry out a variety of activities on Australia's biosecurity frontline in northern Australia.

The network of Indigenous ranger groups engaged in the IRBP spans the wider northern Australia biosecurity system, encompassing many different geographic, environmental and cultural regions (as highlighted in Figure 6) – playing a key role in Australia's biosecurity preparedness and response management in northern Australia.

> **Figure 4: Key Australian Government investment in biosecurity since 2015/16**
>
> **$200 million** to improve surveillance and analysis across the wider system
>
> **$12.4 million** over four years towards NAQS Indigenous Ranger Biosecurity Surveillance program

> **Figure 5: Key IRBP figures**
>
> **$25.3 million** additional funding since 2019 through NIAA
>
> This includes **$1.1 million** for a Ranger Capability Building Grants Program available to the **65 ranger groups** engaged in the IRBP in 2022/23
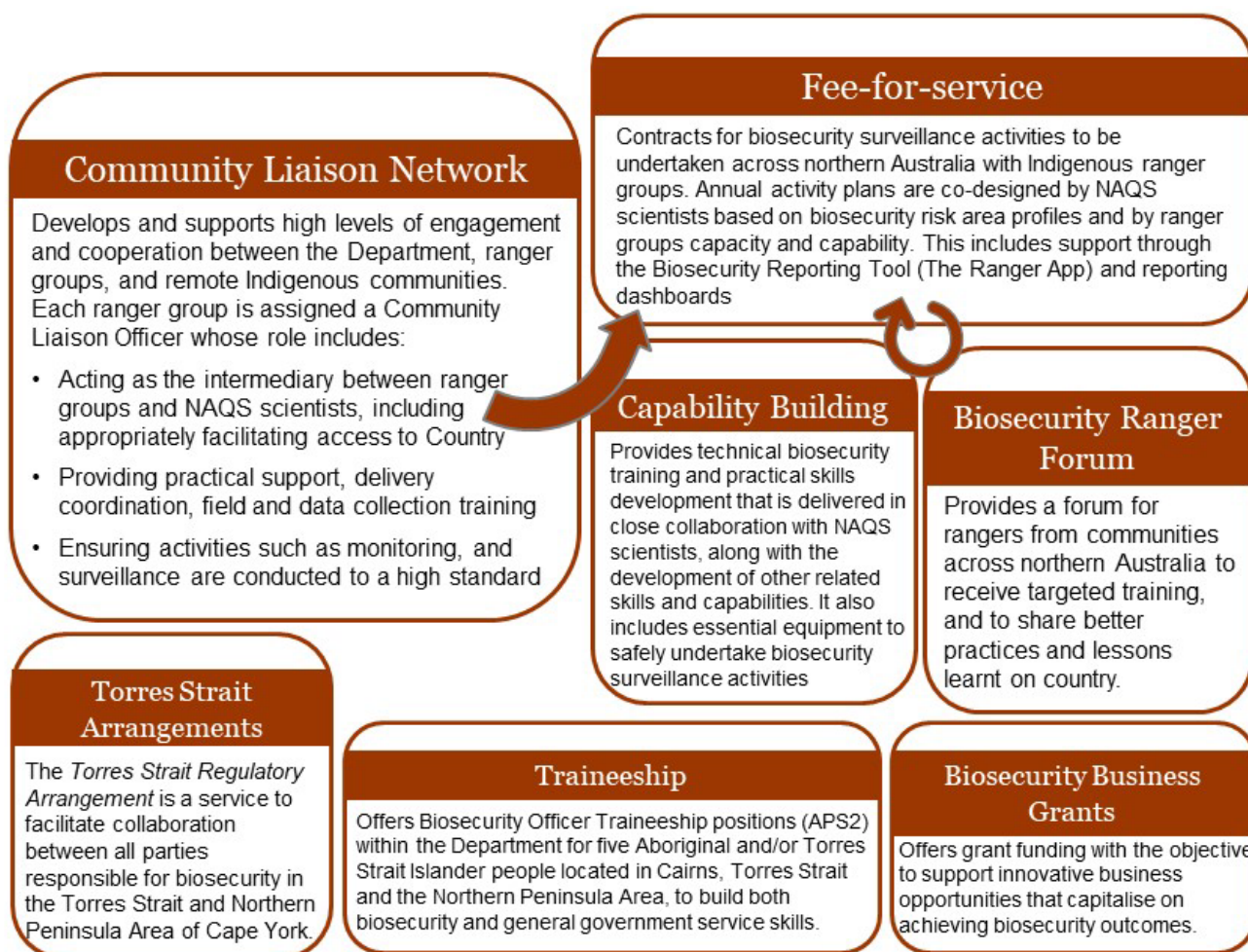
Figure 6: Indigenous ranger groups engaged in the IRBP across northern Australia

2.2 Current IRBP elements

Figure 7: Key elements and initiatives of the IRBP

Community Liaison Network

Develops and supports high levels of engagement and cooperation between the Department, ranger groups, and remote Indigenous communities. Each ranger group is assigned a Community Liaison Officer whose role includes:

• Acting as the intermediary between ranger groups and NAQS scientists, including appropriately facilitating access to Country

• Providing practical support, delivery coordination, field and data collection training

• Ensuring activities such as monitoring, and surveillance are conducted to a high standard

Fee-for-service

Contracts for biosecurity surveillance activities to be undertaken across northern Australia with Indigenous ranger groups. Annual activity plans are co-designed by NAQS scientists based on biosecurity risk area profiles and by ranger groups capacity and capability. This includes support through the Biosecurity Reporting Tool (The Ranger App) and reporting dashboards

Capability Building

Provides technical biosecurity training and practical skills development that is delivered in close collaboration with NAQS scientists, along with the development of other related skills and capabilities. It also includes essential equipment to safely undertake biosecurity surveillance activities

Biosecurity Ranger Forum

Provides a forum for rangers from communities across northern Australia to receive targeted training, and to share better practices and lessons learnt on country.

Torres Strait Arrangements

The *Torres Strait Regulatory Arrangement* is a service to facilitate collaboration between all parties responsible for biosecurity in the Torres Strait and Northern Peninsula Area of Cape York.

Traineeship

Offers Biosecurity Officer Traineeship positions (APS2) within the Department for five Aboriginal and/or Torres Strait Islander people located in Cairns, Torres Strait and the Northern Peninsula Area, to build both biosecurity and general government service skills.

Biosecurity Business Grants

Offers grant funding with the objective to support innovative business opportunities that capitalise on achieving biosecurity outcomes.

2.2.1 Fee-for-service

Given the diversity of projects and elements that sit within the IRBP (as highlighted in Figure 7), this multi-layered program balances the considerations of both enhancing biosecurity capability and providing economic opportunities for Indigenous communities in northern Australia through fee-for-service contracts. Indigenous ranger groups are engaged to undertake a variety of biosecurity surveillance activities including:

• animal, plant and aquatic health surveillance

• insect trapping and surveillance

• plant host mapping

• biosecurity awareness.

Biosecurity activities for the rangers are designed in collaboration with the NAQS scientists and the ranger groups and largely scoped to address areas of high biosecurity risks across key strategic locations of interest in northern Australia. However, the ranger groups engaged with the IRBP can fluctuate from year to year based on their capacity to undertake the biosecurity work required in the delivery of the program plan.

2.2.2 Capability building and traineeships

In order to support the Indigenous ranger groups to have the necessary capabilities to deliver the biosecurity activities outlined in their fee-for-service contracts, the IRBP has implemented a variety of opportunities to

upskill and support Indigenous ranger capabilities in remote regions. The main focus of this capability building is technical and practical support, which is offered through a combination of:

- third-party procurement for equipment

- Ranger Capability Building Grants Program (RCBGP) to support the purchase of equipment and provide targeted and/or specialised training for Indigenous rangers

- biosecurity fundamentals training.

Additional capability building opportunities are also provided through traineeships and the Certificate IV in Tropical Biosecurity, to offer those Indigenous rangers that are looking to build their career pathway in biosecurity and/or government service delivery. Furthermore, the Biosecurity Ranger Forum is also seen as an opportunity for the rangers and ranger groups to meet annually to engage in seminars and knowledge sharing to further build understanding of biosecurity, and the system.

In concert with the fee-for-service mechanism, the capability building initiatives under the IRBP allows rangers to undertake more complex biosecurity work, supporting career development, providing rangers with the opportunity to work within community, maintaining connection to Country and culture and increasing workforce participation.

2.2.3 Biosecurity Business Grants

To complement this capability building, the IRBP is also responsible for the Biosecurity Business Grants program that will run from 2020/21 through to 2022/23. The purpose of the grant program is to provide funding to Aboriginal and Torres Strait Islander business opportunities that relate to biosecurity in northern Australia. This encourages Indigenous communities to view biosecurity as a business opportunity and in turn increase their willingness to work within the industry and expand operations. Examples of potential grant proposals include:[5]

- development of a biosecurity triage system

- purchase of equipment or training materials for new ranger groups to help manage biosecurity risks

- development of biosecurity risk mitigation/ management plans to protect Indigenous values.

Due to this initiative having only just been implemented, this is not included in the scope for this evaluation.

2.2.4 Program support

The IRBP is delivered through the Indigenous Rangers and Business Management Section (IRBMS), including some positions within NAQS Animal and Plant Surveillance team, and provides support through three teams: Grants, Traineeship and Certificate IV; Rangers and CLO Network; and Science team, discussed in turn below.

Grants, Traineeship and Certificate IV – consists of five positions, four based in Cairns and one in Brisbane. The team is responsible for the delivery of a number of capability building initiatives which support the IRBP as well as delivery of non-ranger initiatives that provide economic and employment opportunities for Indigenous Australians in the biosecurity sector in northern Australia. The team also support the broader IRBMS to deliver grants programs for the 'Ghost Nets' and 'Weeds and Pest' initiatives and provides secretariat support to the NIAA-DAFF Joint Committee (detailed in Section 2.3).

In addition, as per the Australian Government's centralised approach to grants administration and management, the grants provided through the IRBP are communicated and operated through the Community Grants Hub.

Rangers and CLO Network – consists of 15 staff. This includes a manager, a CLO coordinator, a program support position, two CLO team leaders, six CLOs and one trainee based in Cairns. The positions for 'Ghost Nets' (two positions) and 'Weeds and Pests' (one position) initiatives also sit within this team. The team has a

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[5] "FAQ sheet – Biosecurity Business Grants – Round 2" Sourced: https://www.grants.gov.au/Go/Show?GoUuid=e33d5f49-ed4f-4198-844a-23d99758a981

multi-faceted purpose focused on managing and overseeing all aspects related to the ranger and CLO network such as the fee-for-service and capability building elements. Responsibilities include:

- delivery of the ranger fee-for-service contracts and associated activity plans

- management of the Ranger App and Management System

- delivery of biosecurity fundamentals and third-party procurement

- strategic planning for program and project with specific emphasis on business improvement and delivery of practical outcomes

- supervision, mentoring and management of the CLO network which requires intimate knowledge of all biosecurity surveillance activities and the ability to communicate this effectively and appropriately

- maintaining strong working relationships with Indigenous communities in northern Australia and stakeholders across departments and jurisdictions

- ensuring strong links between the NAQS science disciplines and the Indigenous rangers on the ground

- conducting community engagement and awareness / events.

The team also has responsibility for delivery of the 'Ghost Nets' and 'Weeds and Pests' initiatives, consequently working closely with the Business Management Unit for the reporting requirements of these projects.

Science team – consists of six positions including a science policy officer, an aquatic specialist, a plant health specialist (botanist), an animal health specialist (veterinarian) and two molecular positions. The science underpins the surveillance activities that the IRBP delivers through the Indigenous ranger fee-for-service contracts. The science team provides support to the rangers and CLO network in addition to providing specialist advice on surveillance data that is submitted by the rangers through the Ranger App.

Part of the program delivery requirements is the awareness activities to support the wider community understand the need for biosecurity surveillance in northern Australia – which is not necessarily assigned to any one particular team. Communication activities are undertaken by all stakeholders of the IRBP and includes communication products and materials to help promote biosecurity to different Indigenous communities and other groups of people in northern Australia. The aim is to help communities understand the negative impacts of poor biosecurity and decide what they can do to help support the early reporting of exotic pests, diseases and weeds, utilising the 'Biosecurity Top Watch' initiative.

2.3   Funding input and governance

The IRBP is predominately funded through an MoU, signed in June 2020, between the NIAA and the (previous) Department of Agriculture, Water and Environment (DAWE). As part of the 2019/20 Mid-Year Economic and Fiscal Outlook, the government agreed that the IRBP would be funded (up to $25.3 million) from the NIAA's IAS resources, over three years.

As such, the IRBP also needs to address the objectives and outcomes of the IAS: Jobs, Land and Economy program. These key objectives, as outlined in the MoU, are:

- to connect working age Indigenous Australians with real and sustainable jobs, including ensuring remote jobseekers participate in activities and gain experience that builds work-readiness and contributed to the broader community

- to foster Indigenous business and assist Indigenous Australians to generate economic and social benefits from natural and culture assets, including the effective management of Indigenous-owned land and seas

- to support Indigenous Australians to have their native title rights recognised.

The full scope of activities to be funded under the MoU can be found in Appendix D.

The MoU is supported by Client Relationship Managers from both parties, with oversight arrangements governed under a NIAA-DAFF Joint Committee with its own Terms of Reference. The current funding ceases in June 2023 and the MoU on 31 December 2023. Funding is expected to continue after the termination of the

MoU, with discussions presently taking place between the department and the NIAA to identify the most appropriate future funding source for the program. Should the funding not continue, this would significantly increase the biosecurity risks in northern Australia, given the IRBP's positive impact and contribution towards protecting Australia's coastline(as outlined in Sections 3.5 and 3.6, with more detailed analysis included in Chapter 4 onwards).

2.4   Further utilisation of the program[6]

2.4.1   Indigenous Rangers Coastal Clean-Up Project

In June 2021, an MoU was signed between the Director of National Parks (DNP) and the department, to provide the DNP with access to the IRBP fee-for-service arrangement and CLO network to deliver the Indigenous Rangers Coastal Clean-Up Project, funded under DNP's Ghost Nets Initiative. This funding is to directly address the challenge of ghost nets and debris in the northern Australian marine environment.

Up to $7 million (of the total $14.8 million investment) will support the utilisation of Indigenous ranger groups to collect data on the source of the ghost nets and coordinate retrievals and marine debris beach clean-up in the Gulf of Carpentaria.[7] The project is currently underway and will continue until June 2024.

2.4.2   Reduction of Feral Pests and Weeds Project

In 2021 the Australian Government allocated $49.1 million over four years to the Supporting Communities Manage Pest Animals and Weeds Program. As part of this program, $4 million in funding from administered department funds was provided to the Reduction of Feral Pests and Weeds Project. This project will seek to use the CLO network, fee-for-service contracts with ranger groups, and grants and capability building initiatives to facilitate on-ground pest and weed management activities. This project will focus on three invasive species in northern Australia, feral cats, pigs and Gamba grass, which have been identified as serious threats to both the environment and primary industries. The funding will be provided over four financial years from 2021/22 through to 2024/25, with the project planned for commencement soon.

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[6] Despite not being captured, we acknowledge that other parties are looking at the IRBP as a potential option for delivering other biosecurity activities (e.g., program participation within the WA fruit fly management system), so there is potential for the further evolution of the program in the future.

[7] https://parksaustralia.gov.au/marine/news/ghost-nets-initiative-launch/

3 Program appropriateness

3.1 Biosecurity context

3.1.1 Importance of biosecurity

As detailed within the Intergovernmental Agreement on Biosecurity (IGAB), biosecurity can be defined by the management of risks to the economy, the environment and the community, of pests and diseases entering, emerging, establishing or spreading. This definition acknowledges both the ongoing roles and obligations of government, industry and community in mitigating risk to our biosecurity system through joint engagement. The Commonwealth's role within this system is distinct and largely involves enabling and driving the action plans to deliver a more coordinated and impactful approach to biosecurity. In doing so, the Australian Government aims to foster network relationships and optimise outcomes through a robust and responsive management system.

The importance of this approach to biosecurity can be expressed through its impact on economic outcomes, the environment and community welfare:

- The biosecurity system protects significant inputs into our economy – such as our agriculture, forestry and fisheries exports and tourism sector worth an aggregate $101 billion dollars of value-add to the economy.

- Ensuring a strong and responsive biosecurity system safeguards Australia's unique biodiversity. Environment assets will constitute a value of more than $5.7 trillion over the next 50 years, which together provides employment opportunities for 1.6 million people. Hence, maintaining native biota and ecological relationships are essential, in their totality, to the overall ecological health of the continent and employment outcomes for Australians.

- A strong biosecurity system provides positive externalities that extends to and safeguards community welfare – with 60 per cent of the world's pathogens originating from domestic animals or wildlife; 75 per cent of emerging infectious human diseases being linked to an animal origin; and 80 per cent of pathogens of bioterrorism concern originating in animals.[8]

This IGAB definition is reinforced by Dodd, Stoeckl, Baumgartner & Kompass (2020), who suggest that strong biosecurity outcomes are contingent upon a range of activities and the 'joint' efforts of stakeholders to ensure the system is functional and responsive to risk. On this view, the system to support biosecurity can be described as a continuum of activities across both different risk points (offshore, border and onshore), as well as actions that operate across an 'invasion curve' of potential response items (i.e., prevention, eradication, containment and asset-based protection).

The differing biosecurity activities are highlighted within the *National Biosecurity Strategy* (NBS)*, detailing the strategic narrative of government in strengthening the biosecurity system. The *Commonwealth Biosecurity 2030* strategic roadmap builds off this strategic narrative and provides the shared vision and purpose in bringing the biosecurity system together in a more defined state – detailing the priorities and rationale to why maintaining a strong biosecurity system is of value to the economy, the environment and our way of life in equal balance.

Northern Australia, due to its 10,000km coastline and high risk-profile, remains the frontline for many emerging biosecurity threats that could impact Australia's economy, environment and way of life – ranging from exotic pests, plants and disease incursions. Biosecurity work in northern Australia can be challenging due to low population density, diverse and difficult terrain which spans vast geographical areas and conditions suitable for exotic pets and weeds to establish themselves in our environment. This evolving risk profile is exacerbated by a range of factors including climate change, resource constraints, challenging operating environment and changing trade and travel patterns.

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[8]Source: https://www.woah.org/en/what-we-do/global-initiatives/one-health/

To address these challenges, the Northern Australia Biosecurity Strategy (NABS) has been developed to build on work undertaken to date, leverage resources and address the delivery gaps to provide better biosecurity outcomes. Given biosecurity operations in northern Australia can be described as guided by an underlying framework of scientific risk assessments, surveillance activities and cross-collaboration to support the early detection and response to the evolving risk environment – the NABS seeks to optimise outcomes through a co-ordinated and functional approach to managing biosecurity challenges.[9]

The IRBP serves a functional role in this endeavour by gathering surveillance and support data that provides a platform for northern Australia to increase the responsiveness and readiness of the region's biosecurity system. In leveraging traditional knowledge and cultural practice (along with the underlying scientific risk identification), IRBP provides a network of frontline support to strengthen biosecurity activities and outcomes in northern Australia. As the Traditional Custodians of the land, seas and waterways, Indigenous Australians hold a vital role in caring for Country and promoting strong biosecurity outcomes through their strong spiritual connection and obligation to land and water. On this view, a robust biosecurity system in Australia involves the input and involvement of First Nations people in delivering strong economic, environmental and welfare outcomes.

3.1.2   Changes to the biosecurity landscape

Australia's biosecurity landscape is evolving and becoming increasingly complex – reflecting a diversity of factors and challenges that pose risks to the long-term viability and responsiveness of the biosecurity system. These include:

- **Climate change:** the changing global climate is altering the habitat and range of distribution of many pests, weeds and diseases, as well as increasing their ability to spread and establish in new areas, including through natural pathways. The changing patterns of these natural pathways (wind, tide movements and animal migrations) is also impacting the biosecurity risk. This is particularly relevant in northern Australia given the linkage between climate change (including the increasing severity and frequency of extreme weather events, tidal and wind patterns) in assisting the spread of pests and increasing susceptibility of incursions – providing the necessary ecological and climatic conditions that may be conducive to the introduction of exotic pests and diseases.

- **Shifting trade and travel patterns:** Australia's supply chains, trading partners and demand for goods are continuously evolving and increasing in complexity, which is providing new pathways for pests, weeds and diseases to reach Australia. This is not only in regard to the volume of imported goods and packages but also regarding the changing industries operating in the north and the diversification of the agriculture industries.

- **Proximity of overseas risks**: Many high priority pests, weeds and diseases are moving closer to Australia's shores, including (for example) lumpy skin disease, African swine fever and foot and mouth disease, which is increasing the risk of entry into the country. In fact, some serious pests and diseases are being managed as closely as the Torres Strait Islands, without yet having reached Australia's mainland. The increasing number of exotic plant and animal pests being detected by our nearest neighbours, increases the risk of these entering into Australia, particularly through our northern borders, coastline and airways.

- **Skills retention and training**: A strong biosecurity system relies on a highly skilled workforce that is able to deal with a complex and changing biosecurity landscape. Training, and re-training, the right people will be key to the future, along with increasing the engagement with Aboriginal and Torres Strait Islander people. Being trained to manage and identify gaps and potential risks in biosecurity activities is critical in building incursion response capability early (prior to incursions) and future-proofing the biosecurity system. This includes potential specialisation in certain biosecurity areas (such as plant, animal or aquatic health), or better understanding of the scientific drivers behind risk identification, or conversely the acknowledgement of the role of traditional stewardship or natural practices.

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[9]Source: https://www.agriculture.gov.au/sites/default/files/documents/naqs_30years_brochure_2020.pdf

- **Sustainable funding**: Sustained and ongoing funding is essential for biosecurity across the system and 'invasion curve'[10] requirements to ensure invasive species are not introduced. The invasion curve refers to the feasibility of the eradication of an invasive species starting at the time it is introduced. This aspect is extremely important and being able to develop a more sustainable funding model for biosecurity will ensure that there is ongoing funding to allocate towards all ongoing activities that help strengthen Australia's biosecurity system. This will then support improved strategic planning for the future, as well as being able to address the items above.

3.2 Connection to Culture

The connection to Country and culture for First Nations people is enriched through, cultural custom, lore and a value system based on the sustainability of spiritual connection, belonging, obligation and responsibility to care for land, people and the environment. Indigenous rangers are often called upon to be the protectors of their respective communities regarding cultural heritage preservation and ensuring that threats or impacts to First Nations peoples connection to land or country, culture and spirituality are eliminated or mitigated.

Throughout Australia, many First Nations people have conducted traditional land management practices and adhered to cultural knowledge principles for over 65,000 years with these practices continuing to be applied daily through various Indigenous ranger operations. The IRBP performs various activities which contributes to the protection of Country from early detection of invasive species and preventing further harm to the community and their food sources. The impact for Indigenous communities, should there be a cessation of biosecurity surveillance, would result in harm to cultural heritage preservation such as loss or damage of scared sites and loss of traditional food and wellbeing sources.

The importance and recognition of connection to culture for Indigenous rangers working in the biosecurity sector is an integral component of the daily operations. Traditional knowledges are considered paramount to ensure connection to Country is not only maintained but continues to be the one of the most important factors when working on the respective Country.

Indigenous Land Use Agreements (ILUAs), under the Australian Government's *Native Title Act 1993 (Cth)* provide a mechanism to enable the exercise of native title rights and interests, land management, future development, mining and cultural heritage. For activities undertaken on Aboriginal Land Trust within the Northern Territory, approval must be sought from Traditional owners and agreed to prior to any work being undertaken. Whilst ILUAs are one of the formal mechanisms to document the agreed matters for all parties, what must be considered is the fact that traditional knowledges and connection to Country is irreplaceable from the perspective of those Traditional Owners and Custodians amongst the ranger groups that operate across northern Australia. Without this, the IRBP will be challenged to completely understand the inter-generational knowledge that Indigenous people are custodians of and continue to apply in the contemporary context.

3.2.1 Indigenous Rangers Program

Indigenous ranger groups are an integral part of protecting Australia's conservation system. Ranger groups work to protect and maintain their Country (lands and sea) for not only the benefit of their communities but also ensuring those lands and waters are protected for all Australians. The IRP was formerly known as the Caring for Country program and is currently managed by the NIAA.

The Indigenous ranger projects were Australian Government funded in 2007 through the former Working on Country program and is reported to have created, or contributed to, more than 2,100 jobs on Country in land and sea management. The ranger projects support Indigenous people to combine traditional knowledges with conservation training to protect and manage their land, sea and culture, including, amongst other activities, bushfire mitigation, protection of threatened species, and biosecurity compliance.

The commitment to care for Country through the Indigenous rangers' program is highly valuable to Indigenous communities and is achieving environmental and employment outcomes and contributing to wider social,

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[10] According to the *National framework for the management of established pests and diseases of national significance* (National Biosecurity Committee), the invasion curve outlines the different stages of invasion and the actions appropriate to each stage (prevention, eradication, containment and asset-based protection).

cultural, and economic benefits. Indigenous ranger groups highlighted that participation in such programs has increased confidence and sense of pride for caring for Country.

Indigenous rangers across Australia will be able to continue their essential work as a result of the Australian Government's $700 million commitment to extend the IRP from 2021 through to 2028. This commitment has been provided with a view to double the existing cohort to 3,800 by 2028. However, it should be noted that the IRBP will remain separate to this commitment.

3.3 Operating in northern Australia

As shown in Figure 9 the operating environment in northern Australia can be described as capturing all parts intersecting the Tropic of Capricorn in Western Australia (Pilbara and Kimberley regions), the Northern Territory and Queensland (Far North, North and Northwest Queensland and Mackay, Isaac, Whitsunday and Rockhampton regions), including all island communities and Indian Ocean Territories (such as Christmas, Cocos and Keeling Islands).

When it comes to the region's economic impact, in terms of Australia's horticulture and agriculture, the area produces more than 94 per cent of the country's bananas, 93 per cent of mangoes, makes up 90 per cent of Australia's live cattle exports[11] and is home to more than 3,000 sugar farms (income alone from just sugar and cattle exports exceeds $3 billion each year).[12]

> **Figure 8: Key facts about northern Australia**
>
> **53%** of Australia's total land mass
>
> **78%** of land is covered under the protection of Indigenous rights and interests[1]
>
> Operating environment spans **10,000km** of coastline[1]
>
> **16%** Indigenous population (compared to 2.55% nationally)

Figure 9: Map outlining the defined area of northern Australia
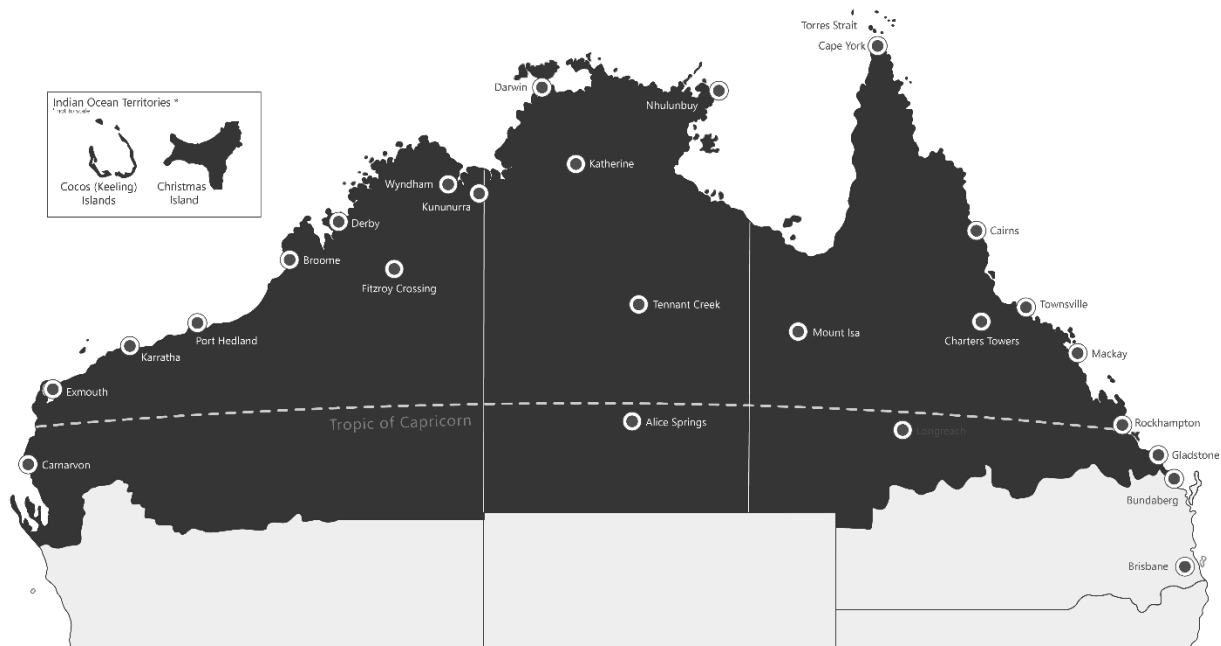
Source: Office of northern Australia; The Department of Infrastructure, Transport, Regional Development, Communications and the Arts

Given these geographical boundaries, delivering activities in northern Australia presents particular challenges due to:

- the proximity of neighbouring countries

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[11]Source: https://www.infrastructure.gov.au/territories-regions-cities/regional-australia/office-northern-australia

[12]Source: https://www.csiro.au/en/research/natural-environment/land/unlocking-northern-australia

- the ecological and climatic conditions that may be conducive to the introduction of exotic pests and diseases

- the limitations of seasonal access

- the range of operating environments (dense rainforest, rivers, marine parks and remote areas)

- challenges associated with accessing remote areas such as costs and telecommunications and IT access

- labour and skills shortages, which reflects the lack of population growth in these areas, despite development policy targets[13]

- the impact of rising costs on scaling, exacerbated by ongoing supply chain disruptions arising from COVID-19 and rising inflationary pressures – with the headline consumer price inflation expected to peak around 8 per cent at the end of 2022.[14][15]

When navigating this operating environment, biosecurity activities in northern Australia offer a unique opportunity to leverage the traditional knowledge and practice of First Nations people to address challenges of serviceability. The IRBP aims to leverage this by utilising the CLO network to provide a communication touch point with First Nations and government whilst fostering a knowledge partnership that values all interpretations of biosecurity risk and surveillance. As shown in literature, partnerships that actively integrate and recognise multiple approaches for biosecurity management optimise the delivery of outcomes.[16] In this manner, the use of CLOs by the IRBP provides a platform likely to deliver more successful biosecurity activities and outcomes.

3.4   Policy and strategy landscape

The policy landscape of biosecurity in northern Australia reflects an ongoing commitment by both the Australian Government and state and territory governments to support a risk-based system that mitigates the threat and impacts of pests, weeds and diseases. The Australian Government sought to foster a more collaborative and strengthened biosecurity system in Australia through the *Commonwealth Biosecurity 2030* roadmap and the NBS. These strategies provide a consolidated approach, at a national level, to biosecurity, the desired future state of the system and the actions required to reach this. Both strategies outline a collection of strategic actions, built upon strong governance, collaboration, and regulation, to ensure the safeguarding of both Australia's environmental assets and economy.

Additionally, the NABS outlines functions across the biosecurity continuum, including how to best build government collaboration and reporting; industry partnerships; community engagement; compliance; biosecurity capacity and capability building; and research development and extension. These functions serve to foster network relationships amongst key stakeholders and develop a more coordinated approach to system management, providing the necessary framework to promote strong biosecurity outcomes in northern Australia.

As detailed in Section 2.1, this framework is reinforced by both the *White Paper on Developing Northern Australia* and NAQS which promotes developmental and biosecurity outcomes in northern Australia through effective governance arrangements, system integration, Indigenous economic participation, workforce transformation and capability building.

A comparative analysis of the following biosecurity strategies across the relevant northern Australia jurisdictions (detailed in Appendix E) reveals that policy is often scoped towards the focus areas of:

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[13] Source: Taylor, A., Thurmer, J., & Karacsonyi, D. 2022. "Regional demographic and economic challenges for sustaining growth in Northern Australia'. *Regional Studies, Regional Science*. 17 June 2022. Accessed from: https://www.tandfonline.com/doi/full/10.1080/21681376.2022.2082316

[14] Source: https://www.rba.gov.au/publications/smp/2022/nov/economic-outlook.html

[15] Source: Lambert, S.J., & Mark-Shadbolt, M. 2021. *Indigenous Biosecurity*: Past, present, future. (Abstract). Accessed from: https://www.taylorfrancis.com/chapters/edit/10.4324/9781351131599-5/indigenous-biosecurity-simon-lambert-melanie-mark-shadbolt

[16] Source: Maclean, K., Robinson, C., Bock, E., & Rist, P. 2021. 'Reconciling risk and responsibility on Indigenous country: bridging the boundaries to guide knowledge sharing for cross-cultural biosecurity risk management in northern Australia'. *Journal of Cultural Geography,* 39 (1), pp.32-54. https://www.tandfonline.com/doi/abs/10.1080/08873631.2021.1911078

- strengthening and enhancing collaboration and partnerships between all stakeholders

- providing preparedness and capacity to detect, respond and recover from incursions and threats

- encouraging the continued communication and knowledge sharing between stakeholders within the biosecurity system

- future proofing Australia's system-wide capability through strategic investment.

Interestingly, there was little, to no, focus on integration and the use of technology to support the biosecurity system in the state and territory strategies but it was seen as a clear pillar and foundation to supporting the system amongst the cross-jurisdictional strategies. The analysis also highlighted a few gaps, in the key goals and actions, amongst most of the strategies:

- capacity building (only mentioned in one or two national strategies)

- Indigenous employment and economic outcomes

- cultural exchange and integration of Indigenous practices

Based on this analysis, it would appear there is a lack of synergy in policy surrounding traditional stewardship and cultural exchange has resulted in gaps within the delivery of biosecurity activities in northern Australia. Therefore, the IRBP plays a dual role in providing complementary services and activities to those common focus areas, while also seeking to address these identified gaps. The IRBP provides a collaborative framework to support the delivery of these visions and objectives, as it supports the upskilling of Indigenous rangers, across 65 ranger groups, to conduct biosecurity activities on Country.

While engagement with Traditional Owners is captured within a broader policy context, the integration of their cultural practice and pathways to professional development and enterprise are typically not accounted for. This is not to say there is not recognition that enhanced relationships and engagement, and opportunities for partnerships, should be better captured in practice – as promoted in the NBS around the acknowledgement there are opportunities for meaningful change. It is more that at present, the IRBP provides the only framework to support these policy functions in biosecurity, with allocated funding and resources to support capability building and traditional stewardship in regional northern Australia.

However, due to the geographical spread of the program it also fosters further collaboration and communication between Indigenous communities in northern Australia. This, in turn, builds the capabilities of not only rangers but also provides the broader community agency to undertake surveillance and response activities on Country strengthening the biosecurity network.

3.5   Ongoing appropriateness of the program objective

The program logic states that the objective of the IRBP is to:

> *To bolster Australia's biosecurity system in northern Australia by partnering with Indigenous rangers and biosecurity scientists to deliver monitoring, preparedness, reporting and surveillance activities. This will include building the capability and resources of Indigenous rangers to undertake fee-for-service delivery of effective and efficient biosecurity surveillance. Contribution to a strengthened biosecurity system will also include facilitation of traditional First Nations knowledge of, and practice in, environmental protection; and investment in tools that support monitoring and surveillance of pests and diseases that pose biosecurity risks.*

In terms of ongoing appropriateness (i.e., to the extent to which objectives of the IRBP align with government priorities/desired outcomes), this evaluation has determined that the program objective remains appropriate. The analysis below highlights there is a balanced and integrated approach to program delivery. The IRBP outcomes not only enhance the service capacity of biosecurity activities in northern Australia but also provide the necessary provisions to upskill Aboriginal and Torres Strait Islander peoples' biosecurity capabilities. The following points demonstrate the ongoing need for the IRBP:

- The fee-for-service model has provided the necessary mechanism to ensure the delivery of priority biosecurity activities and outcomes against the NAQS.

- The utilisation of Indigenous ranger groups to deliver the biosecurity activities, through the fee-for-service model, has provided the necessary safety net to strengthen the funding mix of Indigenous biosecurity operations for ranger groups more generally. As such, it provides Indigenous rangers and

ranger groups the opportunity to maintain distinctive cultural, spiritual, physical and economic relationship with their land and waters.

- IRBP training programs are designed to deliver the skills needed to afford rangers with the opportunity to undertake more complex biosecurity work and supporting career development. This should lead to pathways to support professional development and diversified career opportunities for rangers, potentially supporting broader employment and economic outcomes for Indigenous communities.

- Collaboration remains an imperative for program success, which then has positive flow-on implications for strengthening the biosecurity system in northern Australia. This is built on high levels of engagement and cooperation between the department, ranger groups, and Aboriginal and Torres Strait Islander people and communities in the region.

Given these considerations, it can be suggested that IRBP outcomes satisfy program objectives two-fold by addressing servicing gaps within the biosecurity system and promoting economic and cultural outcomes for Aboriginal and Torres Strait Islander people and communities in northern Australia.

3.6 Ongoing appropriateness and need for the program

The program logic states that the need for the IRBP is due to:

Northern Australia has a vast and sparsely populated 10,000km coastline which is the frontline for many high-risk animal, plant and aquatic pests and diseases. To protect Australia's agricultural industries and unique natural environment – and safeguard Australia's animal, plant, aquatic and human health – there is a need to support biosecurity preparedness, surveillance and response activities to appropriately prevent and manage the risk of pest and disease incursions. A core way to achieve this is by combining traditional Indigenous ecological knowledge and stewardship practices with the scientific expertise of Northern Australia Quarantine Strategy (NAQS) scientists. Funding Indigenous ranger biosecurity activities is required to ensure that northern Australia has a strong, responsive and effective biosecurity system.

The analysis of the policy and strategy landscape (above) and feedback on the program provided through the survey and consultations (analysis can be found in Chapter 4 onwards), highlights a continuing need for the program. Consultations detailed that without the use of Indigenous rangers and ranger groups, biosecurity surveillance activities would be significantly hampered across the north, due to the value that groups provide through community/country access, early detections of targets, assistance during incursion responses, logistical support and a suite of other services. Furthermore, despite the benefits and impact being achieved by the IRBP at present, there is still a significant financial and capacity constraint on both the department and Indigenous ranger groups to achieve the current activities within the IRBP funding level, let alone expand into further areas of biosecurity.

This is not to say that there are not areas for improvement and/or opportunities for the IRBP to operate more efficiently and effectively – for which this is detailed in Chapter 9, based on the analysis in Chapter 4 onwards.

Ultimately, the IRBP continues to be appropriate and ongoing support is needed.

3.7 Future expectations

3.7.1 Biosecurity operating model

The biosecurity operating model complements the priority areas set out by the *Commonwealth Biosecurity 2030* roadmap and provides a future focused articulation of how all aspects of the department's biosecurity operations can support a coordinated, multi-disciplinary, and whole-of-system approach to biosecurity management – working across government and industry. It is expected this will lead to the department driving a multidisciplinary, whole-of-system approach to biosecurity preparedness and prevention, informed by a mature approach to intelligence practice which identifies threat factors at global, regional and local levels to inform decision making.

Given the complexity of the model, it incorporates multiple layers of the system through 11 themes that will frame ongoing deployment, which include:

- **data:** data sharing, access, analytics, management, acquisition, modelling

- **science:** basic/fundamental science that supports management/response options, eradication programs, surveillance and diagnostics, regulatory science (e.g., taxonomy, pest/disease ecology, chemical treatments, biocontrol agents, trap design, etc.)

- **technology:** digital enabled workforce, introduction into service procedures, digital tools and infrastructure that supports DAFF's work

- **intelligence capacity:** geospatial, intelligence analysis

- **planning:** operational planning framework, development or implementation of *Commonwealth Biosecurity 2030* and other strategic plans

- **workforce capability:** organisational design, learning requirements and training/capability development, workforce planning, and people strategy

- **partnerships:** industry, international partners, environmental groups, research providers, marketing and communications, other government departments, states and territories, and Indigenous peoples

- **policy:** analysis and lessons, external management, policy settings, policy development and implementation, advice to industry, policy and permits

- **performance and evaluation:** audit and performance monitoring

- **compliance:** regulatory compliance and enforcement

- **pathways:** biosecurity risk assessment, managing biosecurity threats that may cross borders through cargo, conveyances, mail, travellers, and natural pathways.

With the IRBP playing a significant role in the biosecurity system across northern Australia, and with initiatives and future opportunities aligning to a number of these 11 themes, future iterations of the IRBP will need to consider how it integrates and aligns change with this model.

4 Outputs of the Indigenous Ranger Biosecurity Program to date

Analysis of the outputs of the IRBP to date has been conducted using the data collected as part of this review, including survey results, program expenditure and grants, and information gathered during consultations with ranger groups, land councils, IRBP staff and other stakeholders.

This analysis did not consider outputs of the Ranger App or KPI reporting. However, it has assessed how these elements of the IRBP interact with and support the outputs of the program more holistically.

The analysis below uses the structure of the program logic that was developed specifically for this review. Its development process highlighted that the interactions between the different elements of the IRBP are not always clear and it therefore presents the IRBP as more complex than its core purpose. This is highlighted by the specific nature and breadth of outputs covered in the program logic as to try to capture all the different, yet not always aligning, aspects of the IRBP.

As such, it is recognised that the IRBP does not also operate in the traditional sense of a program but more as a model or framework in order to deliver the different elements, initiatives and/or projects. This is likely reflected in the analysis presented, with more detailed analysis provided in Appendix A.

4.1 Actions by or through government

For the purposes of this evaluation, the outputs for actions by or through government, according to the program logic, are:

- technical and practical biosecurity development of rangers
- biosecurity fundamentals training
- ranger forum/s
- Certificate IV in Tropical Biosecurity
- Indigenous traineeships and Certificate IV in Government
- awareness of IRBP
- Torres Strait Regional Authority rangers' biosecurity inspection services.

It is acknowledged that in providing the commentary below, there is recognition of the challenges faced in undertaking all the IRBP initiatives (and therefore expending the full IRBP allocations) due to COVID-19 and delays associated with government procurement processes.

In reviewing the outputs of the IRBP, there are two funded initiatives/elements that do not clearly align with the others – Torres Strait Regional Authority rangers' biosecurity inspection services and Indigenous traineeships and Certificate IV in Government (given the survey results, highlighted in Figure 10) – even if they are complementary activities. As a result, both initiatives were not commonly, if ever, discussed in consultations. Consequently, analysis of the efficiency for these outputs has not been made in this report.

Figure 10: Ranger participation in the additional activities and opportunities to upskill and build biosecurity capabilities
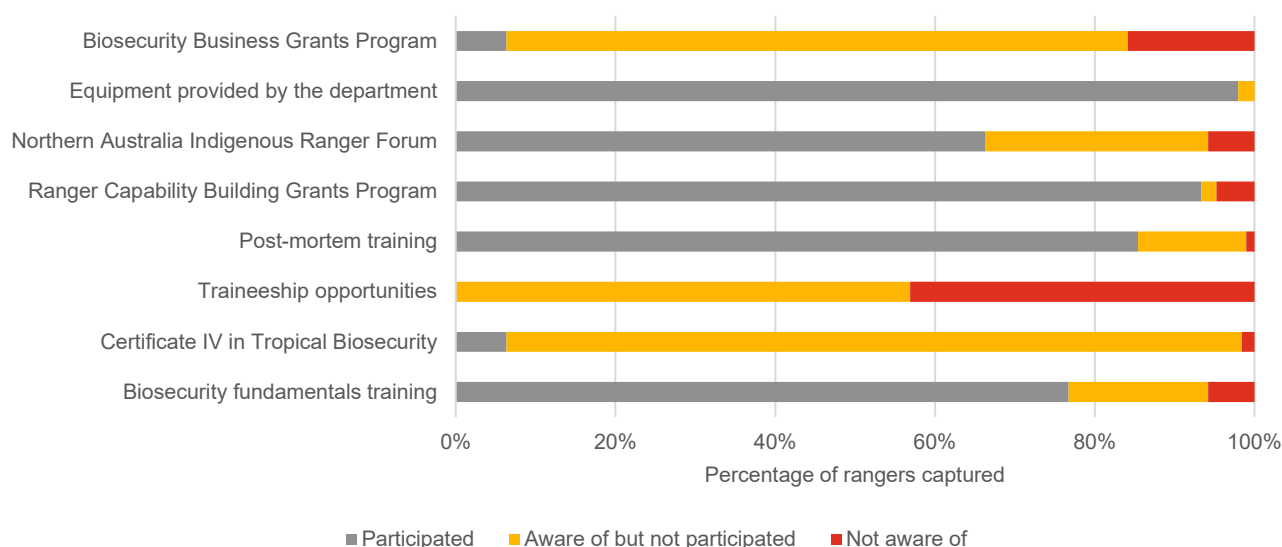
Overall, anecdotal evidence suggests the outputs produced 'by or through government' appear to be high given the level of participation but the results of these could potentially be improved through targeted and appropriately delivered activities.

4.1.1 Technical and practical biosecurity support

Positively for the department, there were no survey responses in the key capability building initiatives (i.e., those that clearly align with building the successful completion of fee-for-service contracts), that indicate participants where either 'ineligible to apply' or viewed it as 'not relevant'. In those cases where it does appear (such as the traineeship opportunities), this is a likely indication of the targeted nature of those initiatives and therefore should not be viewed as a negative response.

REASONS FOR NON-PARTICIPATION

100% of rangers captured nominated 'other' for equipment provision, the RCBGP and post-mortem training

67% of rangers captured nominated 'geographical factors' for biosecurity fundamentals training

30% of rangers captured nominated 'did not seem relevant' for traineeship opportunities

Despite the relatively high reported engagement with the Biosecurity Fundamentals Training (77 per cent), there are still some areas that the program could look to improve its output, namely addressing feedback that some rangers did not engage with the biosecurity fundamentals training due to geographical factors. This may be reflective of the fact that the first round of training in 2020/21 was only provided in a face-to-face approach in the Northern Territory and Queensland, and not Western Australia. However, interestingly, there was not an increase in numbers attending the training in 2021/22 when it was offered across all three states/territories, in a virtual forum, with no evidence provided as to the reason for this.

Based on consultations with ranger groups, this is likely a reflection of a range of issues – such as:

- **Resources and learning materials could be more accessible for community:** there are language and/or literacy barriers in terms of the style of the current training providing, with current communications and materials considered to be lacking in cultural nuance and language accessibility. It was highlighted that the low literacy rates in some ranger groups have made it more difficult for them to engage in the training, despite their willingness to participate. Therefore, there may be an opportunity to develop new training materials and/or approaches that are more appropriate for the rangers' ways of working (for example, more videos and resources in local language). For example, for those rangers captured in the survey who have not participated in capability building support initiatives, with the response 'other', identified that lower levels of literacy meant rangers were unable to participate in sessions where a comprehensive level of English is required.

- **On-ground and/or in-community training opportunities could be increased:** more engagement with learning occurs when the CLO is on-ground in community, as indicated through the free text responses in the survey when asking about CLOs. Multiple respondents suggested that they would feel more supported by their CLO through more regular community visits. While it is recognised that the IRBP is resource and time constrained to be able to send the CLOs to visit communities regularly, the once-a-year visit (or twice if in a high-risk area) is reportedly not sufficient to support the technical and practice development of rangers. Additionally, it was raised that additional practical training should be integrated into the delivery model to support rangers to stay abreast of the evolving complexities of the biosecurity landscape.

> **Figure 11: Ranger experience with CLO**
>
> **83%** of rangers captured either 'somewhat' or 'strongly' agree the CLO network is important to conduct daily activities
>
> **72%** of rangers captured either 'somewhat' or 'strongly' agree their CLO helps with co-ordination
>
> **80%** of rangers captured either 'somewhat' or 'strongly' agree their CLO provides practical field and data collection advice

4.1.2 Ranger Capability Building Grants Program (RCBGP)

A positive aspect with activities that provided support to rangers for technical and practical biosecurity development, is the funding provided through the grants program (as reported through survey and analysis of the grant data provided by the department). Overall, there were no survey respondents that stated this support was less than 'moderately effective'. In fact, almost 70 per cent of respondents noted it was 'very or extremely' effective in 'increasing the skills and capability of Indigenous rangers' and over 60 per cent thought it 'increased the ability of Indigenous rangers to undertake current and future fee-for-service activities'.

The outputs of the RCBGP suggest that improvements could still be made though, with the grants data indicating low levels of engagement (only 39 per cent of groups covered, noting only four groups that applied were unsuccessful in achieving at least partial funding). While this places less pressure on the limited funding that is available and means most applicants were at least partially funded, the feedback gained in consultations around the positive impact that this funding has for rangers and ranger groups suggests greater engagement with the grants should be sought.

> **CAPABILITY BUILDING GRANTS PROGRAM**
>
> **26** grants were awarded
>
> **Over $1m** worth of grants provided
>
> **39%** of IRBP ranger groups received funding
>
> **72%** of requested items were funded

Overall, survey respondents agreed that the grant process was an accessible and straight forward process however, there were issues noted around the 'timeliness of decision making and impact on delivering the grant'. Discussions in consultations identified that this is likely due to connectivity, capacity or literacy issues, particularly for the smaller ranger groups that do not have the governance and capability structure that the larger land councils or organisations may offer.

Some comments made during consultations were that the grants were deemed too restrictive on what could be applied for. This feedback is not necessarily a reason to alter the guidelines in order to drive additional engagement. The purpose and objective of grant funding (whether government or otherwise) is to support investment in targeted and priority areas to drive outcomes. As such, the department should seek to understand what aspects stakeholders are potentially lacking in support for (in order to achieve their biosecurity surveillance activities) and determine how best (if possible) support can be provided.

As third-party procurement processes were not explicitly questioned in the survey or the consultations, comments or assumptions cannot be made against whether one process (i.e., grants or third-party procurement) is more appropriate than the other as both provide their pros and cons (for example, transfer of ownership processes, impact on the financial position of organisation receiving the benefit/support). This is discussed in further detail in Section 8.4.

Approved grant funding was almost evenly spread between equipment items and training and education items. Items or projects that were unsuccessful in getting funding were broadly those where ranger groups were seeking further support for capacity (i.e., equipment to undertake their activities) as opposed to capability growth (i.e., training to improve outcomes of the activities they undertake). However, with the IRBP grants

coming from a limited pool and the evidence suggesting rangers are still requiring support for equipment to be able to undertake biosecurity activities, it may be that the department seek to support ranger groups access other avenues for funding. In saying that, investment by IRBP grants being evenly spread between the two aspects of items for support ensures that support between capacity and capability are both being addressed.

Additionally, the fact that 75 per cent of survey respondents did not indicate a level of dissatisfaction with the process is a positive sign for the department and the program. Not dissimilar to results in other evaluations of grant programs (government or otherwise), consultations noted that improvements to participants satisfaction levels would be driven by aspects such as better communication around the process and decisions, and the timeliness for decisions. It is noted that both of these aspects are not always within the control of the department however for those parts of the communications process that are within the purview of the department (with the grants managed and administered by the Community Grants Hub), such as improvements regarding the notification and details regarding unsuccessful applications, this is something that could be reviewed by the department.

4.1.3   Certificate IV in Tropical Biosecurity

The activities with lower levels of participation of rangers captured, such as the Biosecurity Business Grants Program and Certificate IV in Tropical Biosecurity (both at 6 per cent), tend to be newer activities that have yet to be fully rolled out to all ranger groups. What is a positive sign for the IRBP, is the level of awareness for the Certificate IV (92 per cent), especially given it has only just been implemented in this year. Indications from the survey suggest that the Certificate IV was considered effective at improving biosecurity knowledge and capability and is a specifically targeted qualification.

4.1.4   Awareness of the IRBP

Internally, in terms of those stakeholders that work closely with the program, there is adequate awareness and a general consistency in understanding of what the IRBP does. Yet, externally this is more variable. It is evident from both the undertaking of consultations with stakeholders, and the outputs from the analysis in Chapter 4, that there are many different Indigenous programs in northern Australia (in addition to the general IRP supported through the NIAA) and that can make it difficult for people to understand what activities are included in the IRBP and how the program fits with other programs and initiatives.

Many felt the program was achieving extremely beneficial outcomes for both biosecurity and Indigenous ranger groups, and therefore the impact of the IRBP needs to be better acknowledged outside of stakeholders familiar with program. Therefore, it was highlighted that there needs to be improved communication on the activities and successes of the program.

4.2   Actions by or through Indigenous rangers

For the purposes of this evaluation, the outputs for actions by or through Indigenous rangers, according to the program logic, are:

- ranger biosecurity surveillance and sampling
- KPI reporting against activity plans in dashboard
- reporting and surveillance data.

Analysis of the ability for rangers to complete their biosecurity surveillance and sampling requirements (detailed in Figure 13) highlighted that there is a significant improvement in the average completion (and expenditure) rates – up from 69 per cent in 2020/21 to 81 per cent in 2021/22. The program is still experiencing around 20 per cent non-completion of activities (with some groups being lower given it is an average) and therefore the department needs to examine how to continue to improve this.

It has been acknowledged there have also been external factors influencing ranger groups' ability to complete their contracted biosecurity activities, such as COVID-19 and also the changes experienced regarding wet season. Consultations highlighted, from both industry and ranger groups, the extended period of extreme weather events have impacted rangers' ability to access Country and areas requiring surveillance. There are other factors raised in consultations that are also impacting this.

In saying this, there is still a continual increase in completion rates of ranger groups' fee-for-service activity plans over the past few years, particularly since 2018/19 (as highlighted Appendix A). In fact, the last financial year experienced the highest level of activity completion rate (81 per cent), with the value of the fee-for-service contracts (and therefore scheduled activities) almost double that of 2018/19. Therefore, a reasonable assumption could be made that the continued increase in completion rates is a reflection of the investment by the department in its capability building initiatives. As a result of this investment, the ability of ranger groups to produce its outputs (as per the actions outlined above) has increased.

4.2.1   Capacity for biosecurity activities

While the level of time spent by Indigenous rangers on biosecurity activities may appear low (as indicated in Figure 12), this is a likely reflection of the level of IRBP funding provided for fee-for-service activities. While the fee-for-service contracts are appreciated, and support the sustainability of ranger groups, they are not their main source of income (based on of the information obtained during consultations). Therefore, the capacity ranger groups have for biosecurity activities is not only dependent on the level of funding they receive but also the level of other activities they have been engaged to undertake.

Figure 12: Average ranger time spent on biosecurity activities

66% spend 1 day per week

18% spend 2 days per week

15% spend 3 days per week

1% spend 4 days per week

0% spend 5 days per week

Feedback from consultations outlined that the ranger groups employed by the IRBP often felt they need to prioritise other work they have been engaged to undertake due to the value of the contracts and therefore could be conflicted around which activities to perform. Therefore, it is not necessarily the *capability* of the rangers that are impacting the activity completion level of fee-for-service contracts, but the overall *capacity* of the ranger groups to perform the tasks allocated to them.

Based on this, it was suggested that there needs to be recognition that rangers are already undertaking an extensive and diverse workload, and therefore the scope of biosecurity activities expected for completion by rangers (through fee-for-service contracts) can often add to a workload for groups that are already at or over capacity. Additionally, it was noted during consultations, that the activities being contracted do not necessarily align with traditional owner aspirations for their Country. For example, based on their perceived place-based and community needs, some ranger groups did not see the connection between these and their activity plans. Acknowledging there is already a level of co-design in the activity plans with ranger groups (with support from CLOs), the department may need to consider reviewing this process to understand where ranger groups wish to be more collaborative with their fee-for-service contract development, including development of the activity plans, and look to improve the communication regarding feedback as to the reason for activity plan changes.

Stakeholder consultations also highlighted that system updates to the Ranger App, without then providing appropriate training and/or support to ranger groups, have impeded the ability for rangers to execute biosecurity activities, often experiencing errors with the application. The department has stated that the majority of the significant issues with the Ranger App have been a result of changes outside of their control and not a result of system enhancements and updates specific to the Ranger App (for example, are normally a result of phone software updates). The Ranger App is discussed further in the next chapter (Section 5.2).

4.2.2   Cost of biosecurity activities

As highlighted in Section 3.3, when discussing the challenges being faced across both northern Australia and the biosecurity system, there is a rising cost of undertaking and delivering services, for which the IRBP and ranger groups are not immune to these pressures. It was indicated through consultations that ranger groups felt the influencing factors regarding this include:

- Cost-estimates provided in the fee-for-service contracts (and/or the allocation of funding to the fee-for-service IRBP element) do not accurately reflect the current environment and therefore overall costings for actually undertaking fee--for-service activities.

- Ancillary activities associated with delivering the biosecurity activities that utilised administrative time and resources within the ranger groups was not always paid for under the contract. For example, the fee-for-service model creates a high administration burden for groups due to the volume of variations for relatively small contracts. Through discussions with the department it was highlighted that they

carried the majority of the administration burden for the contract variations compared to the ranger groups (therefore this may need to be clarified with ranger groups in order to understand their concerns around this).

Consequently, there were indications amongst the consultations that the department needs to review its current contracting fee levels and costing model.

4.3   Efficiency findings

Against a program logic, efficiency examines if outputs are being produced and how the administration of activities to produce these outputs is operating. As explored in the analysis above, actions through or by both government and Indigenous rangers are producing most of the outputs identified in the program logic. The key insights from the analysis on outputs is that:

- Anecdotal evidence suggests the level of outputs 'by or through Indigenous rangers' are sufficient (monitoring, sampling, reporting and surveillance data) and there is limited capacity within current IRBP funding to analyse the reporting and surveillance data. Therefore, no comment can be made around the quality of the outputs produced by the ranger groups and consequently, whether the outputs are actually being produced, or the number of activities is just increasing.

- Despite clear improvements in completion rates and budget spends regarding biosecurity activities by Indigenous rangers, there was no clear evidence gathered in this review that can be directly attributed as to why this is occurring. Therefore, only assumptions can be made as to this improvement – such as the inputs being provided by the IRBP (for example, funding for capability building activities and CLO expertise) are positively impacting the outputs 'by or through Indigenous rangers'.

- There appears to be positive engagement with grants and other capability building initiatives in terms of efficiency and there is insufficient data to be able to analyse the effectiveness of this investment. As it is too early in the process to determine the efficiency around the grants programs (and their interaction and alignment with the third-party procurement processes), this will likely need to be undertaken by the department following future rounds. Further details regarding the grants programs can be found in Chapter 8.

In order to support the production of the outputs outlined above, the enabling program staff have been resource and capacity constrained yet still able to provide significant input in order to achieve these outputs. Acknowledging this strain on the program team also highlights that the team can be hindered from undertaking additional activities, which could be beneficial to the program and biosecurity outcomes more generally. Program activities may include improved monitoring and evaluation (including those noted above) to support the IRBP self-identify improvement areas and internally drive business improvement initiatives; whereas biosecurity activities could include Ranger App data analysis or increase fee-for-service engagement with ranger groups.

Additional observations which indicate the inputs into the IRBP could be improved is highlighted in Section 8.2 which details the types of program support available. Through these descriptions, it would appear the structure of the program team may not be conducive to streamlined program inputs and business outputs. For example, in some cases the alignment to the IRBP is not always clear in the description of responsibilities or a clear delineation in the IRBP program team from DAFF-funded staff is not always evident, such as the Director of the program also being responsible for multiple other programs.

5 Achievement of short-term outcomes

Stakeholder	Achievement	Outcome
Impact on ranger individuals or groups		Increased knowledge of biosecurity science by Indigenous rangers
		Indigenous biosecurity surveillance capacity of Indigenous rangers
		Improved community engagement skills of Indigenous rangers
		Increased understanding of biosecurity system by Indigenous rangers
		Increased business and enterprise skills of Indigenous rangers to execute biosecurity contracts and projects
		Increased understanding and awareness of Indigenous rangers on how to enhance their career pathway
		Increased knowledge sharing and application of traditional First Nations environmental practices
Impact on Australian communities and industries (including agriculture)		Improved quality of biosecurity data and reporting
		Increased biosecurity response capabilities in northern Australia
		Increase and improved surveillance activities, especially in high-risk biosecurity areas
	Emerging evidence	Improved protection of the unique and pristine environment of the area from pests and disease travelling between the north and south

The evidence gathered for this evaluation highlights that, overall, there has been notable achievement against the short-term outcomes, and in some areas, a significant growth against earlier data from the beginning of the IRBP.

This is reflected in survey responses regarding how effective the rangers' biosecurity activities are in reducing biosecurity issues – with all but insect trapping activities considered at least 50 per cent (or more) 'very effective' (see Appendix A for further analysis). This was also confirmed in consultations, that outlined it would be difficult to undertake biosecurity activities through any other avenue than through Indigenous rangers. It should be noted that the sample size for insect trapping is significantly smaller than other activities, with only four groups conducting this activity, which could be the result of the lower levels of perceived effectiveness.

The growth in rangers' knowledge and skills is highlighted by continual increase in ranger groups' ability to complete contracted activities (represented by average budget spend). Compared to the previous evaluation, there has been a noticeable increase in the budget expenditure rate (as shown in Figure 13) based on analysis of the data provided by the department. Average budget spend for 2014/15 through to 2017/18 was just over

55 per cent; whereas the average completion rate based on budget spend for 2018/19 through to 2021/22 is 74 per cent.

Figure 13: Average budget expenditure of IRBP fee-for-service contracts
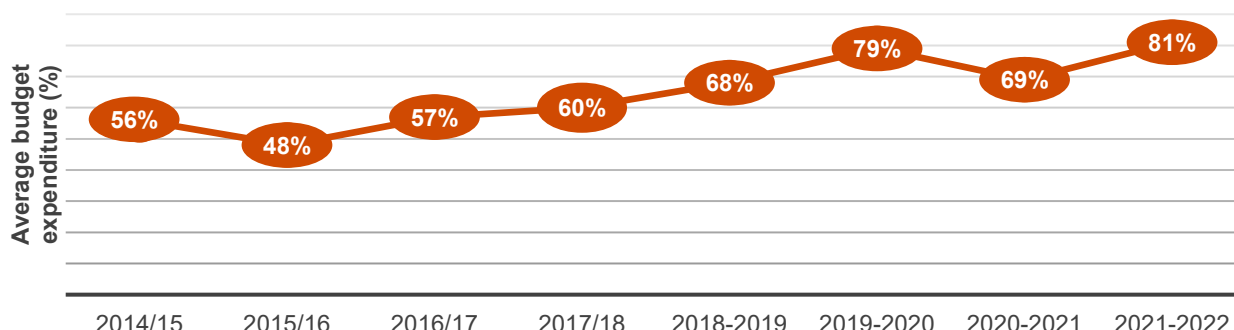
There is still significant room for improvement given the average expenditure is almost 20 per cent below budget allocations. Feedback garnered from both internal and external stakeholders is that the continued expansion of the program is potentially diluting the impact of the current initiatives (and therefore limiting the achievement against outcomes sought) as the capacity of both department staff and Indigenous rangers are stretched.

5.1   Ranger individuals or groups

For the purposes of this evaluation, the outcomes the impact on ranger individuals or groups, according to the program logic, are:

- increased knowledge of biosecurity science by Indigenous rangers
- increased biosecurity surveillance capacity of Indigenous rangers
- improved community engagement skills of Indigenous rangers
- increased understanding of biosecurity system by Indigenous rangers
- increased business and enterprise skills of Indigenous rangers to execute biosecurity contracts and projects
- increased understanding and awareness of Indigenous rangers on how to enhance their career pathway
- increased knowledge sharing and application of traditional First Nations environmental practices.

Prior to engaging in the IRBP, survey responses identified that the majority of rangers captured (65 per cent) had 'no or low skill' in biosecurity system knowledge and half of rangers had 'no or low skill' in biosecurity surveillance techniques, as shown in Figure 14. After being involved in the IRBP, survey respondents reported an increase in skill level (across the different biosecurity areas[17]) shifting from 'no or very low skill' or 'some skills' through to 'some to good skills', with 90 per cent of rangers captured increasing by at least one skill level.

Figure 14: Skill level after engaging in IRBP initiatives

90% of rangers captured indicated an increased knowledge of biosecurity system

70% of rangers captured indicated an increase in biosecurity surveillance techniques

59% of rangers captured felt they had '*good to expert*' communication skills

55% of rangers captured felt they had '*good to expert*' community engagement skills

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[17] The survey asked for respondents to indicate skill and knowledge areas in biosecurity system knowledge; biosecurity surveillance techniques; communication skills; and community engagement skills.

The ranger consultations indicated this is a combination of being able to access funding for equipment and the ongoing capability building support and initiatives delivered for ranger groups. This was supported by industry stakeholders, who have seen the on-ground impact (especially in the aquatic and marine activities) and indicated that there had been a significant improvement in the capability of rangers as a result of the training and qualification opportunities provided. As highlighted by the statistics from the survey, this has also resulted in an increase in rangers' ability and confidence in their communication and community engagement skills.

When it came to the *Certificate IV in Tropical Biosecurity*, observations from the consultations highlighted that:

- a Certificate IV could potentially be too high a level for the purpose of the IRBP and what the rangers are looking for further education/training on

- it is not necessarily provided in a forum that is culturally appropriate or sufficient to account for the varying levels of literacy amongst rangers

- rangers are currently trying to plan for, and work around, wet season and therefore the timing of Certificate IV is not ideal.

It is recognised that the *Certificate IV in Tropical Biosecurity* was only implemented in mid-2022, with survey results confirming that low participation responses indicating this was due to the fact that it has only recently become available. It is unclear whether the participation level of this particular education is due to its relatively new release, or whether its target audience may not align with the rangers that are engaged in the IRBP.

Following completion of the first cohort of the *Certificate IV in Tropical Biosecurity*, the department could look to compare feedback from participating rangers, on the impact of the Cert IV training on their capabilities, to that of biosecurity training, and whether that has an impact on suggesting this education to other in the future.

This may help the department understand where to target future investment and the training/education avenues that are not only going to provide the best value for money, but also the most impact against the outcomes sought by the program. There are tools and frameworks available from The Office of Impact Analysis, within the Department of the Prime Minister and Cabinet (such as assessment templates or post implementation review resources), that can support the department in undertaking analysis on the impact of the Certificate IV.

When examining how well the IRBP integrates the science-based biosecurity knowledge and risk identification with that of being able to apply traditional Indigenous practices for caring for Country, the results were mixed. Both stakeholder cohorts that participated in the consultations (i.e., ranger groups and industry) indicated that the application of cultural knowledge and two-way knowledge exchange within the biosecurity activities is improving; however, the survey results suggest there is still further work required to integrate this better (as shown in Figure 15).

Figure 15: Connection to Country

63% agreed that biosecurity activities increased application of traditional practices

62% of respondents indicated training activities did not increase ability to apply traditional knowledge

75% believed working in biosecurity improved connection to Country

Of interest, from the scientists amongst the stakeholders consulted with (not just from the department), there was a belief that the importance of understanding the science behind the biosecurity risk identification and analysis, particularly in regard to weeds and plant biosecurity surveillance, also needed to improve amongst ranger groups. The majority of consultations indicated that Indigenous rangers have the most knowledge about, and access to, their Country.

The survey results suggest that the efforts to support rangers to build a career pathway have made a significant impact, with only 30 per cent of rangers captured agreeing (in some form) that they had the necessary skills and understanding for a career in biosecurity prior to working in the IRBP. After engaging in the program, 57 per cent of rangers captured agreed (in some form) that they had the necessary skills. Not only is this a positive for the program, but it is also a significant contribution towards building a stronger biosecurity in northern Australia more generally.

This is supported by consultations with ranger groups who believe the IRBP provides a positive pathway to support the professional development and diversified career opportunities for rangers, that in turn contributes, in part, to ongoing employment opportunities and economic outcomes for Indigenous communities. This

sentiment was supported by industry stakeholders, who also saw the program providing an opportunity for those rangers who wanted to pursue a career in biosecurity, especially through the capability building initiatives that IRBP offers.

Feedback indicated that while there are flow-on economic benefits for Indigenous communities from training and involvement in the IRBP, the fee-for-service model is not designed to provide long-term sustainable employment for rangers. Additionally, it was harder for highly skilled rangers to find fixed term employment within the pay and responsibility bands offered through IRBP and general IRP.

5.2 Australian communities and industries

For the purposes of this evaluation, the outcomes and impact on Australian communities and industries (including agriculture), according to the program logic, are:

- improved quality of biosecurity data and reporting

- increased biosecurity response capabilities in northern Australia

- increased and improved surveillance activities, especially in high-risk biosecurity areas

- improved protection of the unique and pristine environment of the area from pests and diseases travelling between the north and south.

The achievements against increasing biosecurity capabilities, through training and upskilling activities, and improved surveillance activities are intrinsically linked to the outcomes discussed above (on or by Indigenous rangers and groups), with similar feedback being received regarding the outcomes in both sections. Industry consultations were complementary on how the training and qualification opportunities have resulted in significant improvements in the biosecurity capabilities of rangers; however, in some sections there were concerns over the lack of resourcing provided to support the scientific aspects (and expertise) that underpins the program.

Survey results indicate that the majority of respondents either somewhat agreed or strongly agreed that the right collection and surveillance activities are being done and being done in the right locations. In fact, the industry stakeholders we consulted with all believe that the IRBP is a critical part of the national biosecurity system and without Indigenous rangers being physically on the ground there would be a large gap (in terms of risk) in the biosecurity system.

There was belief articulated in the consultations that the achievement against these outcomes could be improved through the department making training and tools available to communities so that they could also increase their biosecurity knowledge and therefore further contribute to passive surveillance. For example, it was raised whether funding allocated to fee-for-service contracts could also encompass resourcing to level that would support full-funded biosecurity positions within Indigenous ranger groups. This would then be able to provide that dedicated resource to delivering biosecurity surveillance activities and on-ground training. It was viewed this may be another avenue that the Indigenous ranger groups could better support the department and the wider biosecurity system. This includes the potential for fully funded positions within Indigenous ranger groups that are dedicated to biosecurity surveillance activities.

In terms of reporting and data, evidence from the consultations suggests that the Ranger App is well received and provides a positive impact to support rangers undertake their surveillance and collection activities (as highlighted in Figure 16). The results above show that the majority of rangers captured either agreed or strongly agreed that it was the most effective (91 per cent) and most efficient (87 per cent) way to collect information. In fact, in some consultations the Ranger App was highlighted as a significant tool in providing support to biosecurity data collection in northern Australia more generally and consideration should be made as to whether this could be developed in a way that could be made available to the community more generally.

Figure 16: Ranger opinions of the Ranger App
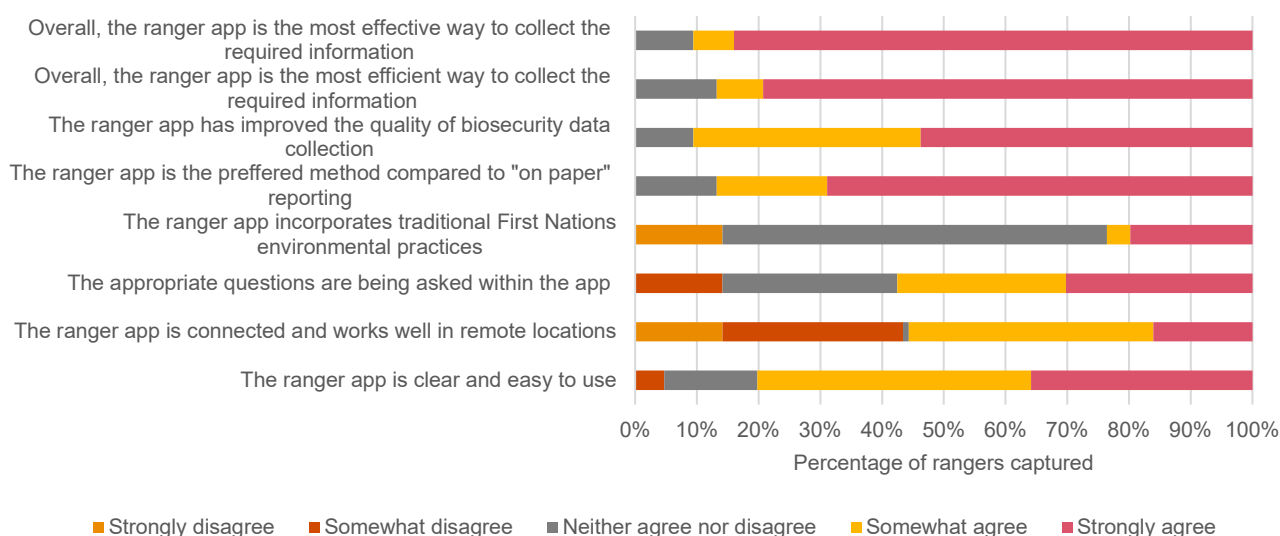
Suggestions were that investment needs to be made across the biosecurity system more generally in a tool that allows data and biosecurity reporting to be more easily shared, and that the Ranger App may potentially provide that baseline platform. It was also viewed as a tool that helps rangers and communities overcome the language and literacy barriers by providing opportunities to utilise pictures and/or videos to support surveillance and biosecurity monitoring. Some even questioned whether the Ranger App could be expanded to host multiple languages to accommodate the various first nations groups engaged in the IRBP.

In both consultations with ranger groups and the survey, it was raised that they believed that, despite the benefits of the Ranger App, there were still some limitations when using it. It was felt that there had been issues with the Ranger App when undertaking updates and development changes. It was felt these updates were not always appropriately communicated to ranger groups regarding when these were happening and the purpose of the updates. As a result, it was proposed that the department could provide improved technical support for rangers that were having difficulty using the Ranger App. Consultation with program staff noted they were aware of these issues and a number of these were beyond the control of the department (for example, changes were sometime as a result of phone system updates).

Furthermore, it was also noted by rangers that they were not always able to use the Ranger App when in the field (as highlighted in Figure 16 and in consultations). Discussions with the department highlighted that they were aware of the following issues and have been continuously working towards improving the Ranger App so it can be best utilised by rangers, particularly with regard to working in locations with poor internet connectivity. Given the remote environments in which ranger groups operate within, the Ranger App has been designed so that it can be used offline, with results being able to be uploaded at a later time when there is an internet connection available (for example, at their ranger stations). The department highlighted that there must be a relatively strong internet connection for the upload to be successful, and due to connectivity issues across northern Australia (which are beyond the control of the department) some issues with the Ranger App may be experienced.

It is acknowledged that, given analysis of the data outputs of the Ranger App were not in scope of this evaluation, a comment around the quality of the data (and therefore any improvement on) cannot be made. This is not a reflection of the limitation of the data and reporting being collected as part of the program (with this being collected as part of the fee-for-service activities and review by CLOs and scientists, when needed), it is that the IRBP and department are not adequately resourced to be able to undertake post-collection data analysis (particular in respect to big data analysis).

5.3   Indirect or unintended outcomes

Consultations highlighted that in-person engagement (whether it be the forums, CLOs or general on-ground engagement) was absolutely crucial to the IRBP achieving its outcomes and one of the key pillars that should

be highlighted as an example on how to successfully undertake biosecurity activities in northern Australia. Therefore, the IRBP has made significant achievement against the outcomes that is targeting 'improved relationships across the biosecurity network'.

Part of the progress to achieving this unintended outcome is that rangers were able to recognise the opportunities for engagement to connect with other ranger groups across northern Australia. Whether it be through the forum or ranger exchanges, this not only drives relationships within the biosecurity system but it also bolsters cross-country connection with Indigenous communities. There was also common agreement that the department program staff have built strong relationships across the north due to their willingness to support and connect with stakeholders, which has resulted in high levels of engagement in the IRBP and facilitated knowledge sharing across the biosecurity system.

6 Progress against medium-term outcomes

Stakeholder	Achievement	Outcome
Impact on ranger individuals or groups	Emerging evidence	Improved utilisation of Indigenous ranger groups
		Enhanced career opportunities for Indigenous rangers and other members of remote Aboriginal Torres Strait Islander communities
		Job opportunities for Indigenous people in biosecurity related roles or other client service delivery/regulatory roles
Impact on Australian communities and industries (including agriculture)		Increased biosecurity preparedness
		Improved pests and diseases threat identification and risk awareness
	Emerging evidence	Improved decision making based on robust data
		Strengthened biosecurity network in northern Australia
		Integration of traditional First Nations environmental practices into biosecurity monitoring and surveillance.

Our analysis shows that where data is available to measure, there has been less impact against the medium--term outcomes when compared to short-term outcomes. Furthermore, there are several medium-term outcomes that are currently difficult to measure progress towards due to limited information. This could be expected, though, given the (relative) infancy of the IRBP in its current format and some of the capability building initiatives that drive many of these outcomes have only just commenced.

Generally, there appears to be more progress on the medium-term outcomes for the broader community than individual rangers, as explored below. What is also recognised is that there is clear alignment between a number of the medium-term outcomes with the short-term outcomes and as achievement against the short-term outcomes grow, impact on the medium-term outcomes will naturally follow (see Appendix A for further analysis).

6.1 Ranger individuals or groups

For the purposes of this evaluation, the outcomes associated with the 'impact on ranger individuals or groups', according to the program logic, are:

- improved utilisation of Indigenous ranger groups

- enhanced career opportunities for Indigenous rangers and other members of remote Aboriginal and Torres Strait Island communities

- job opportunities for Indigenous people in biosecurity related roles or other client service delivery/regulatory roles.

Although the actual use of ranger groups compared to expectations can be measured (as in analysis of proportion of budget expenditure in Figure 13), the total capacity of ranger groups is not known, so the utilisation of the capacity cannot yet be measured.

When it comes to job and career opportunities, the IRBP still has areas to improve to deliver impact in this area (as shown in Figure 17). This does show that there has been an increase in the number of respondents who agreed that they had a clear future career pathway and the necessary skills and understanding for a career in biosecurity due to engagement with the program. Over half of the rangers captured somewhat or strongly agreeing they have seen an increase in skills and understanding to support a future career in biosecurity demonstrating a positive outcome for the department and the wider biosecurity system. This was supported in the sentiments raised in the consultations that purported that the investment by IRBP should always be justifiable as, even if current IRBP rangers are not engaged through the program in the future, a continued career in biosecurity means that they are still contributing towards a strengthened system.

Figure 17: Impact of program on enhancing career opportunities
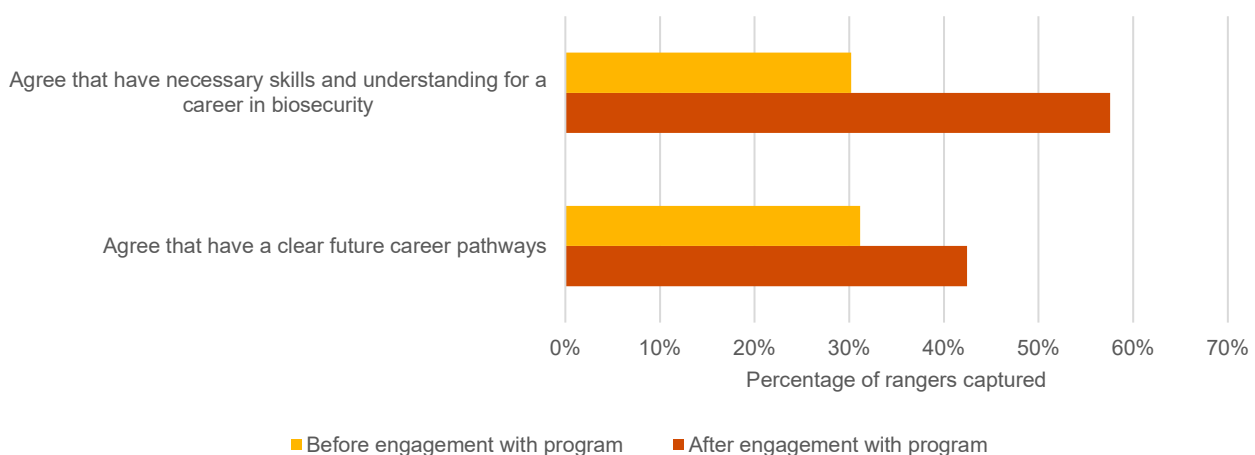
Over 40 percent of rangers captured indicated they believe they have a clear future career pathway after having engaged with the IRBP, and over 60 percent have the intention to continue pursuing a career in biosecurity. It was commonly raised in consultations that the IRBP (namely fee-for-service) does not actually fund positions, only activities, and therefore any enhancement in career opportunities is a flow-on impact and not necessarily a direct result from the IRBP.

The aspect that is most appealing around the career opportunities afforded by involvement in the IRBP, is the ability for Aboriginal and Torres Strait Islander people to be able to work on, and care for, their Country. As such, wearing the ranger badge is seen with pride and this is something the IRBP can continue to promote to drive biosecurity job and career opportunities. As noted above, the IRBP does not fund biosecurity positions and therefore, if the department is seeking to achieve greater impact against these outcomes, it may need to review the structure of the fee-for-service contracts to see if it is viable that more biosecurity-focused roles could be supported.

6.2   Australian communities and industries

For the purposes of this evaluation, the outcomes associated with the 'impact on Australian communities and industries (including agriculture)', according to the program logic, are:

- increased biosecurity preparedness
- improved pests and diseases threat identification and risk awareness
- improved decision making based on robust data
- strengthened biosecurity network in northern Australia

- integration of traditional First Nations environmental practices into biosecurity monitoring and surveillance.

The first three outcomes above are dependent on the achievement of the short-term outcomes and are not measured separately on their own. As the program matures, evidence on the achievement of those outcomes will build.

In terms of the fourth outcome, Figure 19 shows that the majority of respondents believe that the activities undertaken as a whole are strengthening the biosecurity system in northern Australia with 50 per cent of respondents stating it was very successful and 13 per cent stating it was extremely successful. The effectiveness of individual activities is shown in Figure 18.

Figure 18: Top five IRBP activities respondents agree are effective in strengthening the northern Australia biosecurity system

69%: Ghost net and marine sightings and clean up

63%: Aquatic health surveillance

57%: Biosecurity awareness

57%: Plant surveillance

56%: Animal surveillance

Figure 19: Effectiveness of program in contributing to a stronger biosecurity system in northern Australia
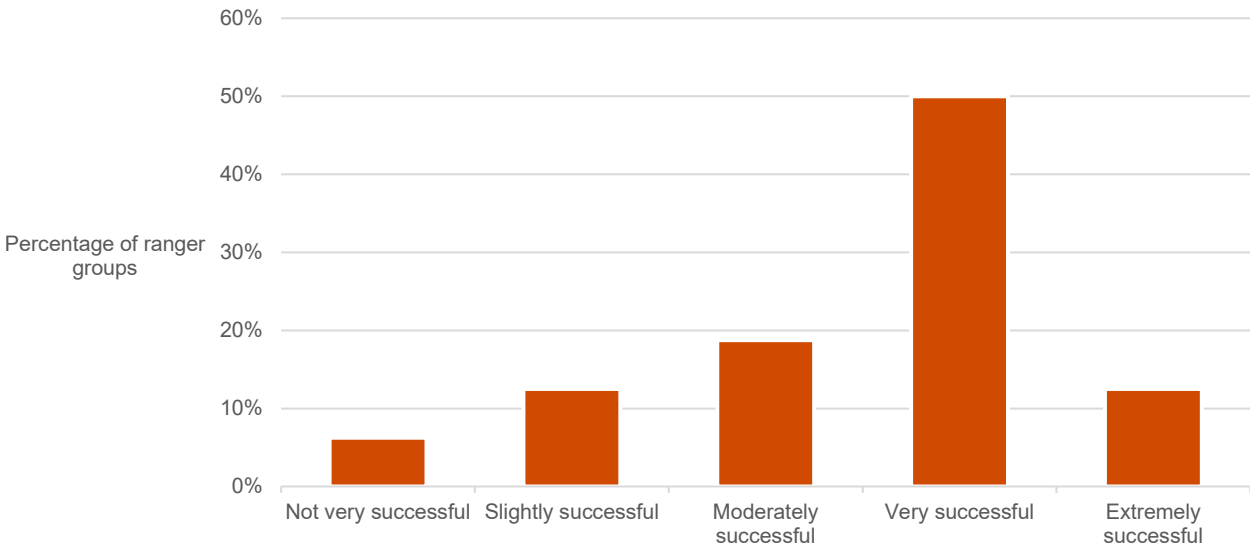
When it came to the identification of the activities included in fee-for-service schedules, it was highlighted that greater engagement directly with the ranger groups should be undertaken. This would help improve the understanding of ranger groups' capability but also start the conversations around integrating First Nations knowledge and understanding of the environment.

It is believed that there is still work to be done around integrating traditional knowledge into current biosecurity monitoring and surveillance activities, and it is acknowledged there are complexities surrounding the sharing (and taking off-Country) of traditional knowledge and practices. In addition, traditional Aboriginal and Torres Strait environment practices change from nation-to-nation, which also hinders the ability to truly integrate this into the science-based biosecurity activities.

7 Progress towards long-term outcomes

For the purposes of this evaluation, the outcomes that impact on Australian communities and industries (including agriculture), according to the program logic, are:

- strong, mature and capable biosecurity network to further enhance localised response capability and surge capacity

- whole-of-government employment objectives realised for Indigenous advancement

- increased biosecurity preparedness and response capability in northern Australia, particularly in Indigenous communities

- contribution to strengthen biosecurity outcomes in northern Australia.

From the evidence available, the IRBP is making some limited progress towards the long-term outcomes. It is acknowledged that the focus of the evaluation was on the program's impact against the short and medium-term outcomes and therefore it is not unreasonable that there is more evidence to support analysis against the other areas.

It is also recognised that the limited progress against the long-term outcomes is a reflection of the fact that the IRBP sits within a large biosecurity and Indigenous rangers' system, and therefore achieving the outcomes sought is reliant on all parties within the system driving and achieving their purpose.

Consultation feedback indicated that the IRBP is seen as a critical piece within the wider biosecurity system in northern Australia, and therefore is contributing to strengthening the biosecurity system and biosecurity outcomes. A key impact raised during consultations, was that the relationships being built across the system is supporting the building of trust in Australia's biosecurity system, which actually contributes to the indirect or unintended long-term outcome of 'enhanced reputation of, and trust in, Australia's biosecurity system'.

The key to the IRBP's progress towards long-term outcomes is recognising both the work the department is undertaking, with limited resources, and the growing spotlight on the importance of ranger work in achieving all outcomes sought. Furthermore, the department might consider additional long-term outcomes that may be required to capture the impact for ranger individuals and groups (for example, job opportunities in senior roles for Indigenous people in biosecurity related roles or other client service delivery/ regulatory roles).

8 Other key themes and insights

From the range of stakeholder consultations undertaken as part of this evaluation, a number of key themes and insights have been identified over and above the assessment against the outcomes and outputs outlined in the program logic. This section provides a summary of these insights given their considerable value in terms of potentially shaping future operation of the program and their input into the opportunities and recommendations outlined in the next chapter.

8.1 Resourcing

Without an ongoing funding stream and budget allocation, it is difficult for the program to provide certainty in program delivery. During discussions with internal and external stakeholders it was highlighted that the funding being provided through NIAA presents certain challenges – namely:

- the administrative burden on program staff having to report both internally to their own department, as well as to the NIAA, via the MoU reporting requirements

- the uncertainty and inconsistency within the organisational structure with roles funded between both the department and NIAA (and therefore those funded by NIAA being fixed-term, non-ongoing positions), impacts the ability for program future planning and the operationalisation of grant programs

- the potential risk for duplication (and perception of 'double-dipping') associated with the fact that the NIAA fund the same ranger groups as the department, even though the department is focused on northern Australia and those groups that wish to engage in the fee-for-service contracting. Therefore, there is the potential for duplication and cross-over between the range of other projects and initiatives NIAA fund to occur.

According to departmental program staff, there are also benefits of utilising NIAA as the funding source, opposed to departmental administered funds. These includes that it:

- provides more flexibility for the program to be able to undertake more specific Indigenous based initiatives (such as the traineeships and grants).

- ensures the IRBP captures outputs and outcomes specific to Aboriginal and Torres Strait Islander people, which may otherwise get lost in biosecurity specific funding.

The key constraint noted during this evaluation was, the non-ongoing funding model through NIAA, impacts the program team's ability to be able to undertake longer term planning, particularly in relation to optimising grant program schedules and multi-year planning for fee-for-service activities. Consultations also highlighted that the lack of ongoing funding impacts the department to better work with ranger groups to improve long-term resource planning fee-for-service activities.

Additionally, a greater ability to undertake resource planning and a stronger understanding of the current capacity of program staff would also help to objectively assess the impact of other funding measures being delivered through the IRBP's network (such as the 'Weeds and Pests' initiative) and what additional resources are going to be required to ensure efficient and effective delivery of the additional initiatives proposed under the IRBP.

8.2 Program structure

While on the surface the funding model for the IRBP appears complicated, the activities and outputs outlined in the MOU clearly align with the outcomes in both the IAS and across the broader policies and strategies for biosecurity in northern Australia. When explaining the purpose of the IRBP during consultations and workshops, a variety of explanations were provided by internal and external stakeholders. On occasion some stakeholders described the program with limited focus on biosecurity outcomes in surveillance and monitoring, with more emphasis on capability building for Indigenous communities in northern Australia.

This highlights the complex environment the program operates in, it also appears to have resulted in the misalignment of some elements of the IRBP from its core purpose (i.e., biosecurity surveillance across northern Australia), particularly as it has evolved to support additional initiatives (e.g., 'Ghost Nets' and 'Weeds and

Pests' initiatives). Consequently, it could be argued that these new initiatives have partially diluted the program's impact against its original priorities and target areas, with effort and resources (both departmental and ranger group) being expended on activities that while valuable, somewhat diverge from the original objective and need.

These issues around program resourcing and capacity constraints are highlighted through the commentary made by a range of stakeholders on the value and operation of the CLO network and how it is structured. It is clear that this aspect of the program is a critical success factor for the program, supporting biosecurity outcomes, facilitating meaningful ranger engagement, ensuring alignment with program objectives and supporting improvements in on-ground capability. In consultation with ranger groups there were repeated requests for increased on-ground engagement time with the CLOs.

It is acknowledged that the demands on these critical positions are continuing to increase as the program expands into new areas, bringing with it a need for knowledge in new biosecurity areas or processes; in addition to these with requests for an increased on-ground presence. The risk with the continuing expansion of program initiatives, and therefore expectations on the CLOs, is that this can drive these resources beyond their capacity, impacting on the sustainability of the program, delivery outcomes and the wellbeing of CLOs. In turn this could potentially lead to CLO's withdrawal from the program, consequently requiring another to be trained and build relationships.

Furthermore, ranger consultations highlighted the desire to have more Indigenous CLOs that were from the local Country. However consultations also indicated there was an increasing expectation for CLOs to continually build their specialist biosecurity knowledge. As a result, this may impact the program's ability to attract and engage local Indigenous community members to these roles if they do not wish to build their specialist knowledge.

8.3   Fee-for-service model

Across the consultations, the fee-for-service model was considered the most appropriate and provides ranger groups the opportunity to opt in and out based on capacity. It also empowers ranger groups by supporting self-determination on whether and how to engage in the program. There are questions as to whether the level of investment available through the fee-for-service arrangements (i.e., contract values) is suitability appropriate for ranger groups to ensure their ongoing engagement in fee-for-service activities when compared to other similar programs.

Responses to the survey noted that ranger groups were able to manage all the fee-for-service model processes and that it is an efficient model to help deliver biosecurity activities. This was supported by consultations, which also indicated the fee-for-service model was the most appropriate approach in delivering the biosecurity activities required. Further analysis of consultations and free text responses largely support the survey results, with many stating that the benefits of the fee-for-service model include:

- providing a safety net to strengthen their funding mix of operations

- providing a flexible funding and delivery model

- supporting the building of on-ground capabilities

- helping to create legitimate and professional relationships with groups.

Limitations were also identified with many stating that alternative models could assist rangers in finding fixed-term employment – which the current fee-for-service model does not allow. They also identified that currently the model creates a high administrative burden for groups due to the volume of variations for relatively small contracts. It was stated that rangers believe it is a complex delivery model, with on-ground activities being just one component of the IRBP. Consultations highlighted that there is a material time effort required to complete necessary processes to facilitate the delivery, for which the ranger groups and/or land councils have limited resources to cover. This includes outgoings for administration and engagement requirements. As such, questions were raised as to whether the contract rate levels were appropriate to cover the current costs of administering and delivering the services. The department is aware of this challenge and is currently reviewing fee-for-service schedules. Consultations with the department have highlighted that they complete the majority of administration work needed for contract variations and therefore further discussions with ranger groups may need to be undertaken to clarify where the administration burden lies.

Equally, the ranger groups felt that the department does not always provide rationale for changes in contracted IRBP activities from year to year (or contract to contract). In some cases, it was believed that the department could better engage with ranger groups to understand why previous activities were not completed before removing them from the schedule. In addition to this, it was raised that the changes year on year, combined with a lack of communication on them, inhibits the ability for rangers to understand the department's expectations of them, as well as the reasoning behind the mix of activities proposed.

According to the department's business process mapping, following collaboration between the department and NAQS scientists to develop and draft activity plans (based on NAQS scientists risk profiling), an activity plan is sent to the CLO to share and review with each ranger group. Rangers then have the opportunity to provide feedback on the appropriateness of the activity plans and make any amendments before the plan is finalised for implementation. As part of this process, ranger groups are also given the opportunity to alter and amend resources through a process of negotiation.

In order to alleviate the concerns of ranger groups regarding the lack of consultation, the department may need to review its communication process for contract negotiations to better include the basis for the draft activity plan and/or how the CLOs maybe able to better describe the changes and why they have occurred.

Additionally, there were a range of aspects of the IRBP raised during consultations that could improve delivery and further drive the achievement of program outcomes. Namely:

- The push to extend the scope of biosecurity activities for rangers is adding to a workload that is already over capacity therefore the constitution of contracts could be reviewed to determine if more resources should be directed to biosecurity activities (for example, a dedicated contracted biosecurity personnel).

- Business process improvements could be made to minimise the ongoing issues of short deadlines, which are often difficult for ranger teams to meet given their other work priorities.

- A more comprehensive communication loop that encompasses ongoing feedback to ranger groups on the results of the data collected to enable Indigenous rangers to better understand the significance, impact and benefits of the work they have done, not just in terms of the quality of work but also to highlight their contribution to the broader biosecurity system across northern Australia.

- The model can hinder the ability to provide long-term sustainable employment for rangers, especially for those more highly skilled rangers, given the fee-for-service contracts have a ceiling, being designed to fund specific activities only and not rangers themselves.

The *Process Mapping 2020* document (provided by the department) indicates that a number of fee-for-service processes are managed through the CLOs, this may also be a reflection on their capacity constraints (and therefore inability to properly support ranger groups to manage these processes accordingly). Consequently, there could be arguments made that the ranger groups themselves (as opposed to just the representative of the land council) could be more involved in co-designing the work schedules and contracts or participate earlier in the process than they currently are. This may also support the incorporation of more appropriate cultural aspirations for their own Country into the biosecurity activities.

The fact that the majority of the processes associated with the fee-for-services model appear acceptable to respondents, any changes by the department should be sought to improve the process rather than look to a new model or approach.

8.4   Capability building funding models

While most of the evidence from the survey and consultation was around ranger group engagement and delivering biosecurity surveillance activities, there are some comments made around the approach to the provision of general training and equipment – namely third-party procurement and grants. When providing the insights below, it is done so in the recognition that the investment of public monies is guided by the *Commonwealth Grants Rules and Guidelines 2017*, along with the general Commonwealth Procurement Rules.

It was raised by ranger groups that they often find the administration around grants – whether applying and/or managing once it has been awarded – cumbersome, however they also noted the administrative requirements for the third-party procurement also difficult at times. This was especially relevant when they were unclear the funding stream for the different pieces of equipment they had through the department, and therefore which

reporting was required for what. It should be highlighted that the survey only included questions regarding experiences with the RCBGP and did not capture insights regarding the third-party procurement process.

An approach that could be considered by the department to streamline the reporting requirements is to consider that all equipment is funded through one stream, and all training through another. There are benefits and downsides to whether this is procured (or delivered in the case of training) by the department, or provided through grants, respectively. Alternatively, the department could review the appropriate sections of the Commonwealth Procurement Rules to determine whether allocations for equipment can be made within the fee-for-service contracts, to streamline expenditure reporting, whilst still maintaining a level of governance and oversight on what the ranger groups are purchasing. The benefit to this approach is that ranger groups can then utilise local businesses for the provision of equipment, however they then lose the benefits that (likely) come with the combined buying power the department may receive on account of bulk purchases.

Whether it be grants, fee-for-service provisions or third-party procurement, when it comes to Australian Government funding supporting the purchasing of equipment – especially those with short asset lives, the department still needs to consider three key risk factors (even if the investment may be justified given the critical nature to supporting ranger groups achieve their activity plans):

- Where the transfer of ownership occurs and who is responsible should there be a fault/issue with government funded equipment. While this may already be covered and addressed through the third-party procurement arrangements, the notion that rangers wish to expand their activities (for example, shooting from helicopters) requires the department to be extremely confident in its coverage of WHS issues and 'at-fault' understanding for these items.

- The public perception that government funding is supporting tools and equipment such as computers, iPads and other similar items that have limited longevity, could cause reputational issues. This is particularly prevalent given the scrutiny and audit on recent grants program investment decisions, including a number of recent audits undertaken by the Australian National Audit Office.

- The taxation matters and accounting treatment related to plant and equipment for the organisations' financial situation. While grant funding (in the form of cash) is usually safeguarded from taxation implications (hence why most grant programs are directed to not-for-profits or incorporated organisations), the 'gifting' of tangible assets can be different (with every asset comes a liability). It is noted this is covered in the IRBP Deed of Gift and addressed through the third-party procurement arrangements. However, it may still be a risk that provision of assets may negatively impact a ranger group or land council's financial position.

In our experience with a wide range of small-to-large grant programs, provided by all levels of government, plant and equipment is rarely an eligible item to receive funding. This is why the suggestion has been made that grants could be focused towards targeted and priority training requirements. This is normally related to the fact that plant and equipment rarely reflects the operational objectives and policy intent guiding the grant program.

Yet, particularly regarding the operational objectives of the IRBP and biosecurity more generally, there is clear alignment between the IRBP policy and the need to also support specialised or essential plant and equipment. Therefore, separating the purposes of the different funding streams (i.e., one for equipment, one for training) may help overcome some of the reporting issues raised by ranger groups (but will create additional administrative burdens on both program staff and grant recipients).

As highlighted in the *Commonwealth Grants Rules and Guidelines 2017*, grants can vary in nature, scale and complexity and it is for the department to consider the most appropriate approach for the purpose of the grants being provided. In terms of the grants provided under the RCBGP, it is noted that this funding is already available over two years which should be sufficient for the grant recipients to undertake their nominated project, even accounting for wet season and supply chain constraints. Additionally, the level of grant being provided could be seen as less risky compared to other larger programs however there is always an inherent risk with any government funding, particularly to parties with less structured governance practices. The 'round approach' to the grants and specific milestone payments (attached to reporting) is a strong mechanism to mitigating this risk.

Regardless of the approach taken, there will always be an administrative burden on the grant provider (whether directly through the department or Community Grants Hub). Whether funding is provided in singular- or multi-financial year rounds, it will not reduce annual cash flow management nor the level of reporting and acquittals required. This is applicable to both payments to recipients and payments held in lieu of milestones. Therefore, there are two main considerations for the department, regarding the structure of the grant program:

- What will achieve the best on-ground outcome from the investment being made (i.e., what is the optimal way to ensure recipients deliver their funded projects)

- How can we best capture the information required to monitor, report and evaluate the investment being made?

Ultimately, when it comes to the provision of government support (whether through service delivery or financial support, even in the form of equipment), there are always going to be stakeholders that are not entirely satisfied with the framework and distribution method implemented. Therefore, the department should only consider changes should the majority of stakeholders indicate an issue or there are clear efficiency savings that can be made through streamlined business processes. The fact that 75 per cent of survey respondents did not indicate a level of dissatisfaction with the process; that the grant programs are still in their relevant infancy; and the third-party procurement process was rarely raised, does indicate there is no immediate need for the department to reorganise its support provisions and methods.

9 Opportunities and recommendations

When providing the opportunities and recommendations below, it is acknowledged the IRBP operates in a region and landscape which comes with unique challenges that need to be navigated in order to provide the services it does. These include aspects such as geographical sparseness and the distance required to be covered; connectivity (both socially and digitally) can be an issue in remote regions; and having to work within a biosecurity system that covers a range of different speciality areas, that includes cross-jurisdictional considerations.

It should be reiterated that the primary conclusion from this evaluation is that the IRBP should continue and, based on the evidence provided, in its current format. From the analysis undertaken, stakeholders clearly acknowledge the valuable contribution the program makes towards biosecurity outcomes. The following is provided to support refinement of certain areas to ensure the IRBP is delivering against its core purpose and improving its impact against the outcomes sought.

The conclusions drawn from this evaluation are presented against two different areas. Firstly, opportunities where the program is working well but it is considered there are areas for enhancement to build alternative access to resources, drive tailored services for key stakeholders and, consequently, increase the impact against the outcomes sought. Secondly, recommendations are where evidence and analysis has suggested that more substantiative changes are required for the IRBP.

9.1 Opportunities

1. **Review the potential to upgrade the functionality of the Ranger App to support data and knowledge sharing across the various activities occurring within the wider biosecurity system to help protect Australia's natural environment and industries.**

Evidence collected through both the survey and consultations recognise that the Ranger App is the most appropriate way for rangers to collect data and there is still room for improvement of the interface, that requires investment into new IT solutions. Specifically, there are some iterations of the application that could better integrate opportunities to incorporate First Nations environmental practices, local languages and resources that can be presented in a manner that overcomes the lower English-literacy levels experienced within ranger groups. It is recognised that a significant amount of time and resources would be required to deliver cultural and in-language resources across the 65 ranger groups in which there are diverse languages and geographical boundaries and, as such, could be considered a more long-term goal. Therefore, there should be a focus on application elements, such as increased photo and video content, to help address lower literacy levels across many different groups.

When it comes to the wider biosecurity system, there is interest in wanting a better data sharing and information portal (explicitly highlighted in the Northern Australia Biosecurity Strategy). Similarly, there is examination across government organisations regarding moving towards an open data source model for appropriate information. Therefore, in improving the Ranger App, it could potentially be promoted as the fit-for-purpose surveillance data collection tool for the wider biosecurity system, suitable to be used for both rangers and the wider community. Not only will this support specific surveillance activities, but it will also increase biosecurity reporting and data through the community's ability to undertake passive surveillance.

One of the other constraints with the current data collection model of the IRBP is not the lack of functionality of the Ranger App but the limited (or no) resources available to undertake significant data analysis (also known as big data analysis). By creating an application that could be accessed by those in the wider biosecurity system, it may also provide opportunities to leverage the resources of other organisations, or sections of the system, that are able to undertake the level of data analysis that the IRBP cannot, supporting risk assessments.

The combination of providing a suitable collection and reporting tool to the system, while also leveraging off other resources within the system, will enable the IRBP to improve the achievement of short-term outcomes, progress towards medium-term outcomes and impact the long-term outcomes. It may also further support

delivery against some of the audit findings from the *Northern Australia Quarantine Strategy – Follow-on Audit* regarding data collection and analysis.

2. **Consider promoting the Community Liaison Officer network as a framework that can be leveraged and/or replicated across other programs and initiatives within the wider biosecurity system.**

As noted earlier, successfully working in regional and remote Australia is reliant on a number of factors. A major influencing factor is the ability to build and sustain relationships across the various regions in northern Australia. When it comes to working on-Country and with Aboriginal and Torres Strait Islander people, this becomes even more important. Relationship building and in-community engagement remains a key consideration across the policy landscape to maintaining rapport and ensuring biosecurity outcomes are optimised. By leveraging the CLOs, the IRBP affords a communication touch point with First Nations and knowledge partnerships that actively value all perspectives on biosecurity in the region. This ensures a more collaborative and integrated approach to the biosecurity system in northern Australia.

In this manner, the IRBP's use of CLOs to build in-community relationships and engagements, provides a platform that is likely to deliver more successful biosecurity activities and outcomes. The recognised value of the CLO network affords the IRBP an opportunity to promote it as a 'best-practice' model or framework for the implementation of biosecurity surveillance activities when working with external partners in northern Australia. The framework support offered by the CLO network was already the reasoning as to why Parks Australia engaged the IRBP to deliver the 'Ghost Nets' project. Additionally, the Northern Australian Biosecurity Strategy has recommended implementing Industry Liaison Officers and Indigenous Biosecurity Liaison Officers, and given the synergies between these roles and the CLO network, lessons learnt from the IRBP could be relevant to incorporate into these other initiatives.

These two examples highlight that there is potential for the IRBP to market the CLO network model to other biosecurity initiatives and potentially leverage its existing framework to attract additional resources for this aspect of the program. With expectations and workload continually growing on the existing CLOs, the IRBP may be able to seek partnerships within the wider system that may enable alternative options to resource and grow the CLO network. In doing so, it also delivers against the outcomes sought (and alignment with the policy landscape more generally) to build and strengthen collaborative partnerships. The other benefit is it will help reduce the possibilities for duplication of effort within the system, which then will flow onto more efficient and effective use of the ranger groups.

3. **Review current training initiatives to ensure there is alignment with the priority and target biosecurity activity areas of the IRBP, in a manner appropriate for the audience.**

When examining the results of the survey, it is clear there are certain activities and areas for which ranger groups are either more engaged, or believe they are more skilled in. To ensure the IRBP is able to adequately cover all of the high-risk or key priority areas for which the program is targeting for surveillance, ranger groups should also be looking to increase their skills in these areas.

The evaluation has indicated is that the capability building activities the IRBP has implemented to date have been considered effective in increasing the biosecurity skills of ranger groups and growing rangers' understanding of the biosecurity system more generally. However, feedback from consultations is that the newer educational opportunities targeted at higher level qualifications, or other classroom-based training is not always the most conducive learning environment for the target audience. There is an opportunity for the IRBP to examine which speciality skills may need enhancement (for example, plants and weeds surveillance) and deliver it in a manner which may support increased engagement – namely on-ground practical training.

It is acknowledged that the higher qualifications are targeting those rangers that have identified biosecurity as a potential career pathway, and therefore providing a platform for the capability growth needed to achieve this (and therefore contributing towards the long-term outcomes sought around a strengthened system and whole-of-government employment objectives realised for Indigenous advancement). To provide a more well-rounded skillset for rangers and ranger groups and an improved platform for achieving the IRBP outcomes, the education and training initiatives should develop the 'right' capability sets that potentially move beyond just general biosecurity skills and understanding (whether this is providing support or avenues for micro-qualifications or increased on-Country practical-based education). By driving improved understanding, in more

areas of biosecurity, this could also (potentially) increase the completion rates of fee-for-service contracts based on a more targeted education and training approach.

9.2 Recommendations

1. **The IRBP should continue but with a more clearly defined purpose and role within the biosecurity and Indigenous rangers' system, which is then adequately resourced to deliver against this.**

The program logic alone highlights how complex the IRBP has become with all the different elements and initiatives that are considered part of the program. The complicated nature of the program was also evident throughout consultations, especially in outlining the exact elements of the program and the overall purpose and intent. Therefore, the IRBP needs to improve the definition of the program to refine and clearly outline its purpose and role within the biosecurity system.

Evidence from the consultations and supported by the outputs of the workshop with department staff, note that the program is best placed to focus on the original intent of the IRBP – biosecurity surveillance activities delivered through Indigenous rangers in northern Australia. While the program has evolved to other areas, based on this feedback the program could focus on ensuring that surveillance and monitoring is done well and appropriately resourced before looking at response, control measures and eradication activities. By simplifying the program's purpose, this will then flow into clear focus areas and targeted activities. A more defined purpose should allow the IRBP to clearly identify the key areas of capability building needs, which informs the initiatives to be undertaken (rather than continually trying to be all things to all people).

Ultimately this should inform a more succinct program logic, with fewer outputs and outcomes, in turn enhancing the IRBP's efficiency and effectiveness. Additionally, the IRBP should ensure it is achieving set key performance indicators with regard to the completion of activities schedules and/or outcomes of capability building initiatives, before looking to expand into any additional elements. This is highlighted in the outputs section (Chapter 4) whereby certain outputs were not examined as they were considered outliers in the program. Based on this, it is questioned whether these initiatives (for example, the traineeship and Torres Strait Islander Arrangements) should be promoted as part of the IRBP or whether consideration should be considered to these activities being undertaken separately from the IRBP.

Furthermore, a clearer role in the biosecurity and Indigenous rangers' system should help to better identify what additional resources are required if additional activities are to be undertaken under the IRBP model and/or framework (across the IRBP program and not just program staff). In fact, if such a situation occurs (for example, Parks utilising the model for their 'Ghost Nets' project), this should be seen as above and beyond the IRBP, and not reported or promoted as an initiative supported by the IRBP.

Part of the process in redefining the IRBP needs to include a clear workforce plan on how best to implement the program and its resourcing requirements. The descriptions around positions supporting the program highlights that:

- team descriptions that are slightly misaligned with the title (for instance, some ranger training sitting with the CLO network and others with the grants team)
- there is not always a clear delineation within the team structure between the IRBP and other units that report to the same Director

It was also recognised across the consultations that there are current resourcing issues that are impacting the capacity of personnel to be effective at delivering against the outcomes of the program (which may be reflective of the cross-over of responsibilities between the teams and/or what would appear diversity of workload levels between the teams).

The program is also trying to account for the uncertainty around IRBP being funded under NIAA as opposed to the department. In undertaking a workforce planning process, based on the newly refined IRBP purpose and role, it should consider:

- The key roles and responsibilities essential to delivering the core aspects of the IRBP, and appropriate relationships between these roles to optimise their efficiency and effectiveness

- The functionality of these roles and therefore the appropriate structure to support the core. initiatives of the IRBP, including the number of roles in each function to ensure the priority and key aspects of the program are adequately resourced (and reduce any ability to operate in isolation).

- Identification of funding source for each role to ensure that the IRBP allocated funding is supporting those roles which have direct impact on the IRBP (i.e., any role funded by IRBP that does not interact with the program should be funded separately). This would ensure that ongoing/permanent funding is directed to roles so that the functionality of the IRBP can continue should the source of funding be changed and/or removed.

- Future workforce expansion planning to be able to properly identify and cost key roles, understand the impact of new initiatives and structure any requested expansions and/or use of the IRBP model/framework for other elements.

As noted earlier in this report, the non-ongoing funding environment that the IRBP operates in prevents long-term planning and resourcing arrangements from being considered for critical northern Australia biosecurity surveillance. Consequently, ongoing funding sustainability is recommended to support these critical biosecurity activities.

2. **The Community Liaison Officers are a crucial component to the impact and success of the IRBP and therefore the network should be expanded to ensure appropriate reach and on-ground engagement.**

Given the crucial nature of the role the CLOs play in the success of the IRBP, it is clear there needs to be an increase in number of CLOs to support the expansion of the network – both in terms of appropriate geographical reach and increased time spent on-ground with rangers and ranger groups. Preferably the work around this recommendation would be integrated into Recommendation 1 however it is recognised that, if required, the review for the optimal CLO resourcing level, structure and approach could be done separately.

One of the most common points raised during consultations (supported by the survey data) is how in-demand the CLOs are and how valued they are in-community (thus the request to have them visit more than once or twice a year). Given the extensive regions the CLOs need to cover, and the time it takes to cover the distance required to visit the communities which Indigenous rangers are based, it has been raised that the program may face WHS and workload risks for CLOs. Additionally, the expectation that CLOs be across the varying surveillance activity areas, and the nuances between the different regions they visit, places further pressure on the CLOs. Evidence indicates that the IRBP produces more outputs, and improved ranger engagement, when CLOs are on-ground.

Another aspect that rangers believe would add further value to the CLOs and support the better integration of traditional knowledge with the scientific-based biosecurity surveillance activities.

It was observed there is currently no CLO based in WA, which not only adds to pressure to the current CLO network but also means that those supporting WA-based rangers becomes logistically more difficult due to the larger geographic distance. It is acknowledged there are regulatory and resourcing considerations that impact the ability for the IRBP to expand the network (for example, having an APS4 CLO based in WA with no immediate place-based supervision or including a supervisory role in WA for just one FTE).

In this manner, and part of the reasoning for suggesting this recommendation is considered when undertaking Recommendation 1, is whether an alternative workforce model may need to be explored. The benefit of going through this process is that the department can holistically examine and review all the implications of expanding and/or changing the CLO operating model. Some of the key aspects that could be considered are:

- Whether expansion of the CLO network should be based on geography or biosecurity skills sets, and therefore what support can be provided to CLOs to ensure they are able to overcome any English literacy level barriers within rangers and ranger groups, no matter which model is implemented.

- Whether or not CLOs should remain APS-employees to the benefit of the program or whether contracting out some roles may be more suited to overcome some of the regulatory constraints (noting that strong governance of the roles still needs to be in place no matter the engagement method and there are likely implications to the process roles CLOs play in fee-for-service contracting).

- How to provide a model that encourages more Aboriginal and Torres Strait Islander people from the region to strive for and want to be employed as a CLO.

- How to ensure the model, whether there are changes or not, continues to support CLOs to operate in a culturally-appropriate manner, for the different regions they are working in; or whether further location-specific cultural awareness training needs to occur.

3. **Develop an IRBP Communications Strategy that promotes the IRBP amongst the wider community whilst also including Indigenous Engagement Principles.**

Developing an IRBP Communication Strategy for both internal program management and external program awareness, will support a connected view of the program, assist in addressing any misconceptions of program operations and create future program effectiveness. Furthermore, a communication strategy may also act as a mechanism to promote any key activities such as grant rounds, which was a common issue raised during the consultation period.

It is important to note that Indigenous people have inherent rights to self-determination and expressions of their culture. To support and recognise these fundamental rights also requires acknowledgment and application of the principle of Free, Prior and Informed Consent (FPIC) pursuant to the *United Nations Declaration on the Rights of Indigenous Peoples* (UN DRIP) from the respective Indigenous community when undertaking engagement and consultation. It is important, and culturally appropriate, that First Nations peoples are recognised and treated as key stakeholders in developing, designing, implementing, monitoring, and evaluating all policies and legislation that may have an impact on their individual and collective socio-economic and cultural wellbeing.

To ensure informed decisions are made, Indigenous people must be provided with information in a way which is culturally and linguistically accessible in an appropriate timeframe to ensure appropriate consideration and understanding as well as an opportunity to obtain clarifications and/or advice.

General considerations when communicating with Aboriginal and Torres Strait Islander audiences include:

- consult on the most appropriate communication tools, to understand the most effective channels

- use clear and concise language, ensuring jargon, acronyms or technical terms are minimised and fully explained

- engage with locally based community representatives to ensure that messages are interpreted appropriately and the meaning is relevant to each Traditional Owner or Custodians

- be aware words may have different meanings in and across communities. It is encouraged that a locally endorsed community representative is engaged to ensure the messaging is relevant and place based

- use multiple channels to convey your message, which can include face-to-face, letters, television, brochures, posters, talking posters, print media, community radio, videos, websites and social media

- use Aboriginal and Torres Strait Islander voices to demonstrate relevant stories of success and encourage locals to share their stories through the selected communication channels

- use a mix of mainstream and Indigenous media channels for general information and Indigenous specific information (i.e., non-Indigenous audience members)

- use culturally specific elements for Indigenous-specific communications, such as language, talent, design and music elements

- be aware that there may be gender specific elements that need to be considered for cultural reasons

- consider that some Aboriginal and Torres Strait Islander communities face lower literacy and numeracy skills

- be active providers of information as some Indigenous communities may wait to receive government information rather than to seek it out

- close the loop when finalising a milestone or activity – This would include re-engaging and reporting back to the community with any next steps and/or a contact person if there are any subsequent questions or concerns with the work that was undertaken.

It is recognised that the department is currently implementing a number of these considerations across their existing communication channels including their YouTube channel, newsletter, FM88 radio station, posters, fact sheets and 3D models. However, given that communication was identified as an improvement area in several consultations, the effectiveness of these methods needs to be considered. It should also be acknowledged that due to the diverse and broad range of stakeholders located across northern Australia it would be difficult to adapt all communications locally but the above considerations should nevertheless be examined.

4. **Consider reviewing the financial model and approach to fee-for-service contracting to refine the process and improve its efficiency and effectiveness.**

Similarly to Recommendation 2, the fee-for-service contracting model is central to the functionality of the IRBP and its ability to achieve the biosecurity surveillance activities required. Evidence from the evaluation indicates that the fee-for-service model was considered the most appropriate model in which to undertake these activities and engage the ranger groups – with no stakeholder cohort offering an alternative approach.

Like Recommendation 2, preferably the work implementing this recommendation would be integrated into Recommendation 1 however it is recognised that, if required, the review of the level of rates within the contracts, and the overall costing model for this element of the program could occur separately.

As recognised in this report, service delivery in northern Australia has its unique challenges, one of which is the exponentially high (and rising) cost of operations compared to other areas. As such, the level of rates provided in the fee-for-service contracts needs to reflect this and ensure the ranger groups are adequately covering cost of delivery – which include the administrative arrangements in managing the contracts. As raised earlier, the current levels are not sufficient to cover all of the delivery costs of undertaking biosecurity activities on behalf of the department.

It is recognised that the department is already aware of this situation and has been working with the ranger groups to ascertain the appropriate levels to be included in the contracts, and this is yet to be completed. An additional consideration in these discussions should focus on how to incentivise ranger groups to ensure that fee-for-service activities are viewed as equally important to ranger groups as their other contracted work. While the opportunity to access capability building support and funding is tied to being part of the IRBP, it is recognised that there may be other approaches to review.

The current fee-for-service contracts have a three-year tenure but the small value contracts or year-long activity schedules are not conducive to full time or permanent employment opportunities for rangers in biosecurity. Similarly, it does not provide security to the ranger group to afford them the opportunity to increase their employee numbers. The perception by ranger groups that activity schedules are continually changing (as highlighted in consultations) and these changes are occurring with limited or no consultation, also reduces the buy-in from the ranger group and can create a sense of disempowerment. Consequently, there are a few aspects of this model which the department should consider in order to help address these perceptions and refine the contracting approach:

- Ensure that communication is improved so that rangers are aware that they have the ability to co-design their fee-for-service contracts. This will not only empower the ranger groups to promote the priorities own their own Country, but it will also provide both parties with a level of understanding and alignment around why certain activities are (or are not) being nominated for the year's activity schedule. A truly co-designed contract should also support improved integration between science-based biosecurity and traditional stewardship of nature practices.

- Review whether a retainer should be built into the contracts to support the ranger groups to cover the costs of contract administration and support improved business-level skills for the ranger groups.

- Explore the regulations, legalities and appropriateness around whether contracts could fund a biosecurity position as opposed to activity schedules, or a combination of both, depending on the capability level of the ranger group.

5. **Improve recognition of the importance of cultural connection to better embed cultural knowledge and practices into the IRBP.**

The *Uluru Statement from the He*art calls for the establishment of a 'First Nations Voice' in the *Australian Constitution* and a 'Makarrata Commission' to monitor a process of 'agreement-making' and 'truth-telling' between governments and Aboriginal and Torres Strait Islander peoples.

It is intended that a Voice to Parliament will not be to the detriment the *National Agreement on Closing the Gap* (CTG) but rather will further support the view that Aboriginal and Torres Strait Islander peoples have an entrenched right to have input into the design and delivery of policies, programs and services that affect them.

To be consistent with the Australian Governments agenda across CTG, a sector wide reset on the approach to Indigenous program and policy to ensure Indigenous voices are included in co-design and that cultural connections are appropriately embedded across delivery. There is an opportunity to better align this commitment to the ranger program, and the broader narrative in regard to First Nations people to secure future investment in the IRBP. There is an opportunity for the IRBP to be proactive in their approach to incorporate traditional knowledge and cultural practices within the program.

The following actions should be considered to further this objective:

*   **Data sovereignty:** Implement a principles-based Indigenous data sovereignty framework which is co-designed with Traditional Owners and Custodians to ensure that Indigenous peoples are able to govern the collection, ownership and application of data about Indigenous communities, peoples, lands, and resources.

*   **Two-way knowledge sharing:** Create an opportunity for the Indigenous Biosecurity Rangers and NAQS scientists to co-design a culturally scientific biosecurity risk profile.

*   **Training and education:** Review current training and education pathways available within the ranger program, considering flexibility in course offerings (short or micro-qualifications as other education options) (refer Opportunity 3 above). This should also ensure that any training and education options are culturally appropriate and any barriers for participation are removed (i.e.in/out of classroom, language appropriate, cross-language barriers).

*   **Promote First Nations practices:** Undertake a community consultation process to understand which practices and cultural knowledge should be considered and embedded into future program redesigns.

*   **Indigenous policy agenda:** Continue to explore options that align with the Australian Government's commitment to CTG Priority Reform and the intention to elevate the voice of First Nations people through amendments to the *Australian Constitution*.

Appendices

Appendix A: Additional data and analysis

Methodology

To support the evaluation, a survey was undertaken and distributed to Indigenous ranger groups to either provide to individual rangers, or to complete on behalf of rangers. The survey was drafted by PwC with input from the department. The survey was made live and distributed to Indigenous Ranger Biosecurity Program participants on Friday 7 October 2022, with instructions that they had two weeks to complete. The decision was made to extend the survey deadline by an additional week and a reminder was sent on Monday 24 October 2022 stating that they survey would close at the close of business on Friday 28 October 2022.

When the survey was closed, it had received 24 substantive responses (noting that not all respondents are able to or will answer every question). Noting that respondents consisted of individuals and participants that were answering on behalf of the rangers they work for. In total the survey captured the experience of 106 rangers in the program (across 4 individual responses and 102 rangers captured in group responses).

In addition to the survey, the department provided PwC with a range of different data points – including reporting against activity plans and grant details – to support the project's analysis. The analysis of the survey data and information from the department has been combined with outputs from the consultation, to support the key insights and themes developed, to then inform the opportunities and recommendations outlined in Chapter 9.

The next section provides a summary of survey responses and key insights which have been captured in this report, along with the analysis of the program data provided by the department. When analysis refers to '*rangers captured'* that is representative of the combined answers from individual rangers and the weighted response from ranger groups depending on the number of rangers they have gathered views from. Whereas '*respondents'* refers to the non-weighted responses from rangers and individuals engaged in the program and '*ranger groups'* only refers to the non-weighted individual answering on behalf of a ranger group.

Survey analysis

Demographic questions

Which of the following best describes the experience that you are able to reflect in this survey?

The majority of responses (65 per cent) were representative of ranger groups responding on behalf of several individual rangers which they had consulted with compared to the 17 per cent of individual ranger responses. This higher level of respondents answering on behalf of rangers was expected due to lower levels of literacy in ranger groups due to English not being their first language, hence why this option was provided to participants in order to elicit a higher response rate and therefore sample size to inform the evaluation.

Table 1: Types of respondents

Answer	Percentage	Frequency
I am a ranger in the program and can answer about my individual experience	17%	4
I work in a ranger group and can answer about the experience of several individual rangers that I have consulted with	65%	15
I work for a ranger group but do not undertake any field activities and can answer only about the experience of working for the ranger organisation	17%	4
I am neither a ranger nor work in a ranger group (please describe)	0%	(ask)

Approximately how many individual rangers are you reflecting the experience of this survey?

The number of rangers that respondents were answering on behalf of ranged between 4 and 10 rangers. The average number of rangers being responded for was 7.3, or a total of 102 rangers captured in the group responses.

Which state/ territory do you perform the majority of your role in the program in?

All survey respondents were from the northern states and territories in which the program operates within. Approximately half of individuals captured in survey (rangers and other stakeholders) (51 per cent) are from the Northern Territory, 31 per cent from Queensland and 18 per cent from Western Australia. This is a relative reflective of the geographical spread of ranger groups engaged in the program with 28 of the 65 ranger groups being located in the Northern Territory.

On average, how long have the rangers you work with, or are answering in reference to, been working under the program?

As seen in the figure below (Figure 20), almost all of the rangers captured (96 per cent) have been working under the program for two years or more with the highest number of respondents working under the program for two to four years (41 per cent) and still a significant portion (25 per cent) working in the program for over six years.

Figure 20: Average length of tenure of rangers captured in survey
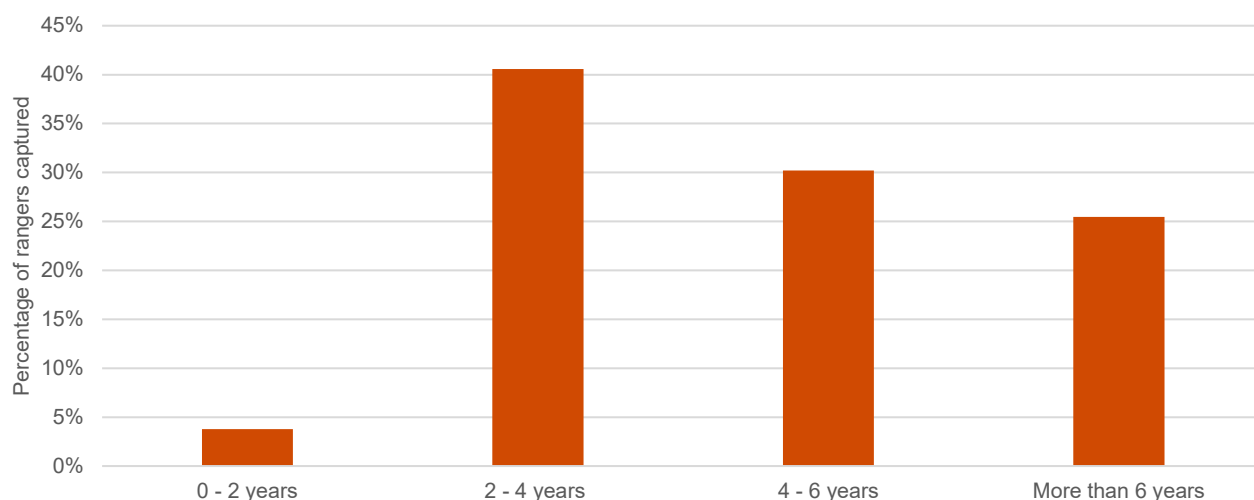
On average, what is the approximate time that the rangers spend doing biosecurity activities?

Most of the rangers captured in the survey spent approximately one to two days per week (84 per cent) undertaking biosecurity activities. Currently, rangers are highly sought out by a variety of departments and programs to undertake different activities on Country. Consultations have indicated that this might have resulted in less days per week spent on biosecurity activities due to their competing work schedules.

Figure 21: Amount of time per week spent on biosecurity activities by rangers

Answer	Percentage	Frequency
1 day per week	66%	67
2 days per week	18%	18
3 days per week	15%	15
4 days per week	1%	1
5 days per week	0%	0

Outputs of the IRBP to date

Actions by or through government

Technical and practical biosecurity development of rangers

Are you (or the rangers you work with) aware of/ have participated in any of the additional activities and opportunities to upskill and build biosecurity capabilities?

Across the board, respondents had high levels of awareness and participation in the additional activities provided by the IRBP to upskill and build biosecurity capabilities. The activities with the highest levels of participation amongst the total rangers captured were *equipment provided by the department* (98 per cent), *Ranger Capability Building Grants Program* (93 per cent), *post-mortem training* (85 per cent) and *Biosecurity Fundamentals Training* (77 per cent).

The activities with lower levels of reported participation, such as the Biosecurity Business Grants Program and Certificate IV in Tropical Biosecurity, tend to be newer activities that have yet to be fully rolled out to all ranger groups which would not allow for greater participation rates. What is a positive sign for the IRBP, is the level of awareness for the Certificate IV, especially given it is only just being rolled out. However, observations from the consultations are that a Certificate IV could potentially be too high a level for the purpose of the IRBP and what the rangers are looking for further education/training on. Therefore, it is still unclear whether the participation level of this particular education is due to its relatively new release, or whether its target audience may not align with the rangers that are engaged in the IRBP.

Traineeship opportunities had the lowest levels of both reported participation (0 per cent) and awareness (57 per cent). The traineeship only takes five participants per year and they consist of both rangers and individuals from Indigenous communities, which is assumed has resulted in the lower levels of participations from rangers.

Figure 22: Ranger participation in the additional activities and opportunities to upskill and build biosecurity capabilities
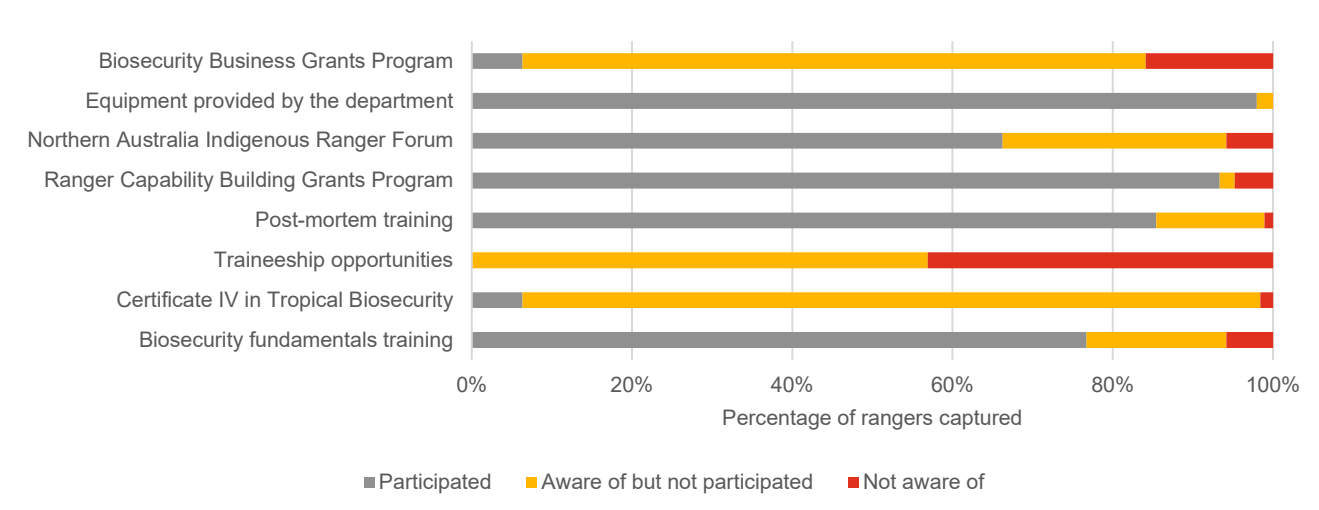
Please select the reasons in which why you (or the rangers you work with) have not participated?

The majority of rangers captured who had not participated identified that they did not participate in the additional activities due to geographical factors, trainings being too time consuming, or training times not aligning with their work schedules.

For many of the rangers captured who had not participated, who responded with 'other', their reasoning was that they have enrolled in activities such as the Certificate IV in Tropical Biosecurity, but they have yet to participate as they have only recently become available. Additional responses also identified that lower levels of literacy meant rangers were unable to participated in the accredited courses where a comprehensive level of English is required.

Figure 23: Reasons why rangers did not participate in the additional activities
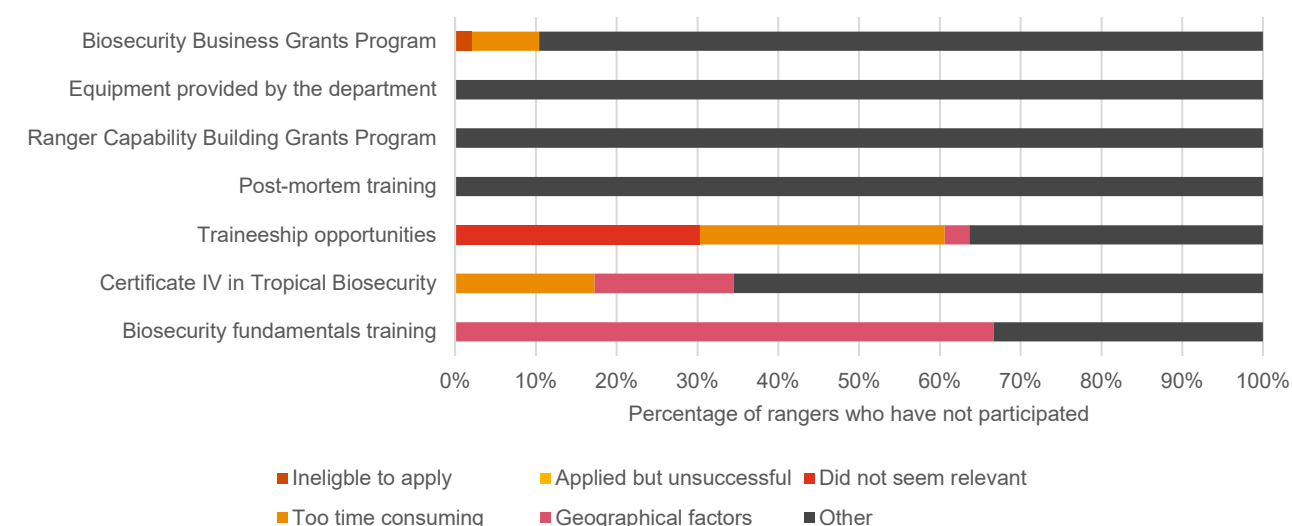
Positively for the department, there were no responses in the key capability building initiatives (i.e., those that clearly align with building the successful completion of fee-for-service contracts) that indicate participants where

either 'ineligible to apply' or viewed it as 'not relevant'. In those cases where it does appear, this is a likely indication of the targeted nature of those initiatives and therefore should not be viewed as a negative response.

Of interest is the 67 per cent of rangers captured who noted that the did not engage with the biosecurity fundaments training due to geographical factors. This may be reflective of the fact the first round of training was only provided in a face-to-face approach in the Northern Territory and Queensland, and not Western Australia. However, interestingly, there was not an increase in numbers attending the training in 2021/22 when it was offered across all three states/territories, in a virtual forum.

Based on consultations with ranger groups, this is likely a reflection of a range of issues – such as the desire to have more on-ground/in-community training opportunities; general access to location of the training; and/or language/literacy barriers in terms of the style of training providing. However, the fact that 77 per cent of rangers captured have participated in the biosecurity fundamentals training is a positive and highlights that rangers are engaged with the capability building activities the department is offering.

How did you become aware of the Ranger Capability Building Grant? Please select all that apply

Figure 24 shows that the majority of respondents became aware of the Ranger Capability Building Grant through the department (59 per cent) and Biosecurity or agricultural organisations (35 per cent).

Additionally, no respondents stated that they became aware of the grant through word of mouth or other indigenous groups. How rangers and ranger groups become aware of other grant opportunities under the IRBP was not covered in the consultations.

Figure 24: How respondents became aware of the Ranger Capability Building Grant
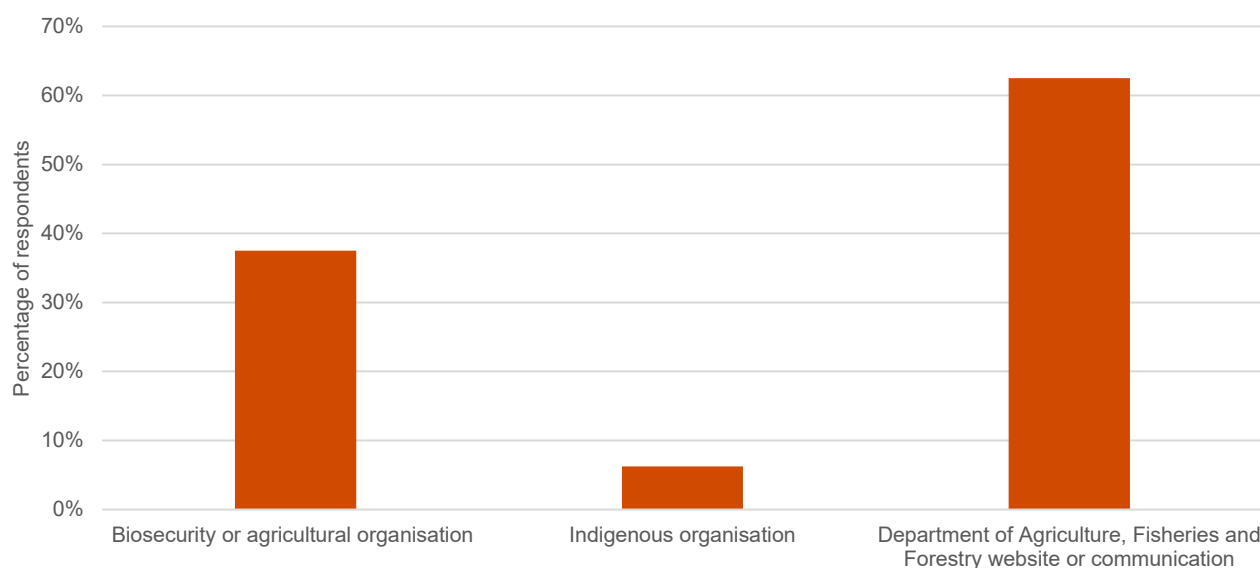
Note: Because this is a select all that apply question, respondents may select more than answer and the percentages will sum to more than 100 per cent

How would you rate your experience with the following parts of applying for the Ranger Capability grant?

Overall, respondents agreed that Ranger Capability grant process was an accessible and straight forward process with 78 per cent of respondents stating that it was either somewhat easy or extremely easy to access information to meet criteria requirements and to complete application forms and documents.

However, the response with the greatest variation was *timeliness of decision making and impact on delivering the grant* in which only 50 per cent of respondents stated that the process was either somewhat easy or very easy. Discussions in consultations identified that this is likely due to connectivity, capacity or literacy issues, particularly for the smaller ranger groups that do not have the governance and capability structure that the larger land councils may offer.

Figure 25: Ease of the Ranger Capability Grant process
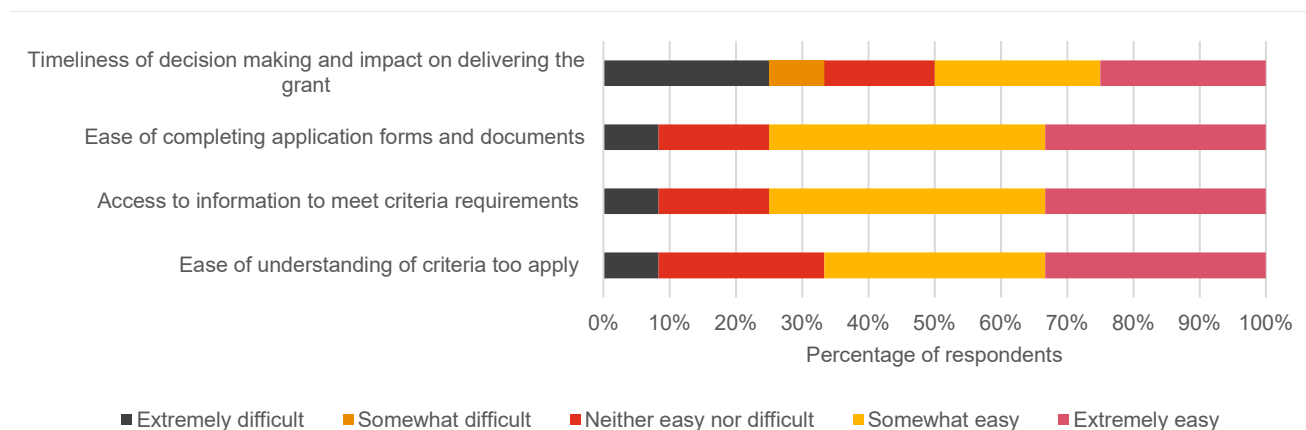
Overall, how satisfied were you with the grant application process?

Overall, 25 per cent of respondents were extremely satisfied and 50 per cent of respondents were somewhat satisfied with the grant application process. No respondents reported being extremely dissatisfied, with 17 per cent somewhat dissatisfied and 8 per cent neutral.

How effective were the activities undertaken by your group as part of the grant program in achieving the following outcomes?

In terms of how grant activities were able to achieve desired outcomes, Figure 26 shows that overall respondents believed that the grants were effective, with no respondents stating that they were not effective at all. Respondents identified that the grant activities had the largest effect on increasing the skills and capability of indigenous rangers to enhance their career pathways, with 69 per cent of people stating it was either very effective or extremely effective. As identified in previous survey responses and grant activity data, the purchase of equipment was the most common grant activity, which would directly increase the capability of rangers as highlighted below.

Figure 26: Effectiveness of grant activities in achieving outcomes
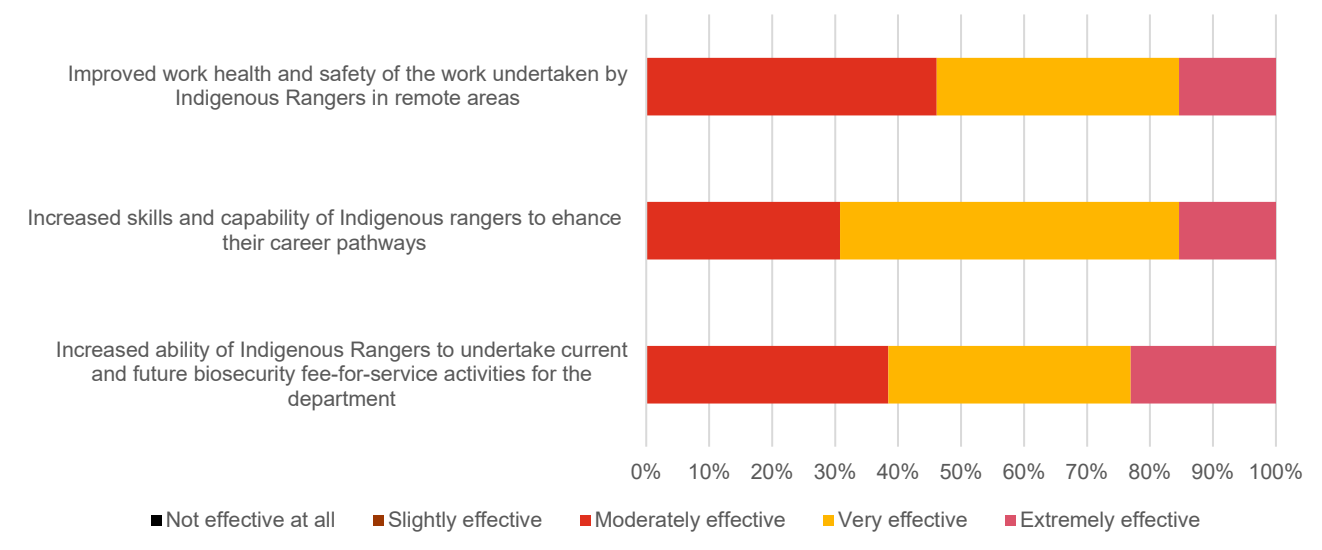
Actions by or through Indigenous Rangers

With regard to the ranger app, how strongly do you agree with the following statements?

Figure 27 showcases the rangers' captured opinions on various elements of the Ranger App. Overall, the majority of rangers captured either agreed or strongly agreed that it was the most effective (91 per cent) and most efficient (87 per cent) way to collect information. The answers provided in the survey align with stakeholder's opinions from consultation in which they recognise that the Ranger App is the most appropriate way for rangers to collect data but that there is still room for improvement of the interface that will require significant investment into new IT solutions.

Of most significance is that only 24 per cent of rangers captured saying they either agreed or strongly agreed that the Ranger App incorporates traditional First Nations environmental practices. While this was not raised in consultations, the fact that traditional practices can/may vary across the different First Nations based in northern Australia; along with the limitations to what can and can't be shared, and taken, outside of Country (including data) may have some influence on this. What is in the control of the department may be the ability to review the language/s available on the app, to support the different English-literacy levels across Aboriginal and Torres Strait Islander people in northern Australia.

Another limitation of the Ranger App was that 43 per cent of rangers captured stated that they strongly disagreed or disagreed that the app is connected and works well in remote locations. This is reflective of consultation conversations in which stakeholders acknowledged that connectivity issues often arise by virtue of the program operating in remote northern Australia.

Further analysis of the free text responses also identified app updates, syncing issues and the inability to install the app on android phones as having been contributing factors to the connectivity issues experienced. This is something that the department could review when looking at development opportunities and requirements for the app to better support the program (noting there is limited investment available however a well-functioning app, and relevant developments, is crucial to program success and impact on outcomes). Additionally, consultations raised the app as a potential platform that could be extended to the wider biosecurity system (i.e., outside of just IRBP participants), which could form an argument for required investment should this be deemed appropriate.

Figure 27: Ranger opinions of the Ranger App
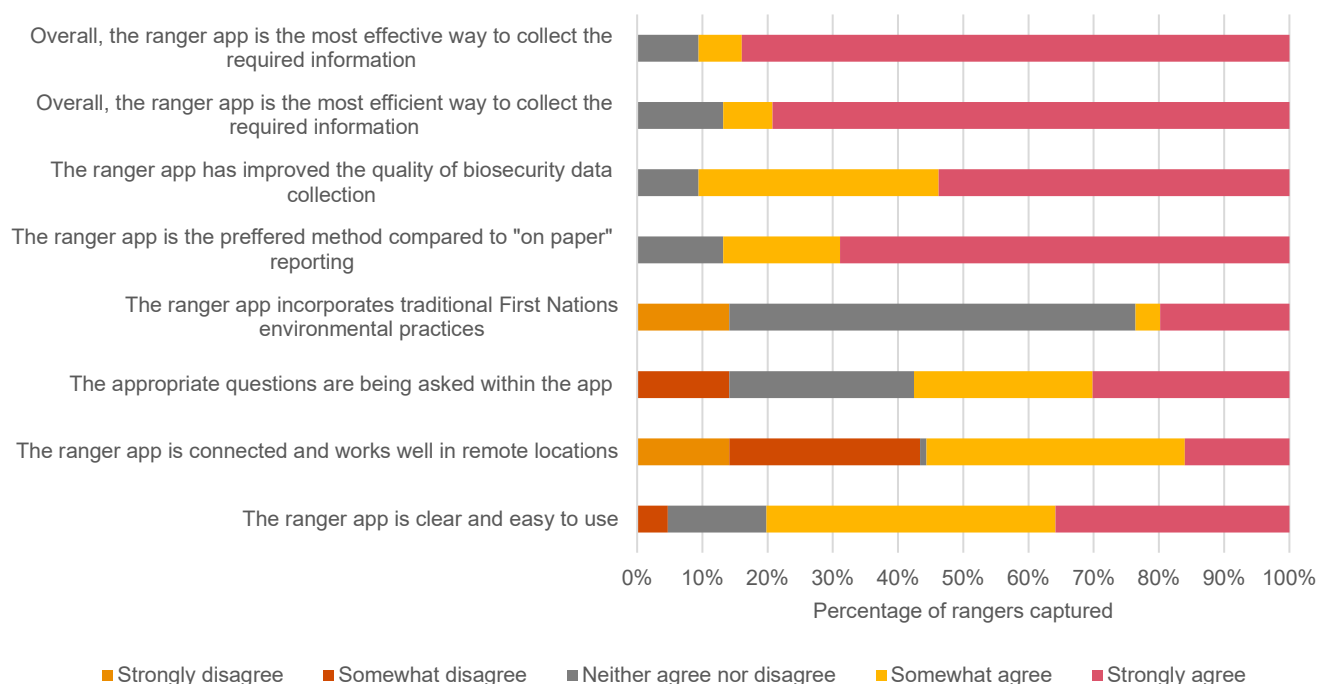
In reference to your Community Liaison Officer (CLO), how strongly do you agree with the following statements?

Overall, the rangers captured have had positive experiences interacting with their CLOs, with 88 per cent of rangers captured strongly agreeing that their CLO is responsive and easy to communicate with and 78 per cent strongly agreed that they felt supported by their CLO. This view is supported in the consultations in which many stakeholders identified the CLO network as critical element for the success of the IRBP and ensures high levels of engagement from the various ranger groups.

However, many stated that the current CLO network is currently both resource and capacity constrained and suggested that moving forward the department should look to expand its CLO network. This is reflective of the free text responses in the survey in which multiple respondents suggested that they would feel more supported by their CLO through more regular community visits.

These positions are also supported by the consultations which both highlighted the CLOs being the most vital and critical aspect to why the IRBP is able to achieve its purpose, but outcomes and impact of the program could be improved if there were additional CLOs that could spend more time in on-ground engagements.

Figure 28: Opinions on the ranger's experience with their CLO
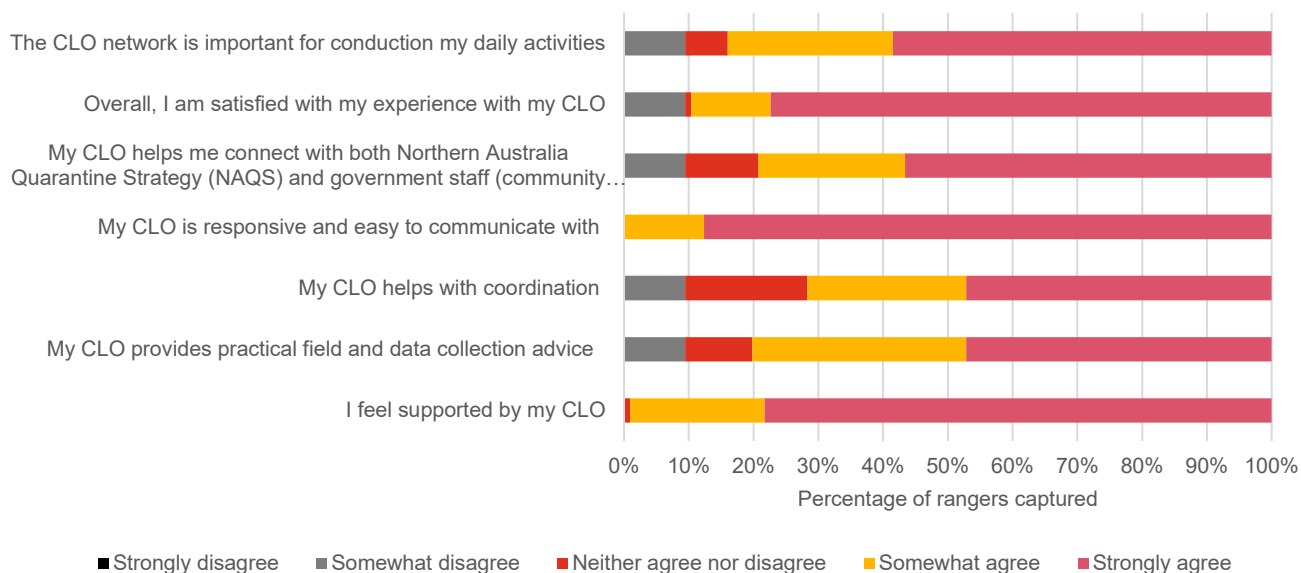
Actions through the department

How did your group become aware of the support for biosecurity activities offered by the department?

Through an analysis of the free text responses, the two main ways in which groups became aware of the IRBP was through direct emails from the department and directly through the CLO network.

How strongly do you agree with the following statements on your experience working with the department?

Figure 29, shows that overall most respondents have had positive experiences working with the department. For five out of the six statements, approximately 70 per cent or more respondents either somewhat or strongly agreed with the statements below. This was reflected in the consultations with a common theme of appreciation for what the department does with limited capacity and also, the belief that the department was responsive and willing to work with stakeholders to achieve shared outcomes and goals.

However, while lower than other statements, a majority (62 per cent) still either somewhat or strongly agreed that department processes were fast and efficient, with approximately 20 per cent disagreeing with the statement. This view was supported in consultations in which stakeholders stated that often the bureaucracy of their work hinders their ability to undertake activities in a timely manner. As such, activities such as grant execution and the establishment of additional programs, such as the management of established pests and weeds, have experienced unforeseen delays.

Figure 29: Experience of working with the department
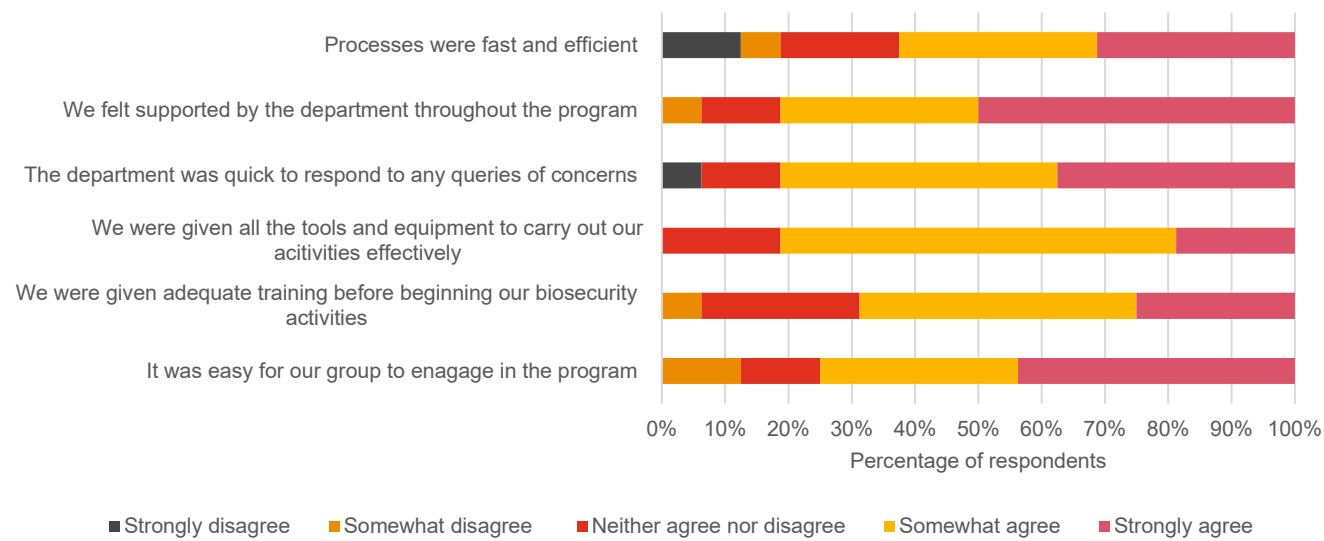
Overall, how satisfied are you with your experience of working with the department?

Figure 30 shows that 77 per cent of respondents are either somewhat satisfied or extremely satisfied with their experience working with the department. This has been a key theme arising from consultations with many stating that the departmental teams' professionalism and strong network of relationships across north has allowed them to continue to maintain an extremely beneficial partnership which has been crucial to the program's success.

Figure 30: Overall satisfaction of working with the department
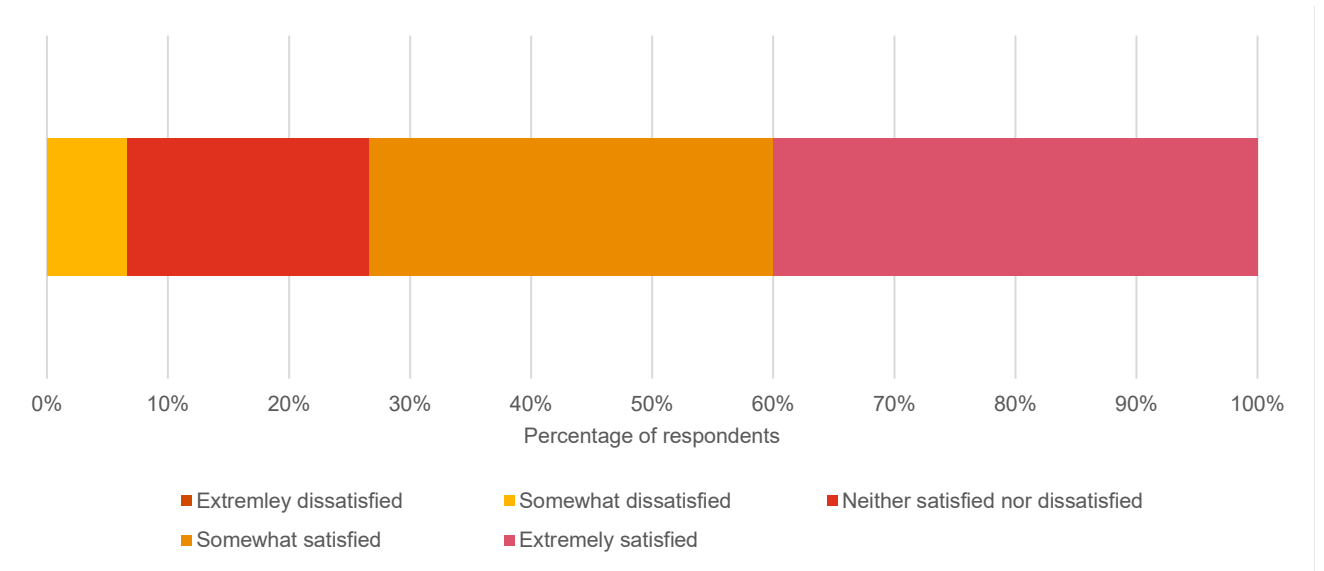
Achievements of short-term outcomes

Ranger individuals or groups

Increased knowledge of biosecurity science

Where you (or the rangers you work with) have participated, how effective do you believe that these activities are at improving biosecurity knowledge and capability?

For five out six of the activities that rangers captured had participated in, they believed that they were either very effective or extremely effective in improving biosecurity knowledge and capability. The Ranger Capability Building Grants Program was the identified by the largest numbers of respondents (92 per cent of rangers captured) as being either very or extremely effective.

Unsurprisingly, equipment provided by the department was the only activity that 10 per cent of rangers captured did not believe was effective at all in improving biosecurity knowledge and capability and it lends itself more to driving rangers and ranger groups' capacity and ability to undertake surveillance activities, as opposed to knowledge and capability of biosecurity activities.

Figure 31: Effectiveness of activities in improving biosecurity knowledge and capabilities
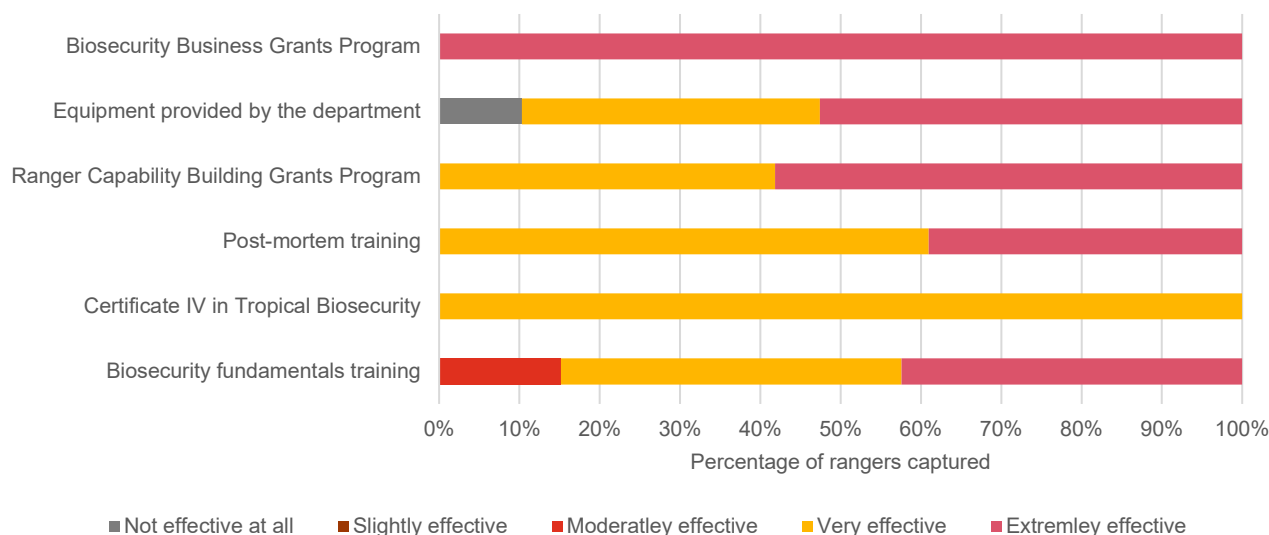
Increased biosecurity surveillance capacity of Indigenous rangers

How would you rate your (or the rangers you work with) skill level in following areas <u>before</u> and <u>after</u> engaging in initiative/s offered by the department?

Figure 32 shows the impact that program initiatives have had on ranger's biosecurity surveillance technique. This shows considerable movement from low or no skills before initiatives to some or good skill after engaging with initiatives.

Figure 32: Ranger biosecurity surveillance technique before and after engaging with department initiatives
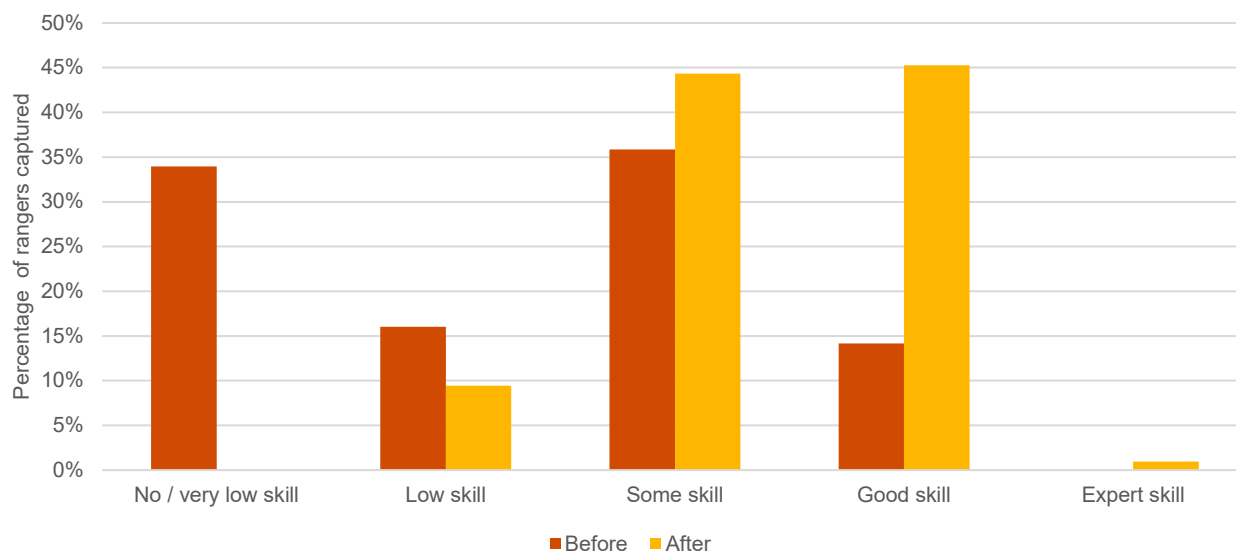
Improved community engagement skills of Indigenous rangers

How would you rate your (or the rangers you work with) skill level in following areas <u>before</u> and <u>after</u> engaging in initiative/s offered by the department?

Figure 33 shows the impact that program initiatives have had on ranger's communication skills and Figure 34 for community engagement skills. This shows considerable movement from low or no skills before initiatives to some or good skill after engaging with initiatives.

Figure 33: Ranger communication skills before and after engaging with department initiatives
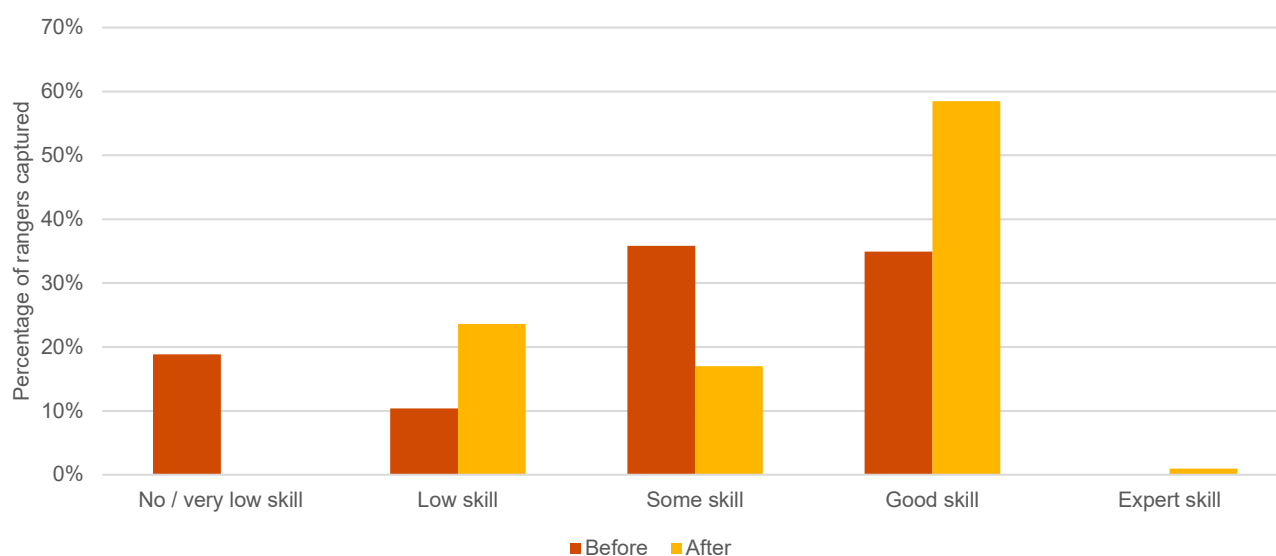
Figure 34: Ranger community engagement skills before and after engaging with department initiatives
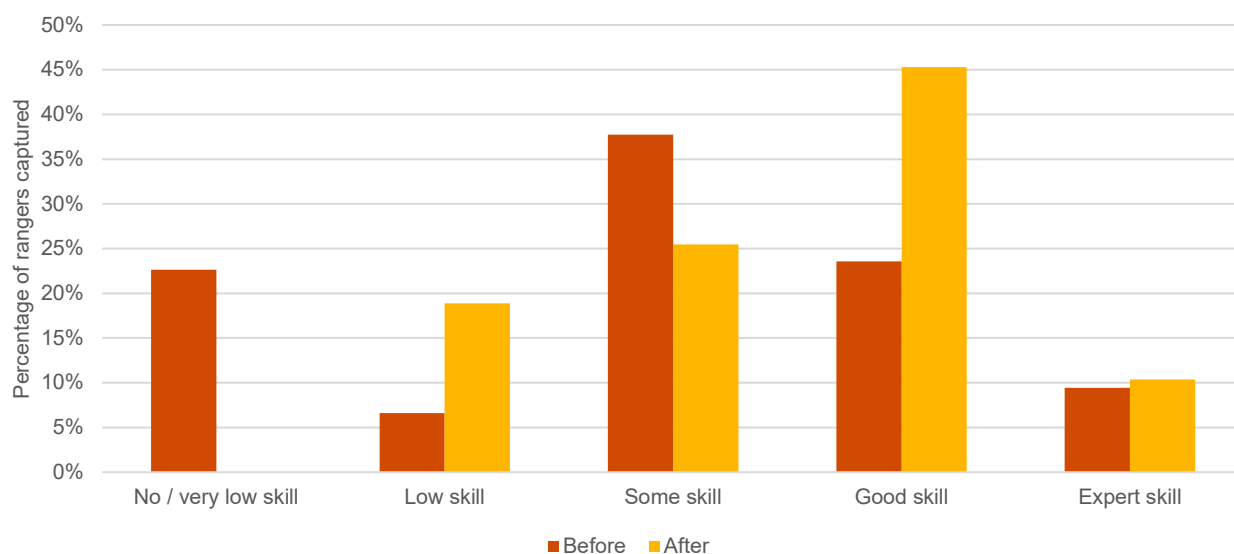
Increased understanding of the biosecurity system by Indigenous rangers

How would you rate your (or the rangers you work with) skill level in following areas <u>before</u> and <u>after</u> engaging in initiative/s offered by the department?

Figure 35 shows the impact that program initiatives have had on ranger's biosecurity system knowledge. This shows considerable movement from low or no skills before initiatives to some or good skill after engaging with initiatives.

Figure 35: Ranger biosecurity system knowledge before and after engaging with department initiatives
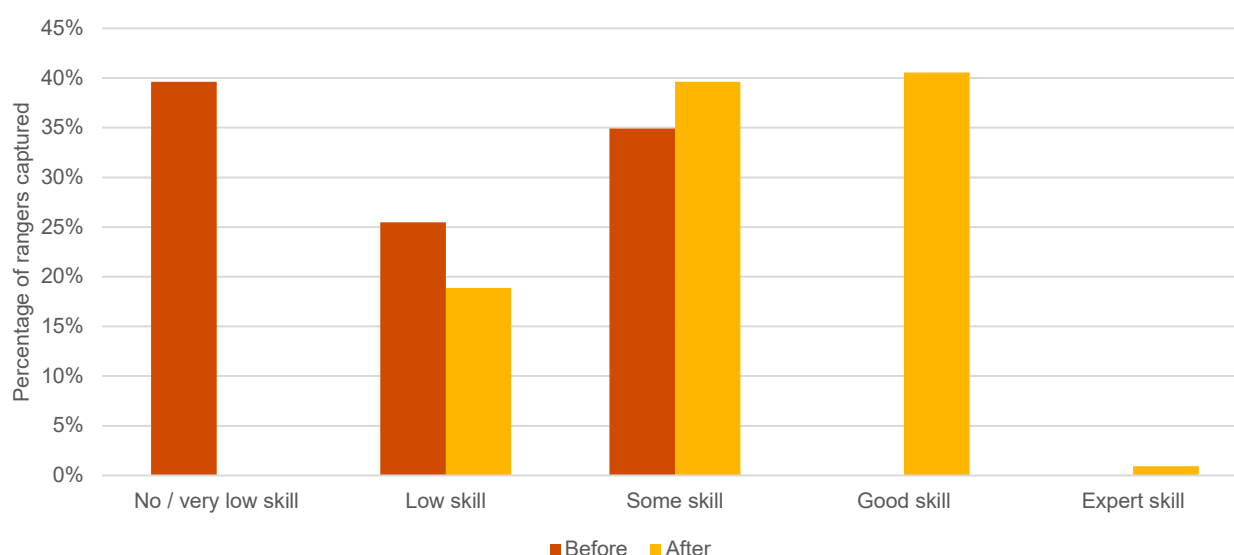
Figure 36 below shows the level of change in skill for each activity with zero meaning no change in skill level and four meaning an increase of four levels from no skill to expert skill. Ranger's biosecurity system knowledge had the largest increase in skill level with 90 per cent of respondents increasing between a one and three level change.

Overall, the biosecurity specific areas had a larger increase in skill rate with 90 per cent of ranger's biosecurity system knowledge and 70 per cent of their biosecurity surveillance techniques increased between one and three levels. This was expected as consultations identified that many rangers had no formal biosecurity training prior to their involvement in the program resulting in a larger increase in biosecurity skills.

Figure 36: Level of skill change
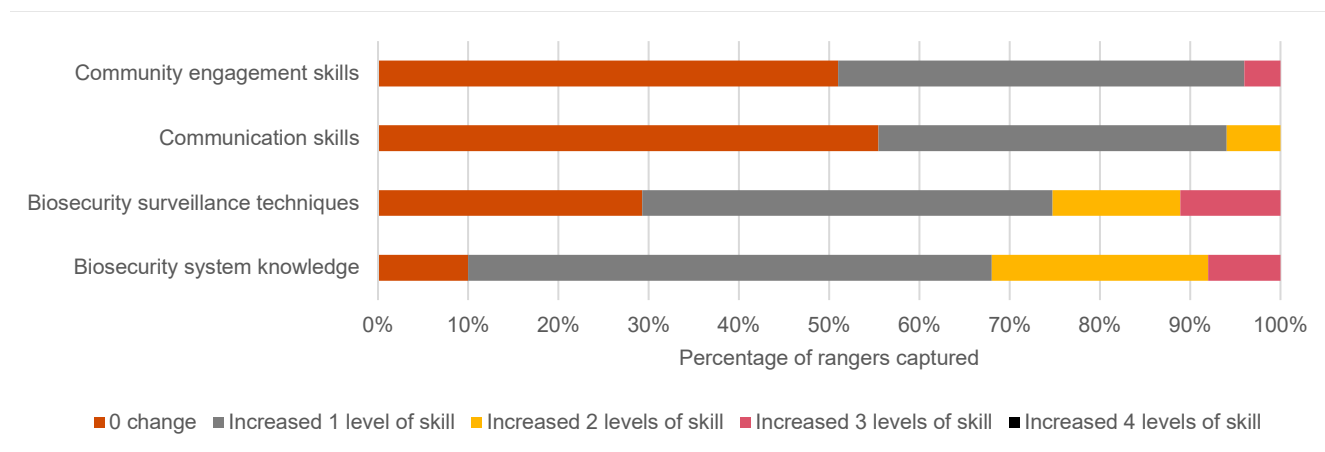
Australian communities and industries

Improved quality of biosecurity data and reporting

How strongly do you agree with the following statements?

Figure 37 shows that overall, the majority of rangers captured either somewhat agreed or strongly agreed that the right surveillance activities are being done (94 per cent) and that biosecurity activities are being done in the right locations (86 per cent).

A small proportion of rangers captured (14 per cent) stated that they did not believe that biosecurity activities are being done in the right locations. In consultations ranger groups identified that there could be better alignment between activities provided by the IRBP and other land maintenance activities to leverage activities to improve time-efficiency and lower costs per operation.

Figure 37: Opinions on type and location of biosecurity activities
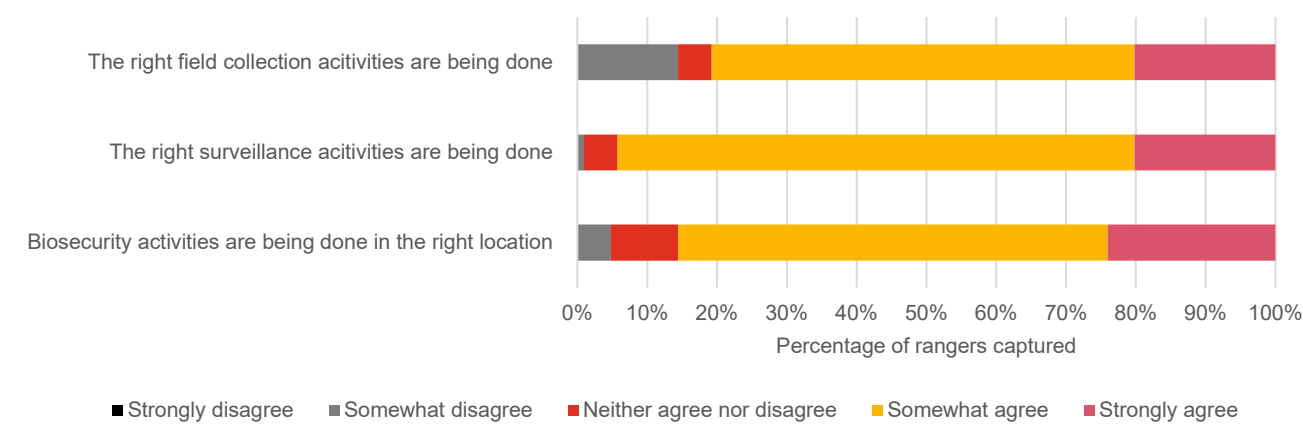
How effective do you think your (or the rangers) activities are at reducing biosecurity issues?

Figure 38 shows that across-the-board rangers captured believe that the majority of individual activities being done are very effective in reducing biosecurity issues. Ranger's captured identified that the most effective biosecurity activity was aquatic health surveillance with 86 per cent of rangers captured saying it was very effective. This was supported in consultations in which several stakeholders referenced one of the key achievements of the program was rangers successfully detecting the Asian green mussel, an invasive pest, on a boat in Cairns.

Contrastingly, insect trapping was the only activity which respondents did not believe was effective, with 78 per cent of rangers captured stating that it was either not at all or slightly effective. Consultations have indicated that rangers tend to prioritise surveillance work over prevention work such as insect trapping and plant host mapping, which may be the result of this lower effectiveness.

Figure 38: Effectiveness of activities in reducing biosecurity activities
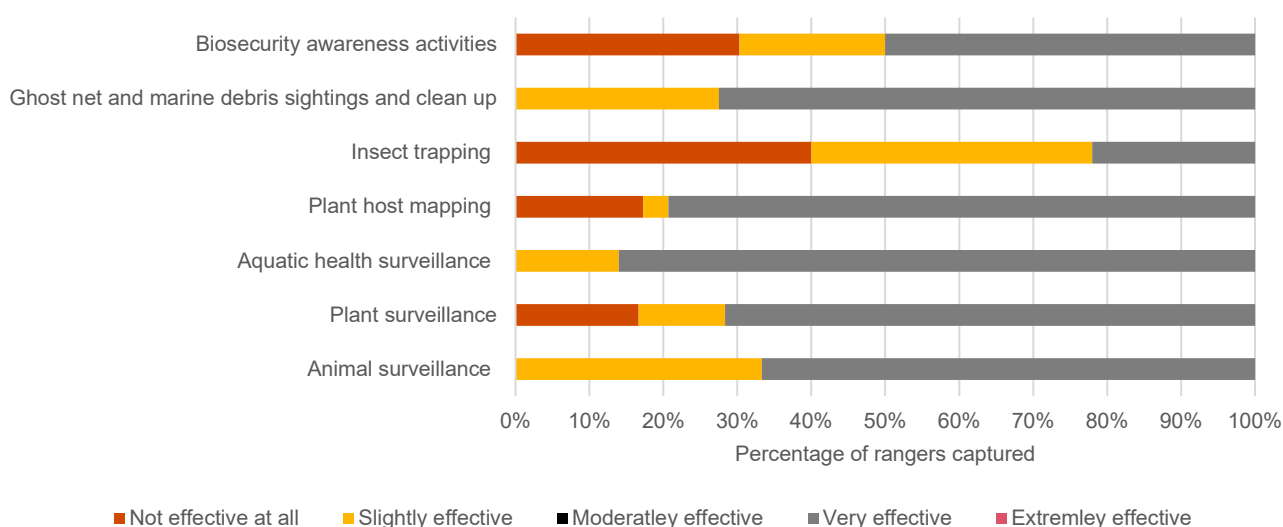
Increased knowledge sharing and application of traditional First Nations environmental practices

Do you agree with the following statements?

Generally, most rangers captured agreed that the program has allowed them to better connect with Country and apply traditional knowledge to their activities as highlighted in Figure 39. However, a significant proportion of rangers captured (37 per cent) did not agree that the biosecurity activities undertaken increased their knowledge sharing and application of traditional practices. This was further discussed in consultations in which stakeholders identified that there was the opportunity to better integrate traditional knowledge through the future co-design of activities.

Figure 39: Connection to Country

Legend: Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree
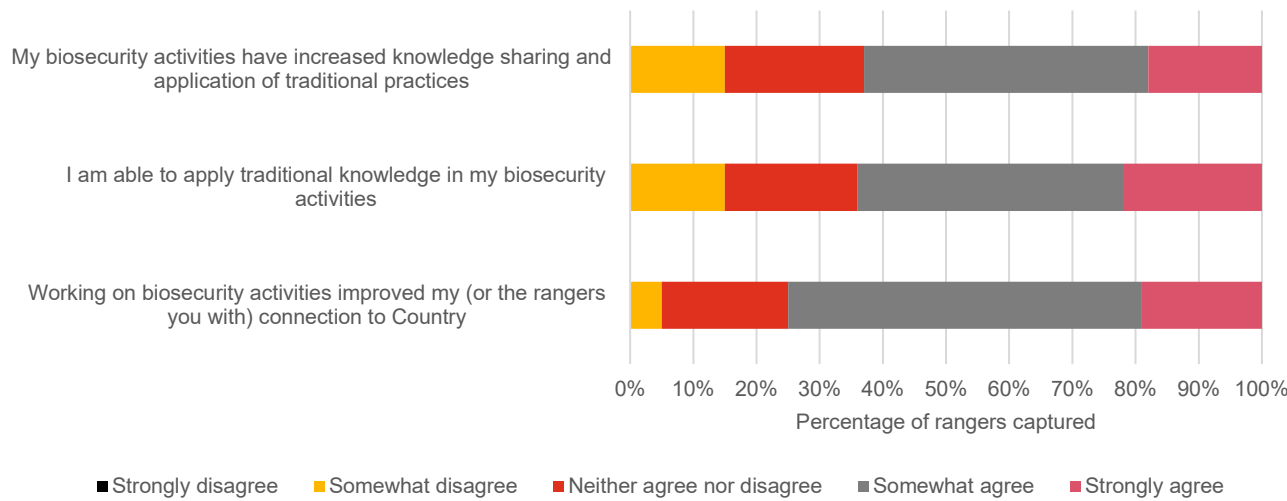
Are you (or the rangers you work with) able to apply traditional knowledge to any of the following activities?

Across the board, rangers captured who conducted each of the activities, believe that they have been able to apply knowledge to the activities they undertake as shown in Figure 40. 94 per cent of rangers who undertook field activities, 88 per cent of rangers who conducted awareness activities and 78 per cent of rangers who attended on Country events responded 'yes' to being able to apply traditional knowledge.

Training activities had the highest number of rangers captured (38 per cent) who couldn't apply traditional knowledge into the activity. This was reflected in consultations in which stakeholders suggested that improvements to the program could be made through better integration of the input from rangers through the co-design of both work schedules and training.

Figure 40: Ability to apply traditional knowledge to activities

Legend: Yes | No
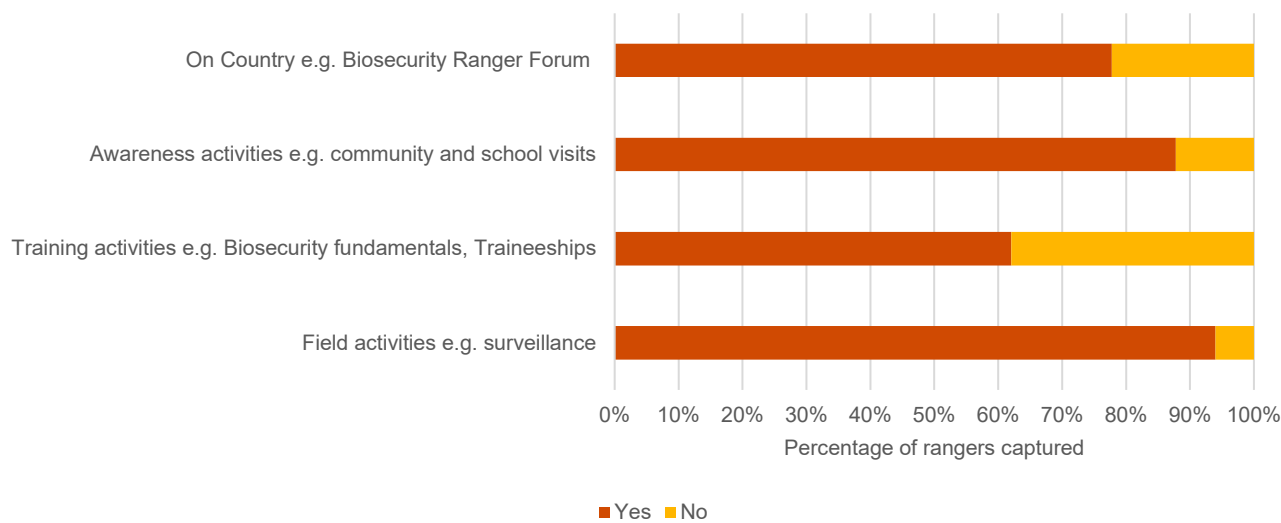
Efficiency of fee for service model in achieving short term outcomes

Do you agree with the following statements about the fee for service model?

Figure 41 shows that the majority of respondents agree with the statements below surrounding the fee-for-service model that they are able to manage all the attached processes and that it is an efficient model to help deliver biosecurity activities.

Further analysis of consultations and free text responses largely support the survey results, with many stating that the benefits of the fee-for-service model include providing a safety net to strengthen their funding mix of operations, greater flexibility, builds capabilities and helps create legitimate and professional relationships with groups.

Figure 41: Experience with the fee-for-service model
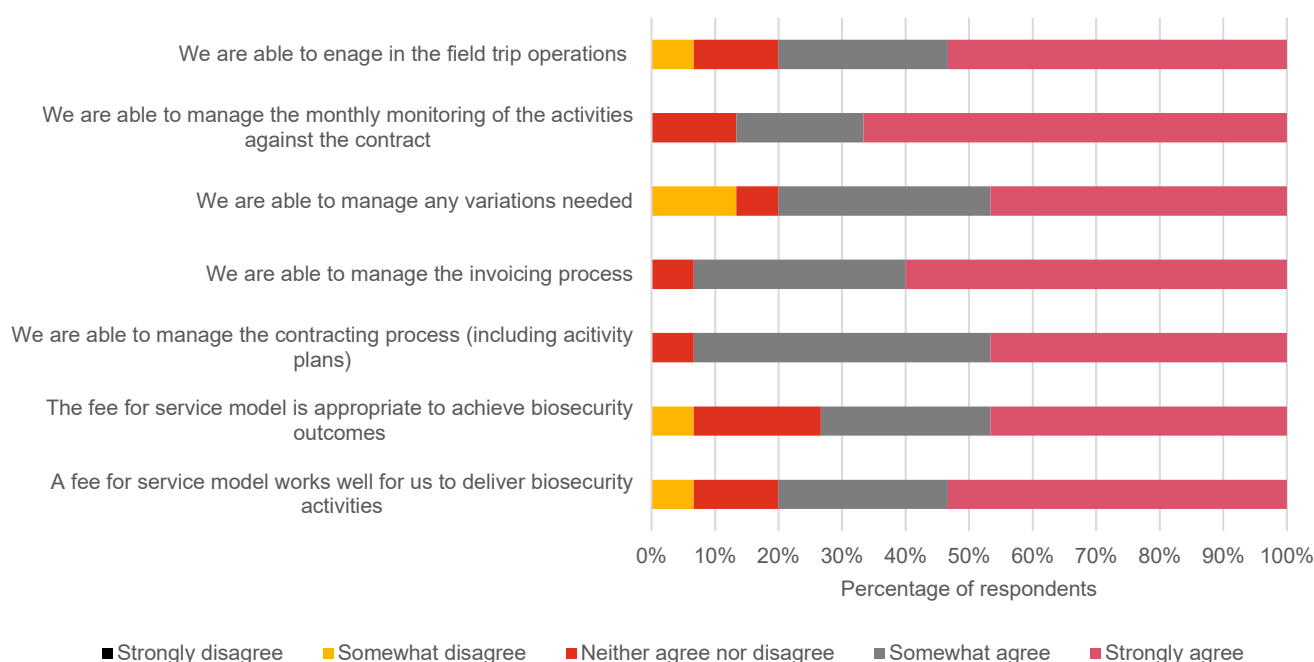
Impact on medium -term outcomes

Ranger individual or groups

Enhanced career opportunities

Do you agree with the following statement about your (or the rangers you work with) career opportunities <u>before and after</u> engaging in the program?

Figure 42 and Figure 43 highlight that prior to engaging in the program there were varied responses from rangers captured on whether they had clear employment opportunities and career pathways in biosecurity. The majority of rangers captured (40 per cent) neither agreed nor disagreed that they had a clear future career pathway and 35 per cent of rangers captured neither agreed nor disagreed that they had the necessary skills and understanding for a career in biosecurity.

Figure 42: Agreement with 'I have a clear future career pathway' before and after engaging with program
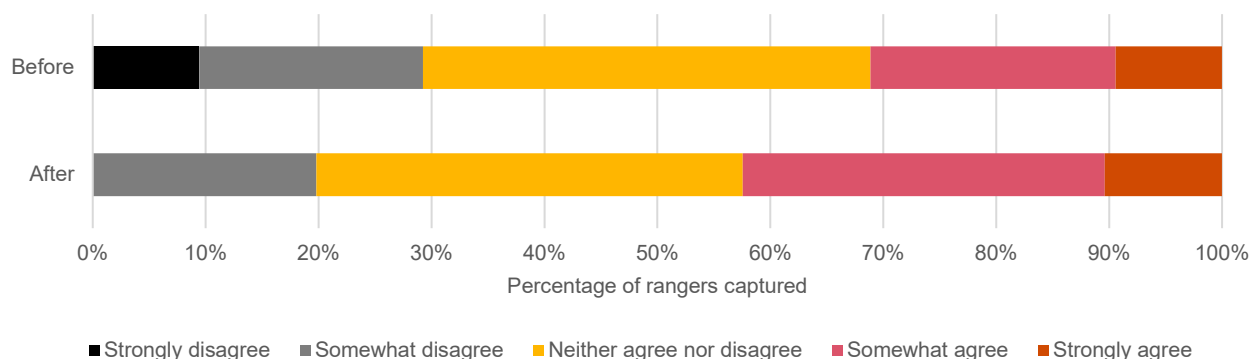
Figure 43: Agreement with 'I have the necessary skills and understanding for a career in biosecurity' before and after engaging with program
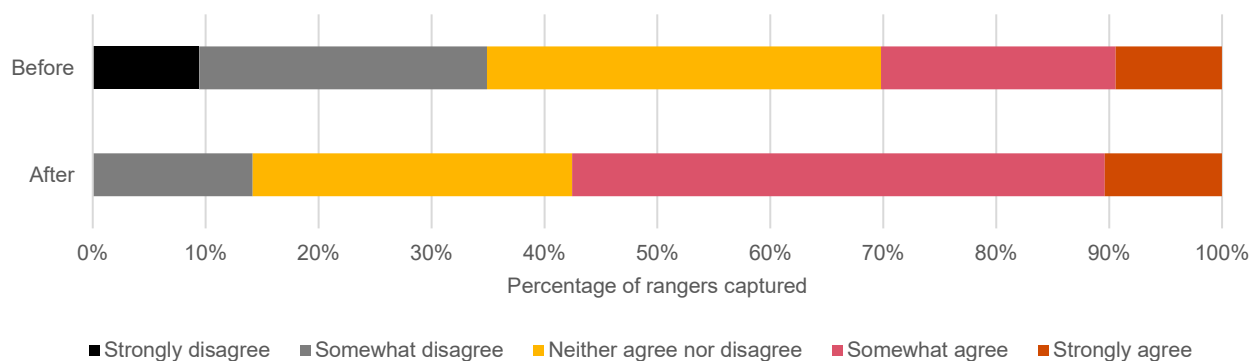
There has been a small increase in number of rangers captured who agreed that they had a clear future career pathway and have the necessary skills and understanding for a career in biosecurity. The most significant increase was from 21 per cent of rangers somewhat agreeing they have the necessary skills and understanding for a career in biosecurity to 47 per cent rangers. There is also no longer any respondent who strongly disagrees with any of the statements above.

Figure 44 exhibits the ranger's captured intentions on pursuing work in biosecurity in the future. The majority of rangers captured (75 per cent) indicated that they either somewhat agreed or strongly agreed that they plan to engage in further biosecurity training. Whereas only 61 per cent of rangers captured indicated that they either somewhat agreed or strongly agreed that they were going to continue to work in biosecurity in the future.

Figure 44: Ranger's future intentions in biosecurity
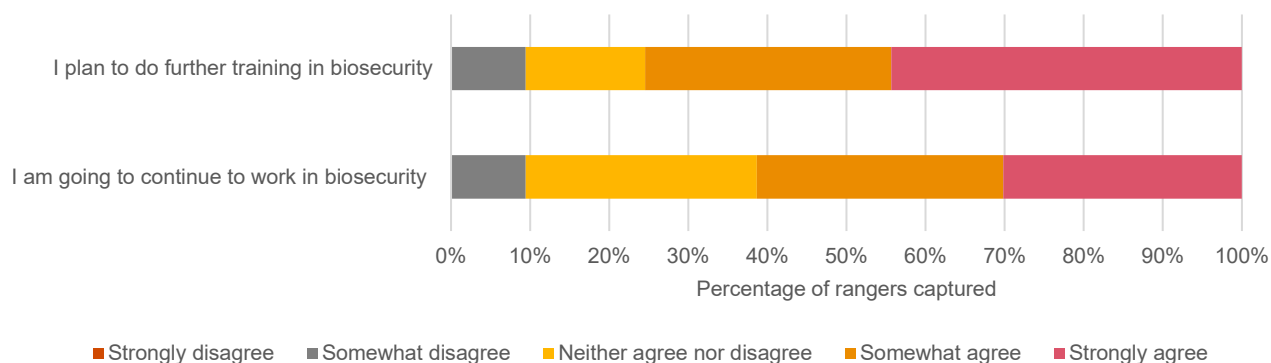
This discrepancy between engagement in trainings and work could be a result of lack permanent employment in the biosecurity space for rangers. Discussion in consultations suggested that there needs to be greater investment into establishing permanent roles for experienced rangers to not only improve utilisation but also assist in career progression.

Australian communities and industries

Strengthened biosecurity network in northern Australia

How effective do you think that the following activities are in contributing to a stronger biosecurity system in northern Australia?

Across the board, ranger groups generally agreed that the following activities that they have been engaged to undertake are contributing to a stronger biosecurity system in northern Australia. Ghost net and marine sightings and clean up was identified as being the most effective activity with 70 per cent of ranger groups stating that it was either very or extremely effective. Whereas insect trapping continues to be identified as the least effective activity with only 53 per cent of ranger groups agreeing that it is either a very effective or extremely effective activity in contributing to a stronger biosecurity system in northern Australia. However, it should be noted that only four of the 65 ranger groups currently undertake this activity so the lower sample size may be the result of the lower levels of perceived effectiveness.

Figure 45: Effectiveness of activities in contributing to a stronger biosecurity system in northern Australia
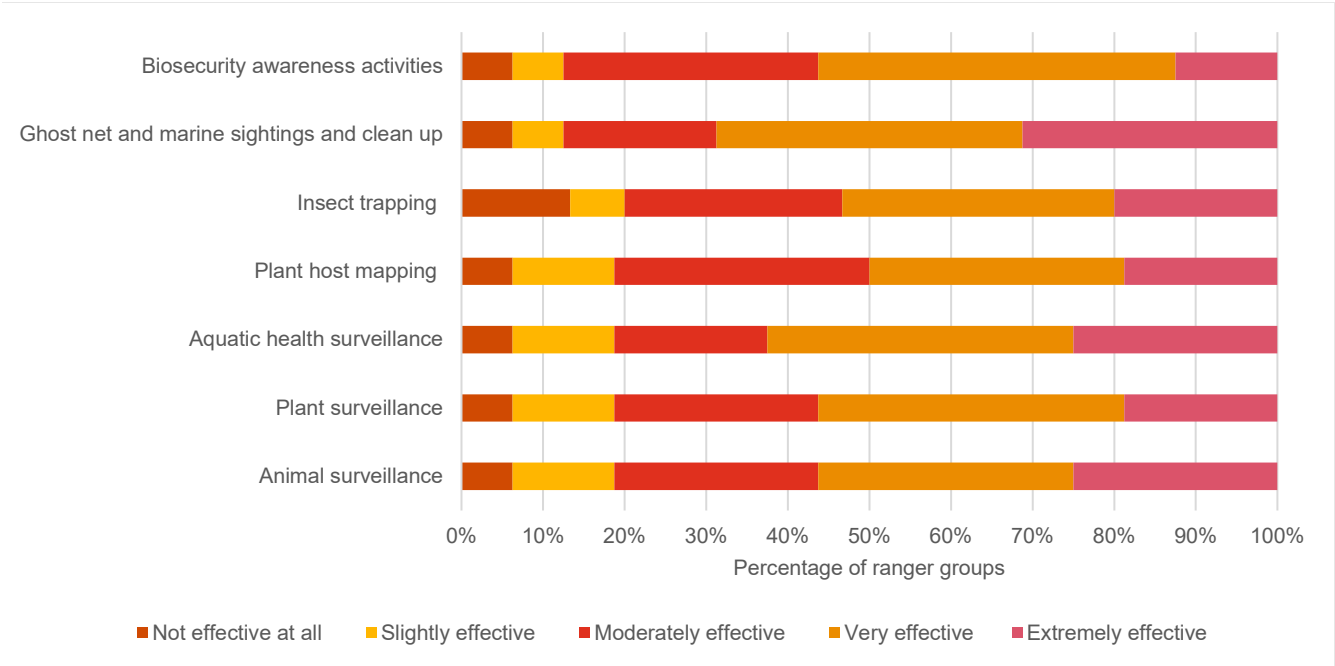
Overall, how effective do you think your ranger groups activities have been in strengthening the biosecurity system in northern Australia?

The majority of ranger groups believe that the activities undertaken as a whole are strengthening the biosecurity system in northern Australia with 50 per cent of ranger groups stating it was very successful and 13 per cent stating it was extremely successful.

Figure 46: Overall effectiveness of all activities in strengthening the biosecurity system in northern Australia
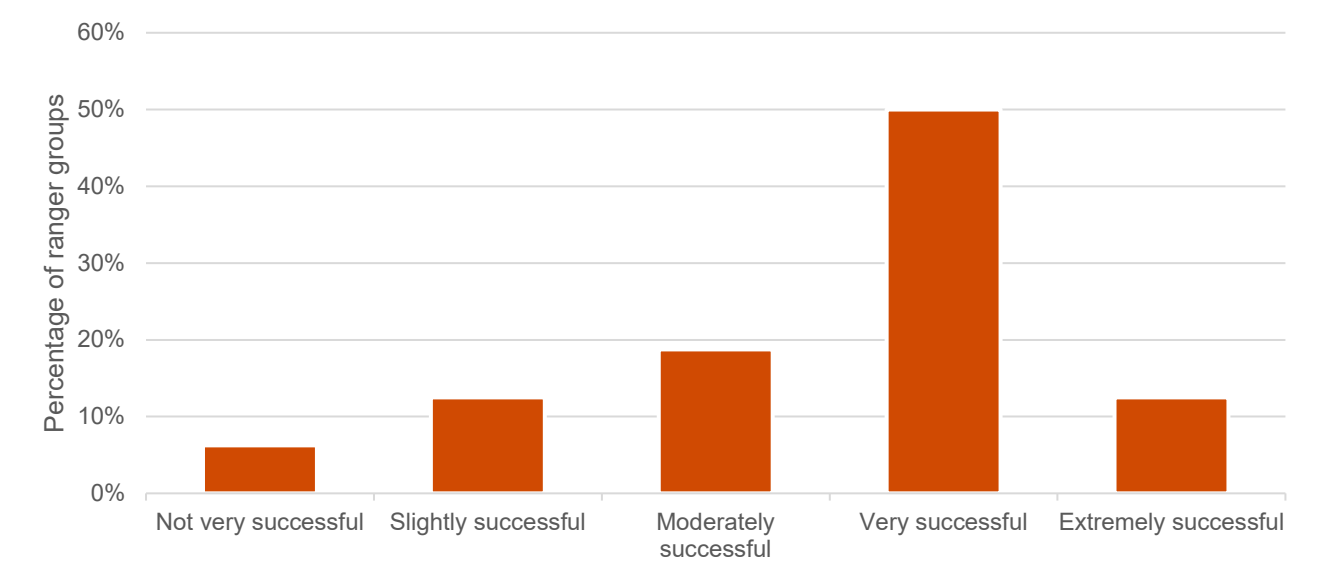
Other grants data analysis

Through the Ranger Capability Building grants program a total of 26 grants were awarded at a value of $1,026,544. Grants were awarded to 39 per cent of ranger groups, across all three jurisdictions, who are engaged under the IRBP. For those that took part in the grant process, only four groups did not receive any funding.

Table 2 below provide a breakdown of grant funding for each individual jurisdiction (noting the amount of funding could not be broken down between training and equipment as that was not provided by the department).

Table 2: Ranger Capability Building Grant breakdown

State	Number of groups	% of total number of groups in the IRBP	Number of grants	% of total number of grants	$ grants	% of $
WA	15	23%	4	15%	$107, 594	10%
NT	28	42%	11	42%	$508, 399	50%
QLD	23	35%	11	42%	$410, 551	40%

WA has 15 ranger groups participating in the IRBP, which is the smallest number of groups for all jurisdictions, making up 23 per cent of the total number of groups engaged by the IRBP. Therefore, it is not unexpected to see WA receive a lower percentage of the funding available. WA was awarded four grants which was representative of 15 per cent of the total number of grants awarded. However, in total they were awarded $107,594 which was only 10 per cent of the total amount of funding delivered.

Comparatively, the NT has 28 ranger groups, the largest number of groups for all jurisdictions, making up 42 per cent of the total number of groups engaged by the IRBP, as such it would be expected to receive the highest portion of the grants provided. The NT was awarded 11 grants which was representative of 42 per cent of the total number of grants awarded. Although they only represented 42 per cent of the total number of grants, they received the most amount of funding (50 per cent) totalling $508,399.

QLD has 23 ranger groups participating in the IRBP making up 35 per cent of the total number of groups engaged by the IRBP and the percentage of grants awarded to QLD-based ranger groups is reflective of that. Similarly, to the NT, QLD was awarded 11 grants which was representative of 42 per cent of the total number of grants awarded; with $410, 551 being awarded (representing 40 per cent of the value of grants provided).

Figure 47: Grant items approved
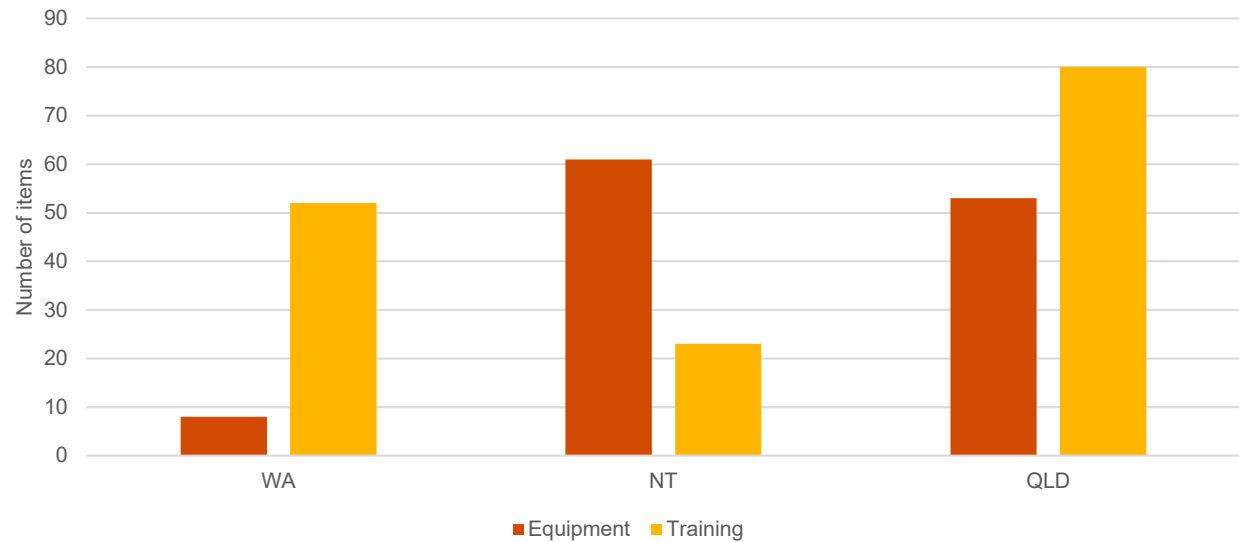
Figure 47 shows how many grant items were approved for each jurisdiction. Both WA (50 items) and QLD (80 items) allocated more of their funding to training and education items compared to NT (61 items) who allocated a larger proportion of funding to equipment items.

Figure 48: Grant items not approved
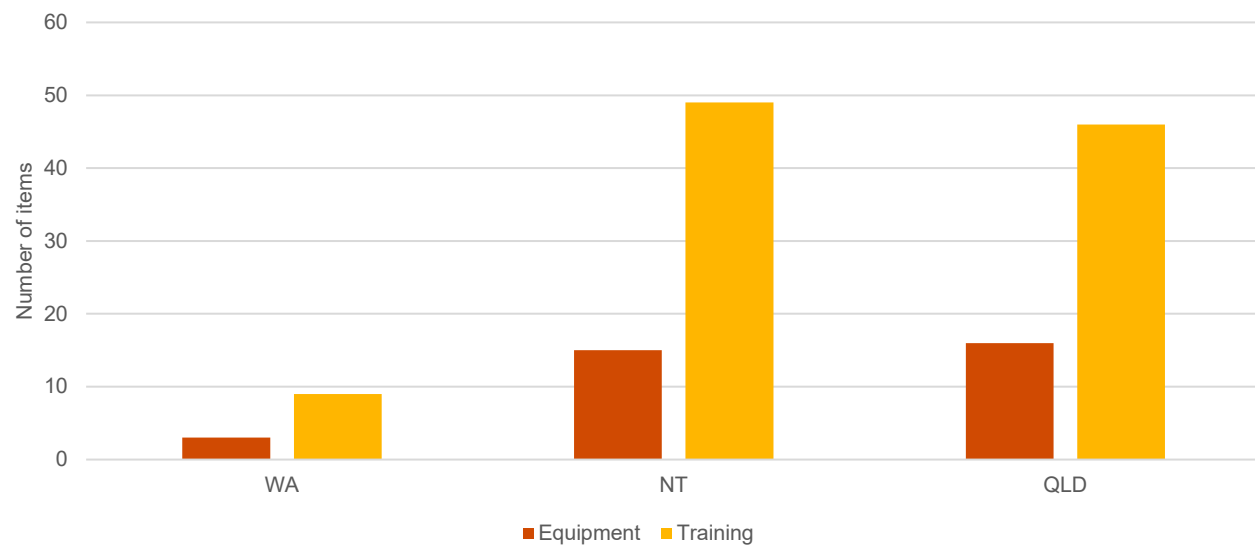
Figure 48 shows how many grant items were not approved for each jurisdiction. 59 per cent of funding requested from WA, which totalled $157,999, was not approved, which was comprised of 9 education and training items and 3 requests for equipment.

24 per cent of the funding requested from the NT, which totalled $157,118, was not approved. Of the funding not approved 34 items were for equipment and 15 items covered education and training activities.

51 per cent of the funding requested from QLD, which totalled $427,174, was not approved. Of the not approved funding, 30 of these items were for equipment and 16 items were for education and training exercises.

Appendix B: Program logics

Figure 49: Previous program logic
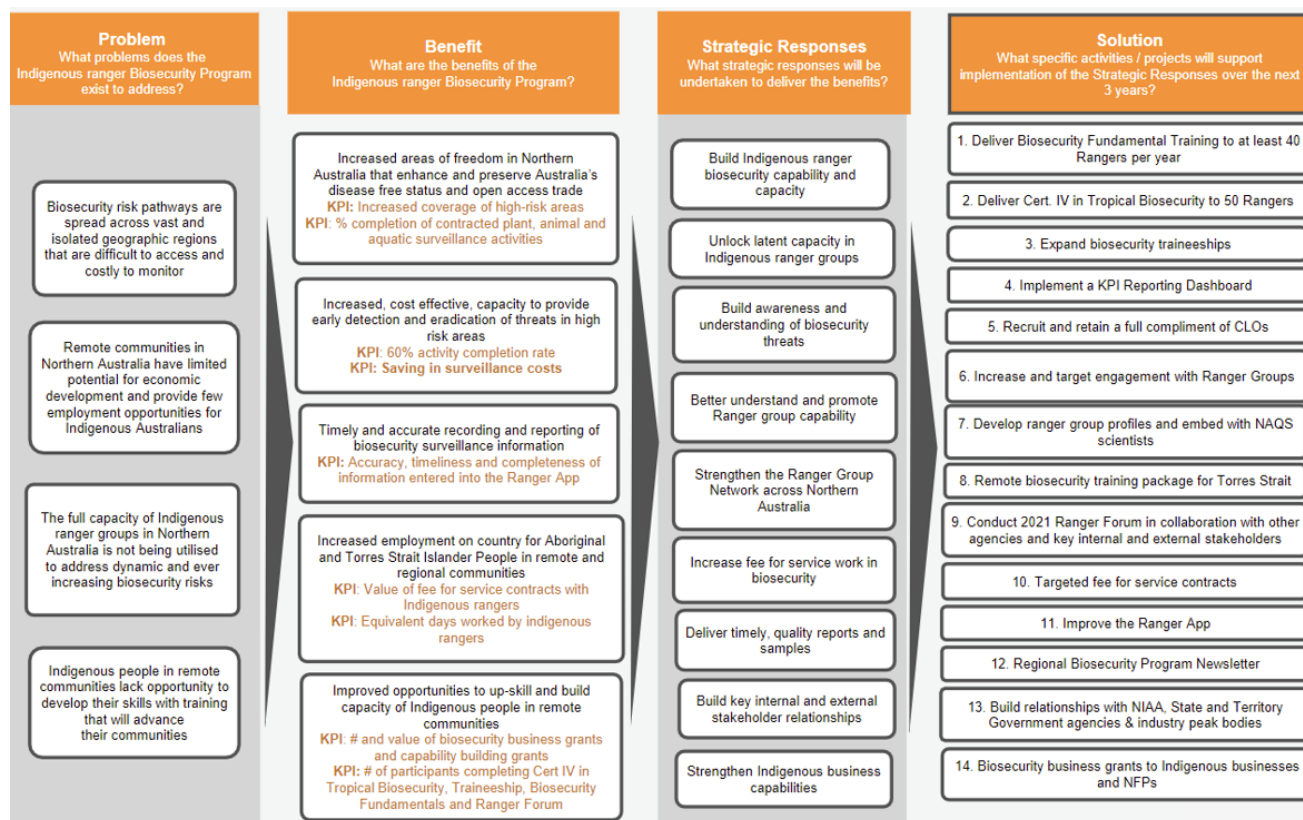
Source: Indigenous Ranger Biosecurity Program (IRBP) Business Mapping and Implementation Planning Consultancy – Final Report, 26 June 2020

Figure 50: Evaluation Dimensions

Core Benefits (Outcomes)	Ancillary Benefits (Outcomes)
Biosecurity networks in place and effective	Direct work opportunities
Biosecurity capacity expanded	Training opportunities realised
Better biosecurity monitoring and surveillance outcomes	Whole of Government employment objectives realised
Improved biosecurity data	
Value for Money	

Source: Indigenous Ranger Biosecurity Initiative – Evaluation: 26 February 2019

Figure 51: Final agreed IRBP Program Logic

Need for the program: Northern Australia has a vast and sparsely populated 10,000km coastline which is the frontline for many high-risk animal, plant and aquatic pests and diseases. To protect Australia's agricultural industries and unique natural environment – and safeguard Australia's animal, plant, aquatic and human health – there is a need to support biosecurity preparedness, surveillance and response activities to appropriately prevent and manage the risk of pest and disease incursions. A core way to achieve this is by combining traditional Indigenous ecological knowledge and stewardship practices with the scientific expertise of Northern Australia Quarantine Strategy (NAQS) scientists. Funding Indigenous ranger biosecurity activities is required to ensure that northern Australia has a strong, responsive and effective biosecurity system.

Program objective: To bolster Australia's biosecurity system in northern Australia by partnering with Indigenous rangers and biosecurity scientists to deliver monitoring, preparedness, reporting and surveillance activities. This will include building the capability and resources of Indigenous rangers to undertake fee-for-service delivery of effective and efficient biosecurity surveillance. Contribution to a strengthened biosecurity system will also include facilitation of traditional First Nations knowledge of, and practice in, environmental protection; and investment in tools that support monitoring and surveillance of pests and diseases that pose biosecurity risks.
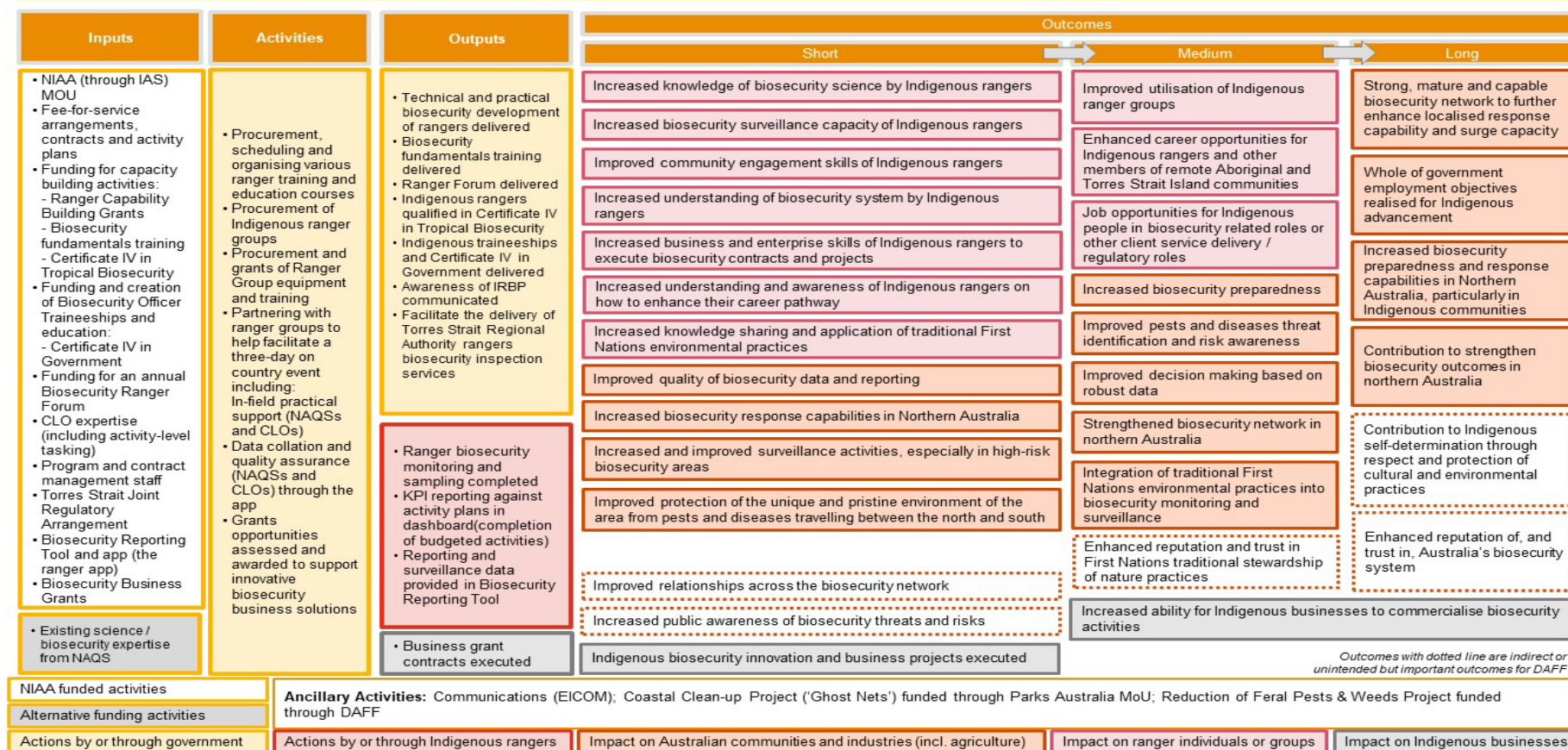
Appendix C: Lines of enquiry

Figure 52: Evaluation lines of enquiry

Category	Line of Enquiry
Program Impact	• What has been the program's progress towards meeting its objectives and outcomes? • Has progress differed between groups, elements, location or other differentiators? • What environmental, social, cultural and economic benefits does the program provide? Do these align with stakeholder expectations? • Are there any external factors influencing this? • Is the program being delivered effectively and efficiently? • Are there common impediments that are hindering progress towards outcomes?
Program Appropriateness in Policy Landscape	• How well are the elements complementing and supporting each other? • What is the program's effectiveness in the context of other Australian, state and territory, and local government biosecurity and ranger activities? • How does IRBP interact with key government policies and strategies – such as the Indigenous Advancement Strategy and biosecurity plans?
Future Options	• As capacity and capability improves, what elements should the program focus on? • What is the best framework and structure to support both biosecurity and Indigenous employment outcomes? • How can the program continue to support commercialisation opportunities for Indigenous businesses? • What is the best mechanism and framework to account for the high (and potentially rising) cost of service delivery in northern Australia?
Other	• Does the program value, and integrate, traditional nature stewardship knowledge and practices into its scientific biosecurity requirements? • Does the program effectively align the scientific and cultural biosecurity priorities and strategies? • Do the IRBP activities effectively drive high-level engagement with Indigenous rangers and organisations?

Appendix D: NIAA MoU - scope of activities

As per the MoU, the IRBP was provided funding, targeted in northern Australia, to continue:

- Fee-for-service arrangements with Aboriginal and Torres Strait Islander Ranger Groups to deliver monitoring for exotic pests and diseases to help de-risk Australian agriculture, support northern development, and assure overseas exports.

- Capability building initiatives for Aboriginal and Torres Strait Islander Ranger Groups to develop, maintain and increase biosecurity capability (including Ranger Forums, training, equipment and other development opportunities).

- Encouraging Aboriginal and Torres Strait Islander businesses and not for profit organisations in northern Australia to view biosecurity as a business opportunity through the development of innovative business ideas.

- Delivering biosecurity education and support material for Aboriginal and Torres Strait Islander Rangers, schools and northern Australia communities.

- Biosecurity Traineeships for Aboriginal and Torres Strait Islander people to help build biosecurity capacity across northern Australia encompassing formal and 'on the job' biosecurity training.

- Minimising pests and diseases moving to and from one of Australia's highest biosecurity risk pathways – the Torres Strait and Northern Peninsula Area – through collaborations with other agencies and Aboriginal Torres Strait Islander Ranger Groups around biosecurity regulation, surveillance and awareness.

Appendix E: Policy and strategy examination

Northern Territory Biosecurity Strategy 2016 – 2026:	Capacity building support	Biosecurity preparedness and response	Strong & mature biosecurity network in NA	Indigenous employment and economic outcomes	Cultural exchange and integration of Indigenous practice	Improved communication and collaboration in NA
Goal 2: Focus on risk and strategic deployment of resources						
Allocate and deploy resources cost effectively to focus on risk in order of priority and with keen regard to impact minimisation		✓	✓			
Implement approaches to biosecurity decision – making that have greater clarity and transparency in order to assist understanding within the wider community and encourage greater collaboration in protecting our resources and environment		✓	✓			✓
Goal 3: Involve everyone in protecting the Northern Territory from biosecurity threats						
Take a partnership approach to identifying and addressing priority risks and issues and engage industry and the community in surveillance, detection, incursion response and recovery planning		✓	✓			✓
Build stronger partnerships between industry and government in a wide range of activities to safeguard our natural resources economy			✓			
Develop training programs tailored to high priority pests, diseases and weeds	✓	✓				✓
Establish a collaborative approach to biosecurity management with Land Councils to facilitate broad engagement with Aboriginal communities in the Northern Territory as well as involvement of indigenous knowledge in biosecurity management		✓	✓		✓	✓
Train and actively involve Aboriginal rangers in biosecurity surveillance and response to enhance ability to conduct responses on Country and create stronger biosecurity systems for Indigenous owned primary businesses (e.g. fisheries)	✓	✓	✓	✓	✓	✓
Goal 4: Protect our assets and safeguard our opportunities						
Develop a robust Northern Territory biosecurity "response preparedness" capacity and capability	✓	✓	✓			✓
Develop efficient tools for determining proof of freedom		✓	✓			

Western Australia Biosecurity Strategy 2016 – 2025:

	Capacity building support	Biosecurity preparedness and response	Strong & mature biosecurity network in NA	Indigenous employment and economic outcomes	Cultural exchange and integration of Indigenous practice	Improved communication and collaboration in NA
Goal 1: Enhanced Partnerships						
Improved cooperation and communication between organisations and community members who have a stake in biosecurity management to deliver efficiencies			✓			✓
Sharing to lead to a broader base of knowledge and expertise to reduce duplication						✓
Industry and community play a role in decision making in biosecurity management		✓	✓			✓
Goal 2: Enhanced engagement						
Roles: • Industry: research and development; surveillance and response activities • Community: Spot and report pests, diseases and weeds; washing down camping, hiking and boating vehicles and equipment		✓	✓			✓
Increased industry and community awareness of biosecurity risks and participation in biosecurity		✓	✓			✓
Goal 3: Increasing use of evidence and agreed principles to inform decision making and investment						
Evidence based protection of the biosecurity status of WA ensures there is a consistent approach to decision making and prioritising investment		✓	✓			✓
State government resources are targeted to provide the greatest public benefit, and for agriculture, this is prevention and eradication of priority pests and diseases		✓	✓			
Goal 5: More effective preparedness and capacity to detect, respond and recover from new incursions						
The introduction and establishment of pests and diseases is prevented by effectively regulating risk pathways		✓	✓			
Industry and community understand the importance of prevention and early eradication and increasingly support surveillance for pests and diseases		✓	✓			✓
Goal 6: Community and industry understand and increasingly use available mechanisms for managing priority pests and diseases						
Industry and community increasingly lead management of established pests and diseases where they consider them a priority		✓				✓

Queensland Biosecurity Strategy:

	Capacity building support	Biosecurity preparedness and response	Strong & mature biosecurity network in NA	Indigenous employment and economic outcomes	Cultural exchange and integration of Indigenous practice	Improved communication and collaboration in NA
Goal 1: Collaborative governance and leadership						
Collective and collaborative partnership between government, industry and communities			✓			✓
Supporting community champions to promote the importance of good biosecurity			✓			✓
Goal 2: Every Queenslander plays their part						
Early education of the next generation of Queenslanders			✓			✓
Clear, inter-connected, integrated and proven communication programs focused on those area in which we have identified synergies for funding			✓			✓
Development and promotion of role models, mentors and 'coaches' in the biosecurity system	✓		✓			✓
Goal 3: Empowered to act						
Conducting skills analysis across the QLD biosecurity system and developing strategies to build capability where a need is identified or where roles may be changing	✓	✓	✓			
Undertake activities: preparedness & prevention, surveillance & vigilance, incident & emergency response, endemic threat management		✓	✓			
Identifying opportunities to expand biosecurity networks and arrangements that enable systems to work together		✓	✓			✓
Goal 4: Bright ideas and better ways						
Encouraging the sharing of practical knowledge and creativity of all partners in the biosecurity systems on an ongoing basis			✓		✓	✓
Goal 5: Valuing and building investments						
Communication of the economic, environmental, and social value of avoided biosecurity risks to the community, businesses and decision makers (by using behavioural techniques)					✓	✓
Documenting our baseline of current investments so we know where and why contributions, including those of a non-financial nature being made					✓	
Goal 6: Better intelligence systems						
Recognising that informal and social networks can provide further knowledge and wisdom beyond what can be obtained through formal channels					✓	✓
Better informed forecast, trend analysis, risk identification and scenario planning		✓	✓			
An intelligence culture where people across the network actively contribute information			✓			✓

Northern Australia Biosecurity Strategy 2020 - 2030:

	Capacity building support	Biosecurity preparedness and response	Strong & mature biosecurity network in NA	Indigenous employment and economic outcomes	Cultural exchange and integration of Indigenous practice	Improved communication and collaboration in NA
Goal 1: Strengthen collaborative partnerships between all system participants and build enhanced coordination of biosecurity actions across northern Australia to deliver better biosecurity outcomes including partnerships between governments, industry, Indigenous Rangers, Traditional Owners, and communities						
Develop letters of intent with industry, community, and other participants to form a NABS-PA. Letters detail support for biosecurity surveillance and preparedness and investments		✓	✓			✓
Streamline the approach of sharing data, information, and biosecurity intelligence, including incursion and surveillance data		✓				✓
Goal 2: Implement proactive and forward-looking approaches to biosecurity activities in northern Australia to minimise the threat and impact of plant, animal and environmental pests and diseases in the north, over the next ten years						
Identifying previous collaborative projects that could be expanded, continued, or extended to other industries and commit to prioritising investment in them		✓	✓			✓
Use a collaborative design approach with industry to develop surveillance and preparedness measures and use an appropriate engagement process with industry partners		✓				✓
Development and promotion of role models, mentors and 'coaches' in the biosecurity system	✓		✓	✓		✓
Goal 3: Leverage and invest in Australia's system-wide capability for the benefit of Northern Australia biosecurity						
Engage with indigenous communities, Traditional Owners, Land Councils, and corporations to obtain feedback about biosecurity efforts to co-develop solutions		✓	✓		✓	✓
Priority 1: Prevention and preparedness future actions						
Build surveillance and response capability through better engagement and recruitment of stakeholders including local councils, Indigenous communities, and Indigenous rangers		✓	✓		✓	✓
Involve Indigenous rangers in small- or large-scale biosecurity responses regularly to keep their skills up. Identify and target gaps in the biosecurity capacity of Indigenous Rangers and support rangers to engage with broader Indigenous communities on biosecurity	✓	✓	✓			✓
Identify technology that can be used to undertake surveillance in the remote north. Work with Indigenous landowners and corporations, wider community groups and industry to support surveillance in the north using modern technology	✓	✓	✓			✓
Priority 2: Incursion response and eradication						
Build incursion response through training. For incursion management and eradication, use more industry participants and include Indigenous Rangers	✓	✓	✓			
Use proactive engagement to engage the community and industry, explaining the biosecurity system and incursion response (prior to incursion).		✓	✓			✓
Priority 3: Management and containment						
Develop innovative and commercial solutions for feral animals that support Indigenous and remote communities		✓		✓	✓	

National Biosecurity Strategy

	Capacity building support	Biosecurity preparedness and response	Strong & mature biosecurity network in NA	Indigenous employment and economic outcomes	Cultural exchange and integration of Indigenous practice	Improved communication and collaboration in NA
Goal 1: Shared biosecurity culture: enhance our culture of biosecurity action so that everyone understands its importance and plays their part.						
• Build on and develop national awareness and education programs • Drive positive biosecurity behaviours and incentivise compliance • Revitalise national communication, engagement, and reporting mechanisms • Determine opportunities to embed biosecurity as a consideration into broader decision-making, risk and business planning	✓		✓	✓		✓
Goal 2: Stronger partnerships: strengthen and expand partnerships and networks between all stakeholders at local, regional, national and international levels.						
• Enhance partnerships and engagement with Indigenous Australians • Collaboratively review and refine roles and responsibilities • Review governance arrangements to ensure they include relevant stakeholders • Strengthen the involvement of environmental agencies and environmental and community groups • Identify and implement opportunities for greater industry and community involvement in decision-making bodies • Deepen international partnerships and capacity building	✓	✓	✓	✓	✓	✓
Goal 3: Highly skilled workforce: develop and sustain a highly skilled workforce to ensure we have the right capability and capacity, in the right place, at the right time.						
• Identify current and future skills needs in key areas • Develop a national workforce strategy to build, retain and deploy capability • Build upon and expand existing cooperative and partnership arrangements • Strengthen professional development programs	✓	✓	✓	✓		✓
Goal 4: Sustainable investment: ensure funding and investment is sufficient, co-funded, transparent, targeted to our priorities and sustainable for the long term.						
• Work together to identify funding needs and determine priorities • Strengthen frameworks to agree and deliver priority investments • Advance co-funding and investment strategies with stakeholders • Increase the transparency of biosecurity funding • Complete the development of a system performance and evaluation framework	✓		✓			✓
Goal 5: Integration supported by technology, research and data: create a more connected, efficient and science-based system to facilitate more timely, informed and risk-based decisions.						
• Continue to invest in and roll out transformative technologies to digitise and automate processes • Increase stakeholder coordination to prioritise, drive and deliver national research outcomes • Actively share data and research widely • Enhance the accessibility and use of surveillance and interception data • Further support innovations to build science and research capacity	✓	✓	✓			✓

• Encourage the uptake of existing and emerging technologies, systems and processes • Increase the use of citizen science, Indigenous knowledge and on the ground insights • Encourage greater private sector investment in the development and delivery of biosecurity innovations	✓	✓	✓	✓	✓	✓
Goal 6: Coordinated preparedness and response: boost system's adaptability and its capacity to prevent, detect, manage, respond to and recover from outbreaks.						
• Undertake and promote regular national preparedness exercises • Advance regionally based planning activities • Continually review and update risk information to inform priorities • Actively embed continuous learning • Strengthen traceability arrangements • Enhance our national surveillance and early detection arrangements • Evolve our national information management frameworks	✓	✓	✓	✓	✓	✓

Commonwealth Biosecurity 2030

	Capacity building support	Biosecurity preparedness and response	Strong & mature biosecurity network in NA	Indigenous employment and economic outcomes	Cultural exchange and integration of Indigenous practice	Improved communication and collaboration in NA
Goal 1: Governance: A strong, ongoing commitment by governments, industry and the community to carry out their evolving roles and responsibilities as part of the biosecurity system.						
• Accelerate efforts with key partners to create a strong, future orientated and efficient national biosecurity system • Increase partnership activities with near neighbours to build their risk management capability and continue our engagement with key international bodies	✓		✓	✓		✓
Goal 2: Technology: An integrated, secure, data-driven and technology-enabled biosecurity system overseas, at our border and within Australia.						
• Generate greater shared responsibility through improved awareness and understanding • Increase offshore intelligence, research and data sourcing to support risk-based interventions, preparedness and response	✓	✓	✓			✓
Goal 3: People: A workforce that has the capacity, skills and flexibility to prepare for and respond to emerging biosecurity risks, challenges and opportunities.						
• Invest in a skilled and responsive workforce supported by improved regulatory tools and information	✓	✓	✓	✓		
Goal 4: Regulation: A regulatory environment that supports us to respond to current and future biosecurity challenges and opportunities.						
• Work together to identify funding needs and determine priorities • Expand offshore assurance arrangements and overseas supply chain integration • Lift national preparedness, response and resilience to exotic pest and disease incursions			✓			✓
Goal 5: Funding: A funding and investment model that is sustainable for the long-term.						
• Align our funding and investment model to emerging system needs	✓	✓				

Plant Health Australia (PHA) – The National Plant Biosecurity Strategy

	Capacity building support	Biosecurity preparedness and response	Strong & mature biosecurity network in NA	Indigenous employment and economic outcomes	Cultural exchange and integration of indigenous practice	Improved communication and collaboration in NA
Goal 1: Stronger Together						
• Strengthen national and international diagnostic connections • Provide a world-class coordinated plant biosecurity diagnostic system built on expertise shared through national and global collaboration	✓	✓	✓			✓
Goal 2: Sustained Support						
• Ensure appropriate, sustainable and coordinated resourcing to support the diagnostic system • Coordinate systems, policies and infrastructure to deliver reliable diagnoses	✓	✓	✓			✓
Goal 3: Future Ready Toolkit						
• Develop the expertise required to enable the delivery of world class plant pest diagnostics • Provide fit for purpose tools and strategies to identify priority and emerging plant pests • Promote the use of innovative tools, technologies and approaches for improved diagnostics	✓	✓	✓			
Goal 4: Impact through Innovation						
• Enhance data analytics to inform biosecurity decision making • Foster innovation through coordinated and accurate diagnostic data		✓	✓			

Commonwealth Aboriginal and Torres Strait Islander Workforce Strategy 2020 – 2024

	Capacity building support	Biosecurity preparedness and response	Strong & mature biosecurity network in NA	Indigenous employment and economic outcomes	Cultural exchange and integration of Indigenous practice	Improved communication and collaboration in NA
Goal 1: Attraction						
• Value diverse interests and perspectives • Offer flexible pathways • Support career development opportunities				✓	✓	✓
Goal 2: Recruitment						
• Provide a simple and easy to navigate recrement process • Build a talent pipeline • Set recruitment targets for indigenous workforce participants • Increase overall representation				✓	✓	
Goal 3: Retention						
• Support to manage cultural responsibilities • Value development beyond the workplace • Respect individual career choices				✓	✓	
Goal 4: Engage and Partner						
• Foster strong relationships • Understand needs and priorities • Identify opportunities for indigenous participation				✓	✓	✓

Appendix F: List of stakeholders

Stakeholders (Virtual Consultations)			
Departmental (DAFF)	**State/Territory Government Representatives**	**Government/External Industry**	**Indigenous Stakeholders**
IRBP Program Staff	Queensland Government	The National Indigenous Australians Agency (NIAA)	Northern Land Council (NT)
DAFF – Weeds & Pests	Northern Territory Government	Plant Health Australia	Kimberly Land Council (WA)
NAQS Scientists	NB: Representatives for the Western Australian Government were afforded the opportunity to participate however we were unable to secure a suitable date and time with them, that aligned with the timeframes for this evaluation	Parks Australia	Carpentaria Land Council Aboriginal Corporation (QLD)
Biosecurity Executives		Animal Management in Rural and Remote Indigenous Communities	Anindilyakwa Land Council (NT)
			Northern Peninsula Area Regional Council (QLD)
			Mapoon Aboriginal Council (QLD)
			Dhimurru Aboriginal Corporation
			Wuthathi Aboriginal Corporation
			Larrakia
			Wunambal Gaambera (Uunggu) Land Council

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