Northern Australia Quarantine Strategy – Follow-on Audit

Department of Agriculture and Water Resources

Canberra ACT

17 January 2019

Dear Mr President
Dear Mr Speaker

In accordance with the authority contained in the *Auditor-General Act 1997*, I have undertaken an independent performance audit in the Department of Agriculture and Water Resources. The report is titled *Northern Australia Quarantine Strategy – Follow-on Audit*. Pursuant to Senate Standing Order 166 relating to the presentation of documents when the Senate is not sitting, I present the report of this audit to the Parliament.

Following its presentation and receipt, the report will be placed on the Australian National Audit Office's website — http://www.anao.gov.au.

Yours sincerely

Rona Mellor PSM
Acting Auditor-General

The Honourable the President of the Senate
The Honourable the Speaker of the House of Representatives
Parliament House
Canberra ACT 2600

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Summary and recommendations

Background

1.   Biosecurity is the management of risks to the economy, the environment and the community, of pests and diseases entering, emerging, establishing and spreading in Australia. Biosecurity is critical for safeguarding Australia's $62 billion agriculture industry from pests and diseases that can destroy livestock, crops and the environment, and for providing assurance to overseas markets that Australia's produce is free from those pests and diseases.[1]

2.   Northern Australia presents particular biosecurity challenges, due to the proximity of neighbouring countries and the ecological and climatic conditions that may be conducive to the introduction of exotic pests and diseases. In the Torres Strait, the biosecurity risk is intensified due to the proximity of Papua New Guinea (PNG) and the arrangements established under the Torres Strait Treaty. The Torres Strait Treaty establishes a Protected Zone, within which Torres Strait Islanders and the coastal people from 13 defined PNG villages are able to move freely (without passports or visas) for the purpose of conducting traditional activities.[2] While restrictions exist regarding what can be carried as part of traditional activities, the constant movement of Treaty villagers (with approximately 26,500 recorded visits in 2017–18) poses a risk to Australia's biosecurity.

3.   The Northern Australia Quarantine Strategy (NAQS) was established in 1989 to provide an early warning system for exotic pest and disease detections across northern Australia and to address the biosecurity risks facing the region. NAQS is administered by the Department of Agriculture and Water Resources (the department) and had a budget of $8.9 million in 2018–19. For NAQS, the department employs a network of 90 scientific and operational staff to survey targeted pests and diseases, manage biosecurity risk in southward movement of people, vessels, cargo and aircraft and conduct public awareness activities.

4.   In 2015, the Australian Government released the *Agricultural Competitiveness White Paper* and the *Our North, Our Future: White Paper on Developing Northern Australia*. Six projects funded through the White Papers, with a total value of $61 million over four years, directly impact on NAQS activities and aim to support the management of new and growing biosecurity risks in northern Australia.

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1   Australian Bureau of Agricultural and Resource Economics and Sciences, *Agricultural Commodities* [Internet], Australian Government, Canberra, 2016-17, available from http://www.agriculture.gov.au/abares/Pages/Agricultural-Commodities.aspx [accessed 12 December 2018].
        Department of Agriculture and Water Resources, *Our North, Our Future: White Paper on Developing Northern Australia* [Internet], Australian Government, Canberra, 2015, p. 74, available from https://www.industry.gov.au/data-and-publications/our-north-our-future-white-paper-on-developing-northern-australia [accessed 3 September 2018].

2   Traditional activities are defined in the Treaty as 'activities performed by the traditional inhabitants in accordance with local tradition', and include gardening, collection of food, hunting, traditional fishing, religious and secular ceremonies or gatherings for social purposes (for example, marriage celebrations and settlement of disputes), and barter and market trade.

Rationale for undertaking the audit

5.   Auditor-General Report No. 46 of 2011–12 *Administration of the Northern Australia Quarantine Strategy* identified weaknesses in data collection for scientific surveillance and inspection activities and in the performance monitoring framework, which impacted on the department's ability to assess the effectiveness of NAQS. The report made three recommendations, which the department agreed to implement:

> Recommendation No. 1: To improve the effectiveness of scientific surveillance activity, particularly in relation to the plant science disciplines, the ANAO recommends that the Department of Agriculture, Fisheries and Forestry strengthen existing arrangements for recording, monitoring and reporting survey and diagnostic data.

> Recommendation No. 2: To provide meaningful data to inform border management decisions and measure performance, the ANAO recommends that the Department of Agriculture, Fisheries and Forestry:

> •   improve quality assurance processes to help ensure that border operations data are accurate and complete; and

> •   analyse border operations data to calculate inspection and seizure rates and establish baselines for each Torres Strait arrival pathway.

> Recommendation No. 3: To inform management decisions and improve accountability, the ANAO recommends that the Department of Agriculture, Fisheries and Forestry:

> •   articulate a clear objective for NAQS;

> •   build on current work to develop performance measures that assess the extent to which NAQS is achieving this objective; and

> •   collect and analyse relevant and accurate performance data.

6.   In November 2012 the Joint Committee of Public Accounts and Audit (JCPAA) reviewed Auditor-General Report No. 46 of 2011–12 and highlighted the need for the department to employ better data management systems and to make better use of its existing data to inform its management decisions.[3] The JCPAA report made two recommendations:

> Recommendation No. 8: That, using information currently available, the Department of Agriculture, Fisheries and Forestry calculate and maintain inspection and seizure rates of quarantine material for areas covered by the Northern Australia Quarantine Strategy zone, and use this information to inform management decisions regarding border operations.

> Recommendation No. 9: That the Department of Agriculture, Fisheries and Forestry ensure that support for Northern Australia Quarantine Strategy activities is a high priority during the continuing development of the BioSIRT database in order to address the deficiencies identified by the Australian National Audit Office and in the Joint Committee of Public Accounts and Audit's review.

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3   Joint Committee of Public Accounts and Audit*, Report 435: Review of Auditor-General's Reports Nos. 33 (2011–12) to 1 (2012–13)*, November 2012, available from https://www.aph.gov.au/parliamentary_business/ committees/house_of_representatives_committees?url=/jcpaa/auditgen8_12/report.htm [accessed 14 November 2018]. The JCPAA report presents the Committee's examination of five performance audits selected for detailed review from twenty four audit reports presented to Parliament by the Auditor-General between May and August 2012. The report made a total of ten recommendations, two of which were relevant to Auditor-General Report No. 46 of 2011–12.

7.   This audit was undertaken to assess the extent to which the department has implemented the recommendations from Auditor-General Report No. 46 of 2011–12. It also examined the department's response to the JCPAA report, the management of new projects funded by the White Papers and whether the additional funding has contributed to improving NAQS' effectiveness in managing the biosecurity risk in northern Australia. The audit provides assurance to Parliament on the management of biosecurity risk in northern Australia.

Audit objective and criteria

8.   The objective of this audit was to assess the extent to which the department has addressed the recommendations from Auditor-General Report No. 46 of 2011–12 *Administration of the Northern Australia Quarantine Strategy*. The following high level criteria, reflecting the three recommendations in the 2011–12 report, were adopted.

- Does the department have effective arrangements for recording, monitoring and reporting scientific surveillance activity?

- Does the department have reliable border operation data to inform border management decisions and measure performance?

- Does the department have a robust performance measurement and reporting framework to assess the effectiveness of NAQS?

9.   The scope of this audit also included a review of the department's management of the six White Papers projects that had direct implications on NAQS activities.

Conclusion

10.   The department is progressing but has not yet fully addressed the recommendations from the Auditor-General Report No. 46 of 2011–12 or the 2012 report of the JCPAA's review of Auditor-General Report No. 46.

11.   Through the implementation of the White Papers projects, the department is improving the effectiveness of its arrangements to record, monitor and report scientific surveillance activity and, in doing so, is addressing Recommendation No. 1 of Auditor-General Report No. 46 of 2011–12 and Recommendation No. 9 of the 2012 JCPAA report. To fully address the recommendations, the department should increase its level of assurance that surveillance activities conducted align to the risk prioritised in its target lists and risk areas.

12.   The department has begun to address Recommendation No. 2 of Auditor-General Report No. 46 of 2011–12 and Recommendation No. 8 of the JCPAA report. The reliability and management of border operation data has improved substantially, but the data is not systematically used to inform border management decisions and measure performance. The department does not have a risk-based approach to inspection rates and prioritising inspection activities in the Torres Strait.

13.   The department has not addressed key aspects of Recommendation No. 3 of Auditor-General Report No. 46 of 2011–12. The department has clearly articulated NAQS' objectives, but does not have a robust performance measurement framework to assess NAQS' progress against its objectives and its effectiveness.

14.   The department has established robust management structures to support the implementation of the biosecurity projects funded under the White Papers. As at October 2018, four of the six projects were tracking well against time and budget.

Supporting findings

Managing scientific surveillance activities

15.   The department's review of biosecurity risk in northern Australia has been partially effective. Its usual processes to review biosecurity risk have not been conducted since 2015. While alternative processes have been adopted in the interim, the department has a lower level of assurance that surveillance resources are targeting species and areas of highest risk.

16.   The relationship between risk priorities and surveillance activities is clear. When planning surveillance activities, the department adopts a robust approach to balancing biosecurity risk priorities with operational and external considerations. However, the department does not ensure that the surveillance activities conducted in any one year align with the risks identified in the risk area profiles and target lists and that sufficient risk coverage has been achieved.

17.   The department does not yet manage surveillance data effectively. The department is developing new electronic systems, which are not fully operational but have started to demonstrate significant improvements in the way the department records, tracks, diagnoses and reports on surveillance and laboratory samples.

Managing the border with Papua New Guinea

18.   The department's risk-based approach to border management is not fully effective. The department has adopted a risk-based approach to regulating the goods moving to, from and within the Torres Strait. It has not documented a risk-based approach to inspection rates and prioritisation of inspection activities.

19.   The department's management of border operation data is improving but is not yet fully effective. Until February 2018, the data collected and managed by the department on border operation activities did not exist or was unreliable. Since February 2018, the reliability of inspection activity data has substantially improved and a better understanding of vessel, aircraft and cargo movements in the Torres Strait is emerging.

20.   The department's arrangements with the ABF aimed at supporting NAQS activities in the Torres Strait are mostly effective. The agreement between the departments to carry out duties on behalf of each other has not been updated following the commencement of the Biosecurity Act in June 2016. As a result, there is a risk that the biosecurity duties that ABF officers are allowed to perform are not clear.

Performance measurement framework

21.   The department does not have a robust performance measurement framework to assess NAQS' effectiveness. The department has clearly articulated the NAQS' objectives and the new NAQS objectives, outputs and performance measures provide a clear line of sight between strategic corporate documents and business-level planning tools. However, the majority of

the performance measures have significant weaknesses in terms of relevance, reliability and, collectively, completeness.

22.   The performance reporting developed for management purposes does not demonstrate the effectiveness of NAQS' activities. The reporting provides a picture of NAQS' activity at a point in time but, due to a lack of targets, does not enable a reliable assessment of performance against intended objectives or outputs.

Management of White Papers projects

23.   The department has established a robust management structure, combining internal and external governance structures, to support the implementation of the White Papers projects in northern Australia.

24.   As at October 2018, four of the six White Papers projects contributing to NAQS activities were on track. One of the other projects, the Enterprise Surveillance System, has experienced issues that have adversely impacted on its budget and timeframes.

Recommendations

Recommendation no. 1 **Paragraph 2.15**	The department periodically undertake a robust reconciliation process to verify that surveillance activities conducted each year aligned with the risks prioritised in the risk area profiles and target lists.
	Department of Agriculture and Water Resources response: *Agreed*.
Recommendation no. 2 **Paragraph 3.10**	The department document a risk-based approach to inspections in the Torres Strait that describes the rate of inspections and how inspection activities should be prioritised.
	Department of Agriculture and Water Resources response: *Agreed*.
Recommendation no. 3 **Paragraph 4.16**	The department develop a relevant, reliable and complete framework of measures to assess its performance in managing biosecurity risk in northern Australia.
	Department of Agriculture and Water Resources response: *Agreed*.

Summary of entity response

25.   The proposed report was provided to the Department of Agriculture and Water Resources, and an extract was provided to the Department of Home Affairs. Formal responses were received from the departments and the summary responses are provided below. The full responses are provided at Appendix 1.

Department of Agriculture and Water Resources

The department acknowledges the ANAO's overall findings and recommendations. The department is pleased the ANAO recognises the department's progress since the previous audit in 2012, and that the recommendations target areas to progress continued improvement. The department agrees with the three recommendations.

The department is pleased that the report highlights the robust approach to balancing biosecurity risk priorities with operational and external considerations. This is particularly relevant in the highly complex physical, cultural and regulatory environment in which the Northern Australia Quarantine Strategy (NAQS) is delivered, including in unique Torres Strait biosecurity zones, which the report acknowledges.

NAQS is an iconic program that, in its 30-year history, has helped to safeguard Australia's agricultural industries and unique environment across northern Australia. NAQS continues to be a fundamentally important contributor to the national biosecurity system and demonstrates the interconnected nature of the work the department undertakes across jurisdictions and with a range of stakeholders.

The department remains committed to effectively managing biosecurity risk in northern Australia, under a sound governance framework, in line with expert scientific advice, and in close connection with the community.

Department of Home Affairs

The Department of Home Affairs and the Australian Border Force (ABF) would like to thank the ANAO for the opportunity to comment on the extract.

The ABF and Department of Agriculture and Water Resources (DAWR) has a long and productive working relationship in a unique operating environment that relies on cooperation to provide border security and deliver services to the Commonwealth, including the administration of immigration, customs and biosecurity regulations.

Under the existing Memorandum of Understanding, ABF officers are occasionally requested to assist DAWR to monitor for quarantine and biosecurity risks. ABF officers refer any identified biosecurity concerns to a DAWR officer rather than exercise powers under the *Biosecurity Act 2015.* ABF officers can seek to achieve certain outcomes without the consent or cooperation of the individuals involved but are instructed to make a note and report the details to DAWR staff on their return. Importantly, ABF officers have comparable powers to examine, search and question people about goods under the *Customs Act 1901.*

We agree that formalising a working agreement with DAWR to deal with the duties carried out on behalf of each other through a Letter of Exchange or Memorandum of Understanding would be beneficial. As a priority, the ABF and DAWR are working to formalise a Letter of Exchange that will articulate roles, responsibilities and work instructions.

While this is occurring the ABF will continue to work under the existing arrangements with DAWR to assist in the monitoring of biosecurity and quarantine risks.

Key messages for all Australian Government entities

26.   Below is a summary of key messages, including instances of good practice, which have been identified in this audit that may be relevant for the operations of other Australian Government entities.

Governance and risk management
- The anticipated benefits from projects aimed at improving the operation of existing programs should not compromise the effectiveness of the business-as-usual delivery of these programs.

Performance and impact measurement
- Measuring the impact of some programs may be challenging, for instance when effectiveness information is incomplete, does not exist or is too costly to collect. This should not deter entities from developing performance measures, using input, activity and output measures as proxies for effectiveness. When doing so, it should be clear why effectiveness cannot be measured, and how proxy measures provide confidence that the program is achieving its objectives.

- When designing a performance measurement framework, performance indicators and targets should be suitable for the program or function, relevant, reliable and complete, and have an appropriate balance between quality and quantity.

Audit findings

1. Background

Introduction

1.1   Biosecurity is the management of risks to the economy, the environment and the community, of pests and diseases entering, emerging, establishing and spreading in Australia. Biosecurity is critical for safeguarding Australia's $62 billion agriculture industry from pests and diseases that can destroy livestock, crops and the environment, and for providing assurance to overseas markets that Australia's produce is free from those pests and diseases.[4]

1.2   Australia's geographic isolation and biosecurity measures mean that Australia has remained free of many of the major pests and diseases that affect agriculture in other countries. However, Australia's biosecurity is coming under increasing pressure from greater movements of vessel, aircraft, people and goods across the border from a wider range of countries and regions.[5]

1.3   Northern Australia presents particular biosecurity challenges, due to the proximity of neighbouring countries and the ecological and climatic conditions that may be conducive to the introduction of exotic pests and diseases.[6] Most biosecurity outbreaks in the past 10 years have occurred in the north, and growth in agriculture, mining and tourism, combined with greater flows of goods and people into the north, has created new pathways for pest and disease incursion.[7]

1.4   Northern Australia's biosecurity risk is intensified in the Torres Strait due to its proximity to Papua New Guinea (PNG) and the arrangements established under the Torres Strait Treaty. The Torres Strait islands act as biological stepping stones for pests and diseases. The northern-most inhabited island, Saibai Island, is approximately four kilometres from PNG's mainland and migratory animals and insects fly between the two countries via this route. The Torres Strait Treaty and associated documents define the border between Australia and PNG and establish a Protected Zone. Torres Strait Islanders and the coastal people from 13 defined PNG villages are able to move freely (without passports or visas) for the purpose of conducting traditional activities.[8] While restrictions exist regarding what can be carried as part of traditional activities, the constant movement of Treaty villagers (with approximately 26,500 recorded visits in 2017–18) poses a risk to Australia's biosecurity.

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4   Australian Bureau of Agricultural and Resource Economics and Sciences, *Agricultural Commodities* [Internet], Australian Government, Canberra, 2016-17, available from http://www.agriculture.gov.au/abares/Pages/Agricultural-Commodities.aspx [accessed 12 December 2018].
Department of Agriculture and Water Resources, *Our North, Our Future: White Paper on Developing Northern Australia* [Internet], Australian Government, Canberra, 2015, p. 74, available from https://www.industry.gov.au/data-and-publications/our-north-our-future-white-paper-on-developing-northern-australia [accessed 3 September 2018].

5   Department of Agriculture and Water Resources*, Agricultural Competitiveness White Paper [Internet],* Australian Government, Canberra, 2015, Chapter 5, available from http://agwhitepaper.agriculture.gov.au/about [accessed 3 September 2018].

6   Department of Agriculture and Water Resources*, Agricultural Competitiveness White Paper*, 2015, op. cit. p. 125.

7   Department of Agriculture and Water Resources, *Our North, Our Future: White Paper on Developing Northern Australia,* 2015, op. cit. p. 73.

8   Traditional activities are defined in the Treaty as 'activities performed by the traditional inhabitants in accordance with local tradition', and include gardening, collection of food, hunting, traditional fishing, religious and secular ceremonies or gatherings for social purposes (for example, marriage celebrations and settlement of disputes), and barter and market trade.

The Northern Australia Quarantine Strategy

1.5   The Northern Australia Quarantine Strategy (NAQS) was established in 1989 to provide an early warning system for exotic pest and disease detections across northern Australia and to address the biosecurity risks facing the region. NAQS was initially operated by the Queensland, Northern Territory and Western Australia governments with funding from the Commonwealth, before a staged transition of responsibility to the Commonwealth commenced in 1995. NAQS is administered by the Department of Agriculture and Water Resources (the department).

1.6   NAQS operates along the coastline from Broome in Western Australia across the Northern Territory to Cairns in Queensland, including the islands of the Torres Strait. The approximately 10,000 kilometres of coastline comprises unpopulated or sparsely populated areas of geographic and environmental diversity.

Figure 1.1:   The NAQS Zone

Source: Department of Agriculture and Water Resources.

1.7   The department's website states that the objectives of NAQS are to:

- identify and evaluate the unique biosecurity risks facing northern Australia;

- develop and implement measures for the early detection of targeted risk species;

- contribute to national and international initiatives relevant to the strategy;

- manage the biosecurity aspects of movements through the Torres Strait risk pathway; and

- engage with stakeholders, particularly Aboriginal and Torres Strait Islander communities, on measures that support effective biosecurity surveillance and other objectives of the Department of Agriculture and Water Resources in northern Australia.[9]

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9   Department of Agricultural and Water Resources, *Northern Australia Quarantine Strategy* [Internet], available from http://www.agriculture.gov.au/biosecurity/australia/naqs [accessed 14 September 2018].

1.8   Through a network of scientific and operational staff based along the northern coast of Australia, the department undertakes the following activities to pursue NAQS objectives:

- animal and plant health surveillance of targeted pests, diseases and weeds in coastal areas across northern Australia, from Broome in Western Australia to Cairns in Queensland (including the Torres Strait);

- biosecurity operations to address biosecurity risks associated with southward movements of people, cargo, aircraft and vessels into and between defined biosecurity zones in the Torres Strait, and from these zones to mainland Australia;

- public awareness activities delivered under the 'Biosecurity Top Watch' initiative[10];

- collaboration with external stakeholders, particularly Aboriginal and Torres Strait Islander communities and state and territory agencies, in support of biosecurity surveillance and other departmental services; and

- participation in surveillance and monitoring activities in neighbouring countries for early signs of targeted pests, diseases and weeds.

1.9   Government outcomes are the intended results, impacts or consequences of actions by the Australian Government on the community. Government programs are the primary vehicle by which government entities achieve the intended results of their outcome statements. NAQS contributes to the department's Outcome 2, and is part of Program 2.1 (see Figure 1.2).

Figure 1.2:   NAQS contribution to the Department of Agriculture and Water Resources' performance results

Outcome 2
Safeguard Australia's animal and plant health status to maintain overseas markets and protect the economy and environment from the impact of exotic pests and diseases, through risk assessment inspection and certification and the implementation of emergency response arrangements for Australian agricultural, food and fibre industries

Strategic Objective
Managing Biosecurity and Imported Food Risk

Program 2.1
Biosecurity and Export Services

Objectives
Use evidence-based risk management to ensure the safe movement into Australia of people, animals, plants, food and cargo
Coordinate emergency responses to pest and disease incursions

Performance Criterion
Australia maintains a favourable pest and disease status

Note a: In 2017–18, the department had five strategic objectives: building successful primary industries; expanding agricultural, fisheries and forestry export; sustaining water and other natural resources; and managing biosecurity and imported food risk. From 2018–19, the department reduced the number of strategic

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10   'Biosecurity Top Watch' is a long-running departmental program aimed at promoting engagement and support from communities by raising awareness of biosecurity risks and encouraging people to report them.

objectives to three: increase, improve and maintain markets; encourage agricultural productivity; and support sustainable, high-quality natural resources. Program 2.1 will contribute to the three objectives.

Source: Department of Agriculture and Water Resources *2017–18 Budget Statements*, p. 31.

1.10   The NAQS budget for 2018–19 was $8.9 million. As at March 2018, NAQS staff included 89 full-time and part-time employees, and one casual employee. Staff are categorised into three job profiles: policy and technical staff (67), scientists (19), and veterinarians (4) and are distributed across five locations in the north of Australia, with an additional two staff based in Canberra (see Table 1.1).

Table 1.1:   Geographic distribution of NAQS staff

Location	Number of staff
Cairns	42
Torres Strait and Northern Peninsular Area	26
Darwin	18
Canberra	2
Broome	1
Weipa	1

Source: Department of Agriculture and Water Resources documents.

Commonwealth funding in 2015

1.11   Two White Papers released by the Australian Government in 2015 led to significant investments in biosecurity and the development of northern Australia:

•   the *Agricultural Competitiveness White Paper* committed $4 billion over four years to improve the competitiveness and profitability of the agriculture sector, $200 million of which was committed to strengthening biosecurity[11]*; and*

•   the *Our North, Our Future: White Paper on Developing Northern Australia* committed $1.2 billion over four years to support economic development in northern Australia.[12]

1.12   Across the two White Papers, six projects, with a total value of $61 million over four years, directly impact on NAQS activities and aim to support the management of new and growing biosecurity risks in northern Australia.

Previous audit

1.13   Auditor-General Report No. 46 of 2011–12 *Administration of the Northern Australia Quarantine Strategy* identified weaknesses in data collection for scientific surveillance and inspection activities and in the performance monitoring framework, which impacted on the

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11   Department of Agriculture and Water Resources*, Agricultural Competitiveness White Paper [Internet],* Australian Government, Canberra, 2015, available from http://agwhitepaper.agriculture.gov.au/about [accessed 3 September 2018].

12   Department of Agriculture and Water Resources, *Our North, Our Future: White Paper on Developing Northern Australia* [Internet], Australian Government, Canberra, 2015, available from https://www.industry.gov.au/data-and-publications/our-north-our-future-white-paper-on-developing-northern-australia [accessed 3 September 2018].

department's ability to assess the effectiveness of NAQS. The report made three recommendations, which the department agreed to implement:

> Recommendation No. 1: To improve the effectiveness of scientific surveillance activity, particularly in relation to the plant science disciplines, the ANAO recommends that the Department of Agriculture, Fisheries and Forestry strengthen existing arrangements for recording, monitoring and reporting survey and diagnostic data.

> Recommendation No. 2: To provide meaningful data to inform border management decisions and measure performance, the ANAO recommends that the Department of Agriculture, Fisheries and Forestry:

> • improve quality assurance processes to help ensure that border operations data are accurate and complete; and

> • analyse border operations data to calculate inspection and seizure rates and establish baselines for each Torres Strait arrival pathway.

> Recommendation No. 3: To inform management decisions and improve accountability, the ANAO recommends that the Department of Agriculture, Fisheries and Forestry:

> • articulate a clear objective for NAQS;

> • build on current work to develop performance measures that assess the extent to which NAQS is achieving this objective; and

> • collect and analyse relevant and accurate performance data.

1.14   In November 2012 the Joint Committee of Public Accounts and Audit (JCPAA) reviewed Auditor-General Report No. 46 of 2011–12 and highlighted the need for the department to employ better data management systems and to make better use of its existing data to inform its management decisions.[13] The JCPAA report made two recommendations:

> Recommendation No. 8: That, using information currently available, the Department of Agriculture, Fisheries and Forestry calculate and maintain inspection and seizure rates of quarantine material for areas covered by the Northern Australia Quarantine Strategy zone, and use this information to inform management decisions regarding border operations.

> Recommendation No. 9: That the Department of Agriculture, Fisheries and Forestry ensure that support for Northern Australia Quarantine Strategy activities is a high priority during the continuing development of the BioSIRT database in order to address the deficiencies identified by the Australian National Audit Office and in the Joint Committee of Public Accounts and Audit's review.

Rationale for undertaking the audit

1.15   This audit was undertaken to assess the extent to which the department has implemented the recommendations from Auditor-General Report No. 46 of 2011–12. It also examined the department's response to the JCPAA report, the management of new projects funded by the

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13   Joint Committee of Public Accounts and Audit, *Report 435: Review of Auditor-General's Reports Nos. 33 (2011–12) to 1 (2012–13)*, November 2012, available from https://www.aph.gov.au/parliamentary_business/committees/house_of_representatives_committees?url=/jcpaa/auditgen8_12/report.htm [accessed 14 November 2018]. The JCPAA report presents the Committee's examination of five performance audits selected for detailed review from twenty four audit reports presented to Parliament by the Auditor-General between May and August 2012. The report made a total of ten recommendations, two of which were relevant to Auditor-General Report No. 46 of 2011–12.

White Papers and whether the additional funding has contributed to improving NAQS' effectiveness in managing the biosecurity risk in northern Australia. The audit provides assurance to Parliament on the management of biosecurity risk in northern Australia.

Audit approach

Audit objective, criteria and scope

1.16   The objective of this audit was to assess the extent to which the department has addressed the recommendations from Auditor-General Report No. 46 of 2011–12 *Administration of the Northern Australia Quarantine Strategy*.

1.17   To form a conclusion against this objective, the following high level criteria, reflecting the three recommendations in the 2011–12 report, were adopted.

- Does the department have effective arrangements for recording, monitoring and reporting scientific surveillance activity?
- Does the department have reliable border operation data to inform border management decisions and measure performance?
- Does the department have a robust performance measurement and reporting framework to assess the effectiveness of NAQS?

1.18   The scope of this audit included a review of the department's management of the six White Papers projects that had direct implications on NAQS activities. It did not include other functions under NAQS' responsibility, in particular public awareness and stakeholder engagement (which include the work conducted by Indigenous rangers on behalf of NAQS). These were examined in Auditor-General Report No. 46, were found to be generally effective and were not the subject of recommendations.

Audit methodology

1.19   The audit methodology included:

- field work in Cairns, which included consultation with NAQS Cairns-based staff, tours of facilities where scientific work was undertaken, and observation of inspections at Cairns airport;
- one month fieldwork in the Torres Strait, which included observation of the following departmental activities: fruit fly trap monitoring from islands in the Protected Zone; sentinel herd and domestic animal surveillance on the Northern Peninsula Area; and border inspections at the PNG–Australia border;
- review of relevant departmental documents and ICT systems; and
- interviews and meetings with a range of government and non-government stakeholders.

1.20   The audit was conducted in accordance with the ANAO Auditing Standards at a cost to the ANAO of approximately $429,521.

1.21   The team members for this audit were Dr Isabelle Favre, Elizabeth Wedgwood, Hugh Balgarnie, Yvonne Buresch and Deborah Jackson.

2. Managing scientific surveillance activities

Areas examined

This chapter examines whether the Department of Agriculture and Water Resources (the department) has addressed Recommendation No. 1 of Auditor-General Report No. 46 of 2011–12 and Recommendation No. 9 of the 2012 Joint Committee of Public Accounts and Audit (JCPAA) report. It reviews the processes established by the department to: assess biosecurity risk in the Northern Australia Quarantine Strategy (NAQS) zone; plan surveillance activity; and record, analyse and report on scientific surveillance activity.

Conclusion

Through the implementation of the White Papers projects, the department is improving the effectiveness of its arrangements to record, monitor and report scientific surveillance activity and, in doing so, is addressing Recommendation No. 1 of Auditor-General Report No. 46 of 2011–12 and Recommendation No. 9 of the 2012 JCPAA report. To fully address the recommendations, the department should increase its level of assurance that surveillance activities conducted align to the risk prioritised in its target lists and risk areas.

Areas for improvement

The ANAO made one recommendation aimed at verifying that surveillance activities conducted align with the risks prioritised in the risk area profiles and the target lists. The ANAO also made one suggestion to review and update the target lists and risk area profiles.

2.1   Surveillance underpins the department's ability to detect biosecurity threats early and to provide evidence of pest and disease status, which the department uses to support trade and market negotiations. To guide the planning and delivery of surveillance activities, the department has been applying a risk framework based on two key elements: target lists and risk areas.

- Target lists are lists of insect pests, diseases and weeds that are not present in Australia and which are considered serious threats to Australia's agricultural productivity, export markets or the environment. The department maintains target lists for four scientific disciplines: animal, botany, entomology and plant pathology.

- Risk areas are 42 discrete regions from Broome to Cairns, including offshore islands (see Figure 2.1). Each area is assigned a risk rating that gives an indication of the degree of biosecurity risk and serves to guide the frequency with which surveillance is conducted. The risk rating assigned to a particular risk area may be different for animal and plant health surveillance purposes. As a general guide, risk areas with a high risk rating are expected to be surveyed on at least an annual basis; those with a medium risk rating every two to three years; and those with a low risk rating every three to five years or targeted for biosecurity surveillance by third parties such as Indigenous ranger groups.

Figure 2.1:   NAQS risk areas
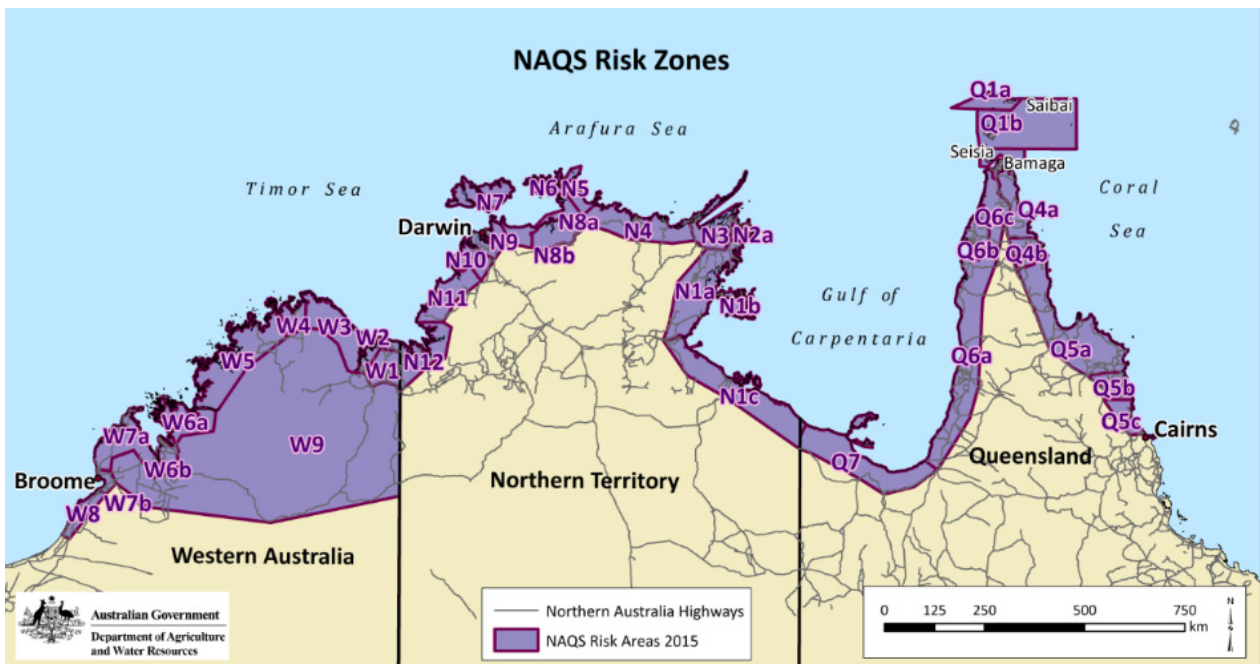
Note a: The naming of the zones is not related to their risk rating. Due to the scale of the map, not all 42 zones are shown.

Source: Department of Agriculture and Water Resources.

2.2   Target lists were developed in the initial years of NAQS operation to direct the department's surveillance effort toward the most appropriate hosts and their likely associated diseases, pests or pathogens. Similarly, risk areas, were established at an early stage of NAQS in response to the challenge of designing surveillance activities consistently across the vast northern Australia area.

Does the department have effective processes to review the biosecurity risk?

The department's review of biosecurity risk in northern Australia has been partially effective. Its usual processes to review biosecurity risk have not been conducted since 2015. While alternative processes have been adopted in the interim, the department has a lower level of assurance that surveillance resources are targeting species and areas of highest risk.

2.3   Target lists and risk area ratings are intended to be updated through the following two key processes.

• An annual review, conducted by NAQS scientists during the NAQS scientific discipline meeting. The meeting, conducted over several days, aims to provide a forum for NAQS scientists and operational staff to review the previous year's achievements and challenges, and discuss key projects and objectives for the coming year. The review of the target lists and risk area ratings is a standing item on the meeting agenda.

- Comprehensive reviews that, the department advised, are conducted periodically in consultation with the Commonwealth Scientific and Industrial Research Organisation (CSIRO), state and territory government experts and university researchers.

2.4   NAQS scientific discipline meetings have not been conducted since December 2015, which was the last time the annual review process for target lists occurred. The last comprehensive target list review with external input was conducted in 2011 for the animal target list; and the last comprehensive risk area reviews were conducted in 2010 for plant health risks and 2011 for animal health risks.

2.5   The risk area ratings are documented in an internal report: the Risk Area Profiles. The report provides, for each state and territory, an overview of the risk rating and survey frequency for the different risk areas; and for each area, a detailed description of the area, its risk rating and survey frequency, and details of risk mitigation strategies implemented. This document was last updated in March 2014, following the 2013 NAQS scientific discipline meeting.

2.6   While these review mechanisms have not occurred, the department advised the ANAO that alternative processes provide an appropriate level of assurance that surveillance activities are targeting species and areas of highest concern. The alternative processes are listed below.

- For the animal target list: several meetings were conducted, in 2016 and 2018, during which the target list and surveillance effort against the target list were reviewed. As part of one of the White Papers projects, a review was conducted in May 2017, in consultation with the Northern Territory and Western Australia governments that established the top 13 animal diseases in northern Australia.

- For the botany target list: NAQS botanists held a multi-day meeting in January and February 2018 to discuss technical and emerging issues and during which each of the 80 species on the existing list were discussed, resulting in a much shorter list of 28 species.

- For the entomology target list: reviews of a number of species from the target list have been conducted at monthly entomology team meetings, starting in September 2017, during which NAQS entomologists discuss technical and emerging issues. As at July 2018, the department advised that 49 out of 92 species had been reviewed.

- For the plant pathology target list: new and emerging threats have been discussed fortnightly by the pathology team, with documentation developed to support the decision to include or exclude new threats identified in the target list.

Projects to improve biosecurity risk analysis in northern Australia

2.7   The department indicated that the usual review mechanisms had not been conducted because there was an expectation that three ongoing surveillance projects (summarised in Table 2.1) would lead to significantly improved analysis of biosecurity risk in northern Australia.

Table 2.1: **Surveillance projects aiming to improve biosecurity risk analysis (as at September 2018)**

Projects	Key Outputs	Timeframe	Status
Project 1: **Risk assessment and evaluation for plant pests and diseases in northern Australia**	Comprehensive risk assessment and report for plant pests and disease pathways in northern Australia. Development of clear plant surveillance priorities for 2017–18, 2018–19 and future biosecurity surveillance planning.	Mar 2017–Jun 2018	Completed Aug 2018
Project 2: **Northern Australia priority animal disease risk profile**	Identification of priority animal pests and diseases for northern Australia Northern Australian maps showing the relative risk of occurrence of priority animal diseases. Community information and training targeting priority animal diseases. Development of surveillance plan and integration of surveillance activities in the northern Australian surveillance system.	Jan 2017– June 2019	Some delays, but expect that all milestones will be met by June 2019
Project 3: **Risk-based modelling**	Design of surveillance programs that maximise early detections by appropriately targeting high risk locations while accounting for uncertainty (in collaboration with the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES).	2016–2019	Draft risk-based model expected Dec 2018

Note a: Projects 1 and 2 are sub-projects of the White Papers project Surveillance Part A (see Table 5.1). Project 3 is funded by ABARES.

Source: ANAO, based on Department of Agriculture and Water Resources documents.

2.8   A NAQS scientific discipline meeting has been scheduled for December 2018. The department advised that target lists and risk area ratings are expected to be reviewed at this meeting and that the three surveillance projects, while not sufficiently advanced or embedded to feed into NAQS risk analysis, will provide preliminary results to inform discussions. The department also advised that it is planning an expert risk review of the animal list in early 2019, as an outcome of the 2018 NAQS scientific discipline meeting.

2.9   Given that two of the projects will not be delivering operational results in time for the 2018 NAQS scientific discipline meeting, a formal review and update of the target lists and risk area profiles is timely. This will give the department a higher level of assurance that surveillance resources are targeting species and areas of highest relative risk.

Is there a clear relationship between risk priorities and surveillance activities?

> The relationship between risk priorities and surveillance activities is clear. When planning surveillance activities, the department adopts a robust approach to balancing biosecurity risk priorities with operational and external considerations. However, the department does not ensure that the surveillance activities conducted in any one year align with the risks identified in the risk area profiles and target lists and that sufficient risk coverage has been achieved.

2.10   Information from the target lists defines the focus of surveillance activities, while risk area profiles define the location and timing of surveillance activities. NAQS uses the target lists and the risk area profiles to inform the development of an annual operational plan, which is presented by the department as the primary management tool for the delivery of NAQS activities.

2.11   The department advised that the development of the operational plan and the planning of surveillance activities typically commences early in the calendar year and is achieved through an iterative series of meetings and workshops co-ordinated by NAQS' operation delivery staff and involving departmental biosecurity scientists, policy officers and veterinarians. Information such as timing, frequency, targets, locations and staffing is discussed in light of risk area profiles, target lists, and any intelligence obtained during the previous year or that was reviewed and discussed at the NAQS scientific discipline meeting (when these meetings occurred).

2.12   The annual operational plan collates the information discussed at the meetings and workshops in a calendar-based spreadsheet. The department indicated that the operational plan is an evolving document that, in addition to the risk priorities identified through the target lists and risk profile areas, considers external and unplanned factors such as weather, cultural requirements[14], offshore counterpart agencies priorities, internal departmental priorities or policies and staff availability.

2.13   The risk area profiles indicate that, as a general guide, risk areas with a risk rating of high or very high should be surveyed at least on an annual basis. Using the 2017–18 operational plan provided by the department in November 2018, the ANAO identified that all areas with these ratings had been scheduled to be surveyed at least once during 2017–18. However, the operational plan indicated that in only three of the eight areas scheduled for animal surveys and five of the six areas scheduled for plant surveys had been funded.

2.14   The department advised that, to ensure that sufficient coverage of risk is achieved, activities planned are compared to activities undertaken as the year progresses, and in preparing the operational plan for the coming year, surveillance activities are scheduled based on the activities and findings from the previous year's plan as well as emerging and known risks. The department's advice to the ANAO indicates case-by-case consideration of past activities when prioritising future surveillance work. However, evidence of this was limited and the department's approach did not constitute a robust reconciliation process to verify that activities conducted in any one year align with the risks prioritised in the risk area profiles and target lists.

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14   Such as access restrictions to Aboriginal and Torres Strait land.

Recommendation no.1

2.15   The department periodically undertake a robust reconciliation process to verify that surveillance activities conducted each year aligned with the risks prioritised in the risk area profiles and target lists.

Department of Agriculture and Water Resources response: *Agreed.*

2.16   *The department agrees to Recommendation 1 and will continue to strengthen its approach to verifying that the surveillance activities undertaken each year align with identified biosecurity risk priorities. The department will formalise existing practices to consider past activities when prioritising future surveillance work*.

Does the department effectively manage surveillance data?

The department does not yet manage surveillance data effectively. The department is developing new electronic systems, which are not fully operational but have started to demonstrate significant improvements in the way the department records, tracks, diagnoses and reports on surveillance and laboratory samples.

2.17   Surveillance activities consist primarily of field surveys conducted by specialist scientists, operational staff and Indigenous rangers.[15] Field surveys involve observations and sample collection from designated plant and animal targets at specific locations across the NAQS zone. NAQS scientists plan to conduct approximately 15 to 20 targeted plant and animal field surveys annually. To survey targets that are expected to have a very high probability of arrival or for which very early detection is desired, the department undertakes regular monitoring, usually through deployment of traps or, in the case of some diseases, through maintenance of sentinel cattle herds.[16] As at November 2018 six sentinel herds were operating across the NAQS zone, one in PNG and one in Timor Leste.

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15   The department contracts approximately 70 Indigenous ranger groups across northern Australia to assist in the delivery of public awareness, survey and surveillance activities.

16   Sentinel herds are small groups of animals (usually 10 to 20) which are examined at regular intervals throughout the year for the presence of diseases.

Figure 2.2:   A biosecurity officer inspecting a fruit fly trap.

Source: ANAO.

2.18   Surveillance data, consisting broadly of sample data, diagnostic results and scientific reports with supporting documentation, has been collected since NAQS' early years of operation in the 1990s. The main repository for NAQS historical surveillance data is the NAQS Database.

2.19   Timely and accurate determination of the identity of samples is fundamental to the effectiveness of early detection surveillance. Auditor-General Report No. 46 of 2011–12 identified several weaknesses in the department's processes to manage plant and animal samples. The report stated that while the department had established processes to manage plant and animal samples, it was yet to establish an effective mechanism to track the more complex and time-consuming diagnostic activities required to identify insect pests and plant diseases.

Figure 2.3:   NAQS veterinarians inspecting the sentinel herd at Bamaga.

Source: ANAO.

2.20   Weaknesses were also identified in the department's management of scientific data. Data entry activities were not adequately quality assured, and capacity and functionality constraints of the NAQS Database limited the storage and use of survey data and diagnostic results. The report made a recommendation to strengthen arrangements for recording, monitoring and reporting survey and diagnostic data, which the department agreed to implement.[17]

2.21   In its 2012 review of Auditor-General Report No. 46, the JCPAA further recommended that the department ensure that BioSIRT[18], the new enterprise-wide database being developed at the time in conjunction with state and territory government biosecurity agencies to manage biosecurity data, addresses the deficiencies that Report No. 46 identified in NAQS databases.[19]

2.22   The department acknowledged both the value of the records on pests and diseases accumulated in the NAQS Database over the previous 25 years, and the inaccuracy and reliability problems with these records. The department also indicated, in the 2012 JCPAA review, that planned IT updates to support NAQS were related to broader updates within the department and that 'the overall full implementation will be some years away'.[20] The 2015 *Agricultural Competitiveness*

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17   Auditor-General Report No. 46 of 2011–12 *Administration of the Northern Australia Quarantine Strategy*, pp. 17 and 34.

18   BioSIRT means Biosecurity Surveillance, Incident, Response and Tracing.

19   Joint Committee of Public Accounts and Audit*, Report 435: Review of Auditor-General's Reports Nos. 33 (2011–12) to 1 (2012–13)*, November 2012, Recommendation No. 9, p. 44.

20   Joint Committee of Public Accounts and Audit*, op. cit.*, p. 38.

White Paper provided funding for two projects that directly aimed to improve the management of surveillance data in northern Australia: the Enterprise Surveillance System project and the Better Data project. The department advised that the Enterprise Surveillance System had replaced BioSIRT as the repository for NAQS Surveillance information.

The Enterprise Surveillance System project

2.23   The Enterprise Surveillance System project aims to provide a central repository for all of the department's surveillance data, including the surveillance data currently stored in the NAQS Database. The project had a budget of $15.7m and was due for completion in June 2018. Its objective is to:

> …implement the department's vision for a national approach to surveillance by:
>
> • establishing nationally consistent and efficient business processes that support surveillance, sample tracking and diagnostic activities; and
>
> • developing the capability for collecting, storing, sharing, analysing and reporting on surveillance data through implementation of a modern IT system.

2.24   To achieve this objective, four software applications, supported by user guides and instructional material, are to be developed:

• Surveillance Information Management System: an application managing data and information for the department's surveillance activities;

• Laboratory Information Management System: an application managing sample testing and identification across the department, with a capacity to interface with the Surveillance Information Management System;

• Taxonomy as a Service: a taxonomic and nomenclatural reference dataset that manages species data using a current reference taxonomy; and

• Register of Specimens and Collections: a central database of the department's biological specimen collection.

2.25   As at October 2018 the project had experienced significant delays and a budget increase of $2.16 million (see paragraphs 5.16 and 5.17 for more detail). The department decided to close the Enterprise Surveillance System project at the end of December 2018, six months behind the initial schedule, and reallocate the uncompleted deliverables to a new project or to business-as-usual activities. The Laboratory Information Management System and the Surveillance Information Management System are under development and testing. The systems have not been used for operational and analysis purposes to date. The department has acknowledged that the persistent problems experienced by the project have impacted on the likelihood that the White Papers (Biosecurity) Implementation Program would be completed by June 2020.

The Better Data project

2.26   The *Better Data* project was initiated to improve NAQS' biosecurity arrangements through developing a stronger biosecurity surveillance data and analysis system. The project aims to improve accessibility, use, analysis and reporting of NAQS' biosecurity data in northern Australia. Its key deliverables are:

- cleaning and preparing surveillance data for transition into the information management systems developed under the Enterprise Surveillance System project;

- electronic cataloguing of high priority NAQS reference specimens;

- developing a strategic plan for improving approaches, tools and methods for spatial and statistical analysis of NAQS surveillance data; and

- implementing surveillance analytics capability, through the use of tools and methods for spatial and statistical analysis of NAQS surveillance data.

2.27   The project, due for completion in June 2019, was tracking well against timeframe and budget as at October 2018. The first three deliverables had been completed, and the department advised that transition of NAQS surveillance data into the information management systems developed under the Enterprise Surveillance System project was expected to start in January 2019. In the interim, NAQS surveillance records were being progressively used to provide information to industry groups and government agencies for analysis and biosecurity planning purposes. Box 1 provides some examples of biosecurity information provided to industry groups and government agencies using the improved NAQS data systems.

Box 1: Using improved NAQS data systems

Assisting Plant Health Australia to develop a biosecurity plan for the sweet potato industry

In July 2018 Plant Health Australia sought the involvement of the NAQS team in the development of a biosecurity plan for the sweet potato industry. The department provided pest and disease surveillance data collected from a range of locations in northern Australia, PNG, the Solomon Islands, Timor Leste and Indonesia, between 1997 and 2016. A database of 560 records was provided to Plant Health Australia.

Providing citrus canker data to the Northern Territory Department of Primary Industry and Resources

In April 2018 citrus canker was detected in Darwin. Citrus canker is a bacterial disease that affects leaves, twigs and fruit of citrus trees causing the fruit to fall to the ground before it ripens. At the request of the Northern Territory Department of Primary Industry and Resources, in May 2018 NAQS provided a dataset of citrus canker hosts in and around Darwin. The dataset included over 500 records collected between 2008 and 2016.

Maps of rice and saccharum (sugar) grass species distribution in northern Australia to support discussions with Sugar Research Australia

The department advised that in March 2018 wild rice surveillance data and maps illustrating the distribution of sugar and rice species across northern Australia (some target species use both sugar and wild rice as hosts) was referenced in a meeting between the department and Sugar Research Australia. The meeting included discussion of potential collaboration on surveillance measures and data sharing, to assist industry biosecurity planning and decisions on future investment to expand into new production areas.
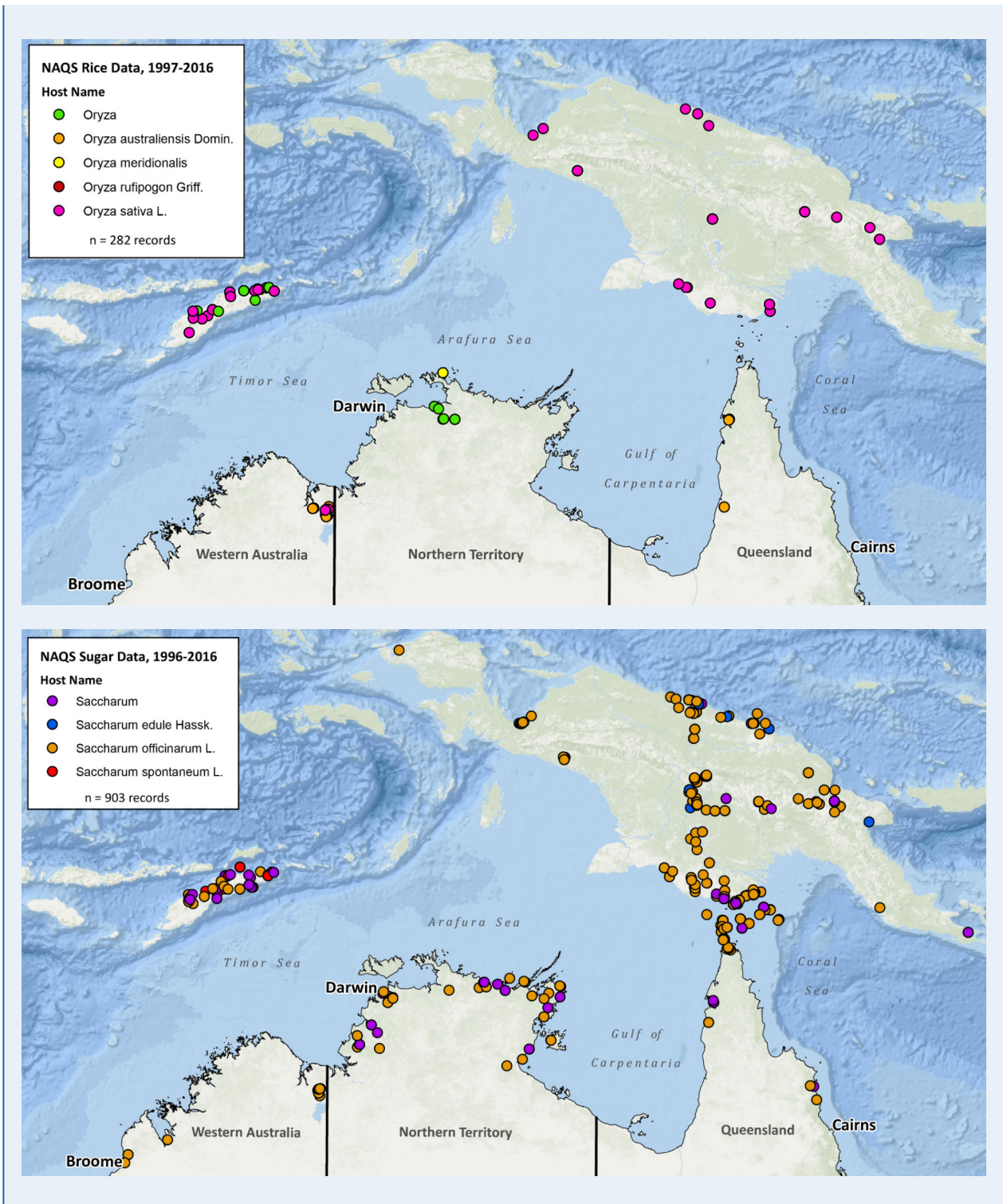
Note a: The department advised that, at the time the maps were created, data cleansing and standardisation work had not been completed beyond the 2016 dataset. NAQS has now progressed the data cleansing work to include 2018 data.

Source: ANAO, based on Department of Agriculture and Water Resources documents.

3. Managing the border with Papua New Guinea

Areas examined

This chapter examines whether the Department of Agriculture and Water Resources (the department) has addressed Recommendation No. 2 of Auditor-General Report No. 46 of 2011–12 and Recommendation No. 8 of the Joint Committee of Public Accounts and Audit (JCPAA) report. It reviews the department's management of border operation data, the approach to inspection activities and the department's arrangements with the Australian Border Force (ABF) within the Department of Home Affairs.

Conclusion

The department has begun to address Recommendation No. 2 of Auditor-General Report No. 46 of 2011–12 and Recommendation No. 8 of the JCPAA report. The reliability and management of border operation data has improved substantially, but the data is not systematically used to inform border management decisions and measure performance. The department does not have a risk-based approach to inspection rates and prioritising inspection activities in the Torres Strait.

Areas for improvement

The ANAO made one recommendation aimed at developing a risk-based inspection approach. The ANAO also made two suggestions to: develop a formalised quality assurance process for the Torres Strait Information System; and finalise the agreement with the Department of Home Affairs for the provision of biosecurity and ABF officer support in the Torres Strait.

3.1   Within the Northern Australia Quarantine Strategy (NAQS) zone, the Torres Strait region presents heightened biosecurity risks due to its proximity to Papua New Guinea (PNG), movements of people and goods associated with the operation of the Torres Strait Treaty, and the natural transmission of exotic pests, diseases and weeds on monsoon winds and typhoons, in water currents and on migratory animals. Of the 42 risk areas defined by the department for the NAQS zone (see paragraph 2.1), the Torres Strait region includes the only risk area with the highest risk rating ('very high').

3.2   The Torres Strait is divided into two biosecurity zones (see Figure 3.1). The northern zone is the Torres Strait Protected Zone, established by the Torres Strait Treaty in 1985. Within this Zone, Torres Strait Islanders and the coastal people from 13 defined PNG villages adjacent to the Torres Strait are able to move freely (without passports or visas) for the purpose of conducting traditional activities. The second zone encompasses the rest of the Torres Strait south of the Protected Zone and is named the Torres Strait Permanent Biosecurity Monitoring Zone.[21]

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21   This zone was originally established in 1998 through proclamation under the *Quarantine Act 1908* as the 'Special Quarantine Zone'. It became the 'Torres Strait Permanent Biosecurity Monitoring Zone' under the *Biosecurity Regulation 2016*.

Figure 3.1:   Torres Strait Biosecurity Zones
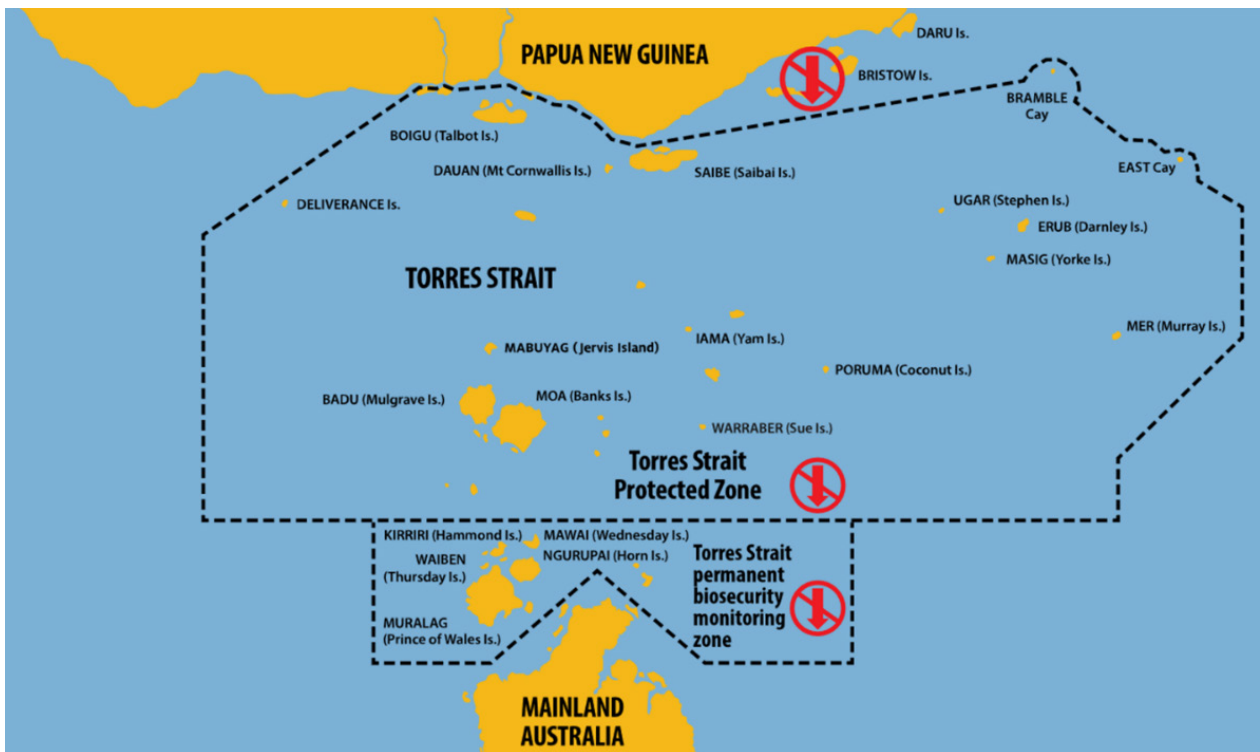
Source: Department of Agriculture and Water Resources.

3.3   The department is responsible for managing the movement of restricted goods (see Box 2 below) and addressing biosecurity risks associated with southward movements of people, cargo, aircraft and vessels into and between the biosecurity zones in the Torres Strait, and from these zones to mainland Australia. To achieve this, the department implements an approach based on public awareness and education activities with local communities to encourage compliance. It also conducts regulatory activities including: inspections of goods moving to, from and within the Torres Strait by a network of Aboriginal and Torres Strait biosecurity officers located on most inhabited islands and in Bamaga (Northern Peninsula Area); and issuing permits to move restricted goods from the Torres Strait to mainland Australia. As at September 2018, 11 islands in the Protected Zone each had one or two biosecurity officers working on a part or full time basis.

> **Box 2: Moving goods to, from and within the Torres Strait**
>
> Under the provisions of the *Biosecurity Act 2015* (Biosecurity Act) the movement of animal or plant material or soil in a southerly direction between the biosecurity zones is prohibited or restricted, requiring either a permit and/or inspection and treatment if necessary. As a general rule, the following goods may only be moved with a permit obtained from the department:
>
> * fresh fruit and vegetables;
> * live animals, including insects;
> * live plants, including cuttings, seedlings or plant products;
> * soil;
> * used machinery and equipment with animal, plant material or soil contamination;
> * untreated hides or skins or other animal products;
> * meat or dairy products (excluding canned items); and
> * poultry products, including eggs or feathers with skin still attached.

Source: Department of Agriculture and Water Resources documents.

Does the department use an effective risk-based approach to border management?

The department's risk-based approach to border management is not fully effective. The department has adopted a risk-based approach to regulating the goods moving to, from and within the Torres Strait. It has not documented a risk-based approach to inspection rates and prioritisation of inspection activities.

3.4   Following the 2008 *Review of Australia's Quarantine and Biosecurity Arrangements*[22], the department committed to the development and implementation of a risk-based approach to its biosecurity operations as a central component of the biosecurity system reform program.[23]

3.5   The department advised that biosecurity officers operating in the islands of the Protected Zone aim to inspect 100 per cent of traditional visitors coming from PNG to the islands of the Protected Zone under the Torres Strait Treaty, but this approach is conditional on:

* availability — as a general rule, officers work normal business hours during week days;[24]
* conflicting priorities — officers also aim to inspect 80 to 90 per cent of aircraft; volume of visitors — for example, on Saibai, the northern-most inhabited island located a 30-minute

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22   Beale et al., *One Biosecurity, A Working Partnership – The Independent Review of Australia's Quarantine and Biosecurity Arrangements*, September 2008.

23   Department of Agriculture and Water Resources, *Reform of Australia's Biosecurity System – An Update since the Publication of One Biosecurity: A Working Partnership*, March 2012, available from http://www.agriculture.gov.au/SiteCollectionDocuments/biosecurity/reform-australia-biosecurity-system-update-since-one-biosecurity.pdf [accessed 9 October 2018].

24   The department's work instructions allow for officers to liaise with their supervisor to determine what arrangements should be in place if vessels are expected to arrive on weekends.

boat ride from PNG, busy days may see 15 or more boats landing within a one to two hour period and carrying approximately ten visitors each; and

- visitors arriving at locations other than the designated landing place – the local council (Torres Strait Island Regional Council), in collaboration with the Department of Foreign Affairs and Trade[25] and PNG local and regional authorities, has implemented a permit and notification system to monitor the flow of PNG visitors. PNG traditional visitors are supposed to arrive only at a single designated landing place on each island. While these measures are mostly complied with, the department advised that a number of PNG visitors land at undesignated locations.

Figure 3.2:   Traditional visitors to Saibai returning to PNG (seen on the horizon).

Source: ANAO.

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25   The Department of Foreign Affairs and Trade has responsibility for administering the Torres Strait Treaty and has two officers permanently based on Thursday Island.

3.6   Movements between the Protected Zone and the Permanent Biosecurity Monitoring Zone, and from either Zone to the Northern Peninsula Area, are conducted on regular and chartered aircraft and vessels.[26] Biosecurity officers also aim to inspect 80 to 100 per cent of these movements and 100 per cent of permit applicants. However, the department advised that context and operational arrangements (availability, workload and ability to monitor unregulated movements) make meeting these targets difficult.[27]

3.7   Movements between the two Zones and Cairns are also conducted on regular and chartered aircraft and vessels. Biosecurity officers in Cairns apply a risk-based approach that is documented in an annual work plan. The work plan for 2018–19 outlines the required inspection frequency[28], and provides guidance on the nature of the biosecurity risks likely to be encountered and recommended inspection methods.

3.8   The risk-based work plan used for movements from the Torres Strait to Cairns contrasts with the absence of documented guidance for prioritising inspection activity within the Torres Strait and between the Torres Strait and the Northern Peninsula Area.

3.9   As outlined in Box 2, the department has adopted a risk-based approach to regulating the goods moving to, from and within the Torres Strait. It has not developed a risk-based approach to inspection rates and prioritisation of inspection activities. Drawing on the early outcomes of the Torres Strait Data project (see following section) and in alignment with the wider departmental focus on risk-based management of the biosecurity risk, the department should articulate a risk-based approach for inspection activity. This would provide guidance and support to biosecurity officers operating in the Torres Strait and contribute to optimising the department's allocation of effort and resources.

Recommendation no.2

3.10   The department document a risk-based approach to inspections in the Torres Strait that describes the rate of inspections and how inspection activities should be prioritised.

Department of Agriculture and Water Resources response: *Agreed.*

3.11   *The department agrees to Recommendation 2 and will further refine and document its guidance for prioritising inspection activities in Torres Strait and the Northern Peninsula Area.*

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26   Vessels include barges (for cargo and machinery), vessels under seven meters in length, and vessels above seven meters (such as ferries).

27   Vessels above seven meters in length must provide a pre-arrival report to the department, indicating the type of goods they are transporting and other biosecurity information. Vessels under seven meters do not have pre-arrival reporting requirements. NAQS officers rely on their local knowledge of community events to identify higher risk movements and decide when to conduct inspections of these smaller vessels.

28   The inspection frequency described in the work plan varies depending on the type of vessel and of goods transported. For instance, all yachts and fishing boats must be inspected. All commercial aircraft should also be inspected, with priority given to international flights if several flights arrive at the same time. Government vessels (such as ABF or Navy vessels) should be inspected once every four visits.

Does the department effectively manage border operation data?

The department's management of border operation data is improving but is not yet fully effective. Until February 2018, the data collected and managed by the department on border operation activities did not exist or was unreliable. Since February 2018, the reliability of inspection activity data has substantially improved and a better understanding of vessel, aircraft and cargo movements in the Torres Strait is emerging.

3.12   Auditor-General Report No. 46 of 2011–12 identified that inspection data for aircraft movements were generally accurate and supported by a quality assurance process. However, the inspection data for traditional visitors and vessel movements was generally inaccurate, in some cases incomplete, and lacked a quality assurance process. In addition, there were weaknesses in the collection and analysis of inspection data. The report recommended that the department improve its quality assurance processes and analyses border operation data.

3.13   The 2012 JCPAA report recommended that the department calculate and maintain inspection and seizure rates, and use this information to inform management decisions regarding border operations.[29]

Inspection data – July 2012 to December 2017

3.14   The previous audit report provided examples of the weaknesses of inspection data. The report identified that monthly inspection reports for traditional visitor arrivals in 2009–10 and 2010–11 did not include data from all islands[30], and monthly reports over-reported the number of vessel inspections in 2010–11.

3.15   For this audit, the ANAO analysed the availability and quality of inspection data collected over five years (July 2012–December 2017) prior to the deployment of the Torres Strait Information System in March 2018 (discussed from paragraph 3.17). The data was collected by the biosecurity officers conducting inspection activities on each of the inhabited islands of the Torres Strait. Collection was done at the point of inspection using paper-based tables that were later entered by the officers into spreadsheets. The format of the spreadsheets used to collect data was not consistent over time, and at one stage comprised over 100 variables. The department advised that some of the electronic records for the collected data could not be located. Figure 3.3 shows the data, from the electronic records, for inspections conducted over the five-year period.

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29   Joint Committee of Public Accounts and Audit*, Report 435: Review of Auditor-General's Reports Nos. 33 (2011–12) to 1 (2012–13)*, November 2012, Recommendation No. 8, p. 43.
      The Biosecurity Act 2015 introduced new language and replaced words such as seizure with forfeiture. This Act and the use of the new language came into effect in June 2016.

30   Data was missing for three islands in 2009–10 and four islands in 2010–11.

Figure 3.3:   Number of inspections recorded, July 2012 to December 2017
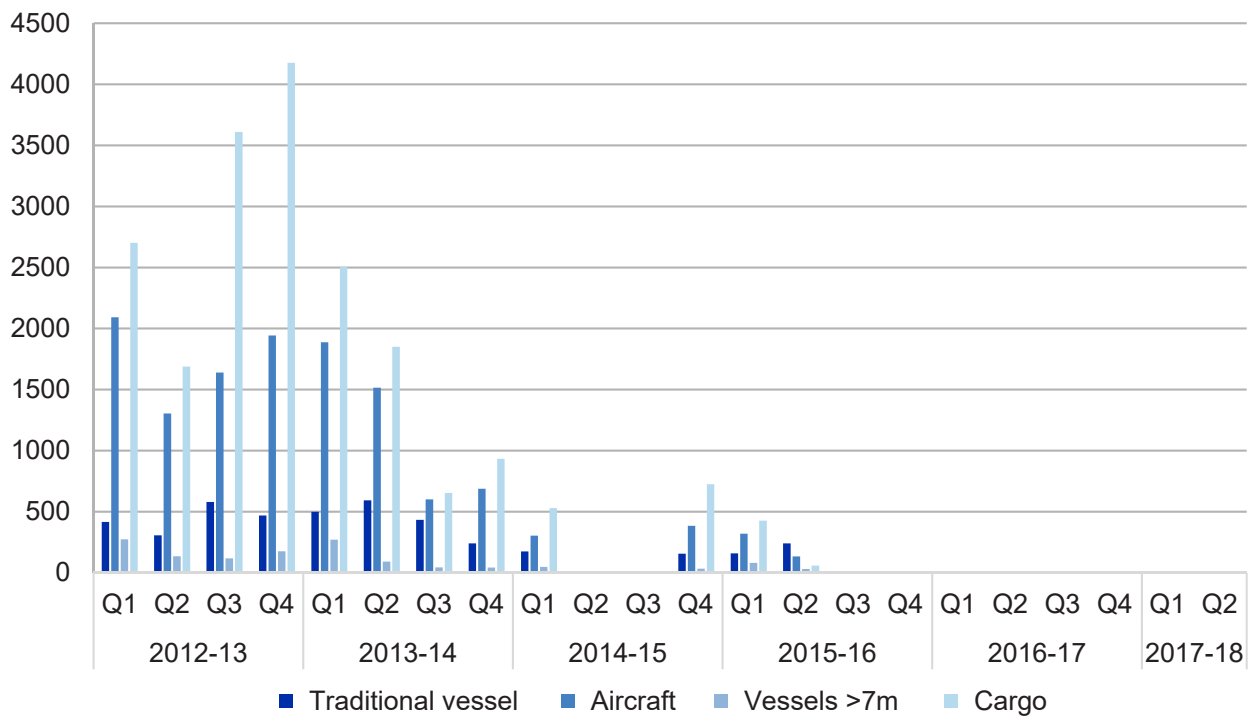
Source: ANAO analysis of Department of Agriculture and Water Resources data.

3.16   As shown in Figure 3.3, the data was sporadically available between July 2012 and November 2015 and unavailable between December 2015 and December 2017. The data that was available contained numerous inaccuracies (such as dates entered incorrectly and data missing for aircraft passengers and crew) and inconsistencies (including categories not consistent over time, dates entered in different formats, and data entered at different time intervals, for example daily and weekly). Due to the poor quality of the data, the extent to which it could be used to inform business decisions was limited.

Border management data enhancement projects

3.17   Funded under the *Our North, Our Future: White Paper on Developing Northern Australia* and the *Agricultural Competitiveness White Paper*, the Surveillance Part D: Torres Strait Data project aims to develop a better understanding of risk pathways in the Torres Strait through improved data management and analysis. The project is expected to inform risk-profiling and biosecurity interventions, and improve the allocation of biosecurity resources across Torres Strait pathways. The project has a budget of $2.66 million, is due to conclude in June 2019, and was assessed by the department as being on time and budget as at August 2018 (see paragraph 5.16).

3.18   The project has several deliverables that can be categorised into three main bodies of work:

•   designing and implementing the Torres Strait Information System (TSIS);

•   conducting survey activity to address data gaps; and

•   engaging with stakeholders to share and collect data.

Torres Strait Information System

3.19   TSIS is an IT application that records inspection, permit and community engagement data in the Torres Strait, either through a mobile application on hand-held devices or through an internet-based application for desktop use. TSIS aims to replace the spreadsheet applications that were used previously. The objectives of TSIS are to:

* streamline the collection, aggregation, risk-profiling and reporting of biosecurity inspection data in the Torres Strait;

* provide a central repository for housing and analysing Torres Strait inspection data;

* obtain improved data to inform risk-profiling and biosecurity interventions; and

* as a secondary function, act as a single repository for performance data related to the department's other NAQS activities in the Torres Strait, including surveillance and community engagement.

3.20   The internet-based application for desktop use was deployed for operational use in March 2018. From June 2018, staff were provided with access to the TSIS application on mobile devices and with the ability to enter data in an offline capacity. This functionality was an essential business requirement designed to address poor connectivity on outer islands in the Torres Strait.

Addressing data gaps

3.21   In 2014, the department commissioned the Centre for Excellence in Biosecurity Research (CEBRA)[31] to develop an approach for implementing risk-based biosecurity arrangements in the Torres Strait. Through this work CEBRA identified data gaps and recommended additional data collection activities, including collecting data on the movement of vessels under seven metres in length, for which biosecurity risks are not well understood. Unlike larger vessels in the Torres Strait, these vessels are not required to report their movements or land at designated ports; consequently, they are difficult for the department to monitor, despite their potential to carry restricted goods southward toward Australia's mainland.

3.22   To address this gap, since June 2016 the department has commissioned a series of surveys using acoustic monitoring and visual observations to estimate the total number of movements (and direction of movements) over a particular route in different seasons. Average movement rates were used to provide estimates of the total number of movements over a year. For example, the department estimated that within a year 1,615 small vessels travel south from the Torres Strait to Seisia (situated on the tip of the Cape York Peninsular on mainland Australia).

3.23   As at March 2018, five surveys had been completed with a further three expected to be completed by June 2019.

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31   CEBRA was established on 1 July 2013 through an agreement between the Department of Agriculture and Water Resources, the New Zealand Ministry for Primary Industries and the University of Melbourne. Its main purpose is to provide research and expertise on biosecurity risk management. Department of Agriculture and Water Resources, *Centre of Excellence for Biosecurity Analysis* [Internet], Canberra. Available from http://www.agriculture.gov.au/biosecurity/risk-analysis/centre-of-excellence-for-biosecurity-risk-analysis [accessed15 October 2018].

Stakeholder engagement

3.24   The third component of the Torres Strait Data project relates to the department's engagement with stakeholders, including other agencies, to capture and share data associated with biosecurity risk pathways in Torres Strait in order to determine a baseline for the total volume of movements in the Torres Strait. As at August 2018, data obtained by the department included:

• data collected by the Department of Home Affairs (ABF) on PNG traditional visitors movements to the Protected Zone conducted under the Torres Strait Treaty;

• data on scheduled aircraft departures and arrivals within the Torres Strait Zones and to and from Australia's mainland;

• data on movements through the Torres Strait of vessels equipped with an automated identification system[32]; and

• cargo data collected from a freight company operating in the Torres Strait.

Telecommunication improvements

3.25   Supporting the data enhancement projects, the department has also invested in a range of technological improvements. This included:

• the provision, between March and June 2018, of mobile devices (tablets and phones) that officers working on islands can use to enter inspection and other data;

• the installation of a satellite internet data service on the three northern-most islands (Boigu, Saibai and Dauan) to support biosecurity operations in these locations; and

• a $3.5 million contribution to a joint telecommunication infrastructure project (with the Torres Strait Regional Authority, the Torres Strait Island Regional Council and Telstra) to improve mobile phone coverage, voice and data services in the central islands (Badu, Moa, Iama, Masig and Erub).

Border management data since TSIS deployment (March 2018)

3.26   While the Torres Strait Data project is not scheduled to conclude until June 2019, a number of the key components have been implemented, including TSIS.

3.27   The ANAO analysed TSIS data from April to August 2018 for inspections conducted on traditional vessels, vessels of more than seven metres in length, aircraft and cargo, and found several improvements, including:

• data had been captured in a consistent format, across a more manageable number of variables (Figure 3.4);

• a number of features are automatically generated, including unique identifiers, inspection time and date stamps, aircraft identification details, and arrival and departure information;

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32   Automatic identification systems are maritime communication devices that larger vessels can use to send and receive identifying information. They aim to reduce the risk of collisions at sea and track and report on vessels movements.

- data is provided in a CSV format[33] that can be read by a range of data analysis software applications; and

- quality control mechanisms incorporated in TSIS, such as drop down menus, checkboxes, date selectors and automated data updates are intended to minimise the risk of data errors; and quick access references and tips aim to provide guidance for staff entering data.

Figure 3.4:   Number of inspections recorded, April to August 2018
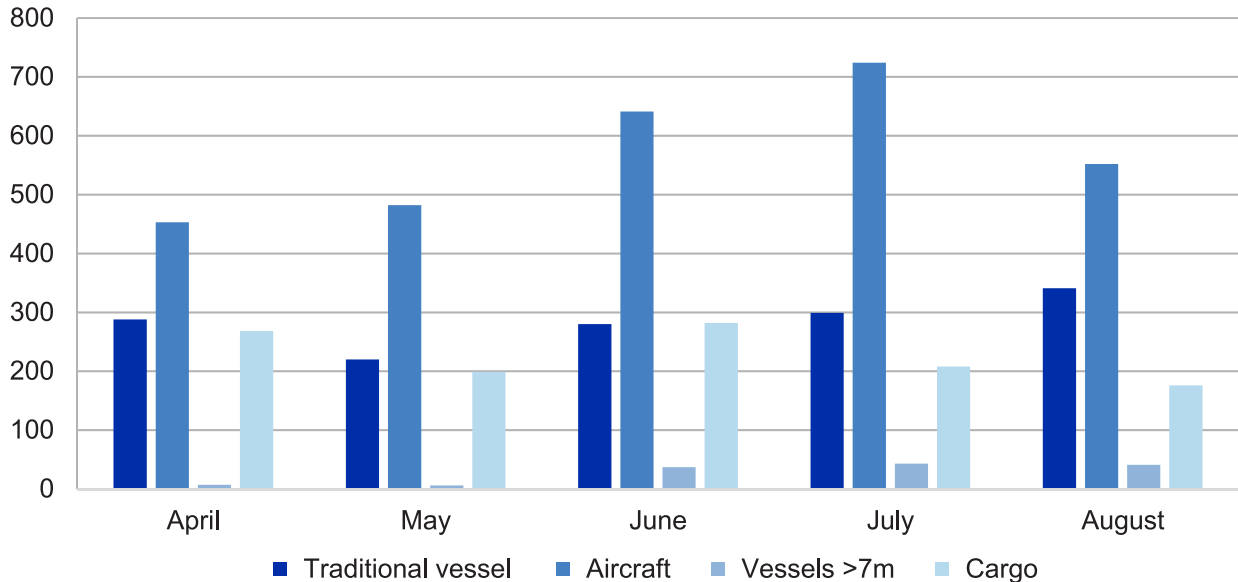
Source: ANAO analysis of Department of Agriculture and Water Resources data.

3.28   A number of NAQS officers consulted by the ANAO have also expressed satisfaction with the new system and with improved telecommunications, which has simplified data collection. Improved features they reported included the ability to collect data on hand held devices, to enter data offline, and to use drop-down menus rather than entering free text.

3.29   While a staff member in Cairns monitors that the data entered is complete and consistent, the department advised that since the deployment of TSIS, quality assurance processes have not been formally established. Quality assurance processes, including through process documentation, audits and reports, should be implemented as soon as practicable.

3.30   The data improvements gained through TSIS and the outcomes of the other elements of the Torres Strait Data project have started to inform reporting for management purposes and border management decisions. Box 3 provides some examples of how the Torres Strait Data project outcomes are being operationalised.

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33   The Australian Government Digital Transformation Agency recommends publishing tabular data in CSV (comma separated value) format. CSV arranges data in the simplest format that can be read by a range of software applications.
Digital Transformation Agency, *Publishing your data* [Internet], Canberra. Available from https://toolkit.data.gov.au/index.php/Publishing_your_data#Creating_datasets [accessed 17 October 2018].

Box 3: Using Torres Strait data for border management decisions and reporting

- Using TSIS inspection data to adjust resource allocation: following TSIS deployment, data has been collected showing that the volume of work required to inspect traditional visitors, in addition to aircraft inspections, justified the allocation of a third biosecurity officer on Saibai.

- Understanding the quantity of certain goods brought in from Torres Strait under treaty arrangements to help determine the potential for biosecurity risk in the region and potential breaches of legislation.

- Using TSIS data to produce performance data for management reporting: a reporting and analytics dashboard was deployed for operational use in June 2018 and is scheduled for inclusion in reporting to management from October 2018. The performance data to be presented in monthly dashboards includes movements, inspections and forfeitures (see example below). This will give the department the capacity to calculate forfeiture rates.

2018 September Torres Strait movements, passengers, inspections, units inspected and forfeitures

	AIRCRAFT	CARGO	TRADITIONAL VESSEL	VESSEL OVER 7 METRES
Number of movements	546	285	191	70
Passengers number	4,122	—	1,913	—
Units inspected	925	940	4,749	936
Number of forfeitures	10	1	6	26
Number of inspections	579	244	191	2 / 26
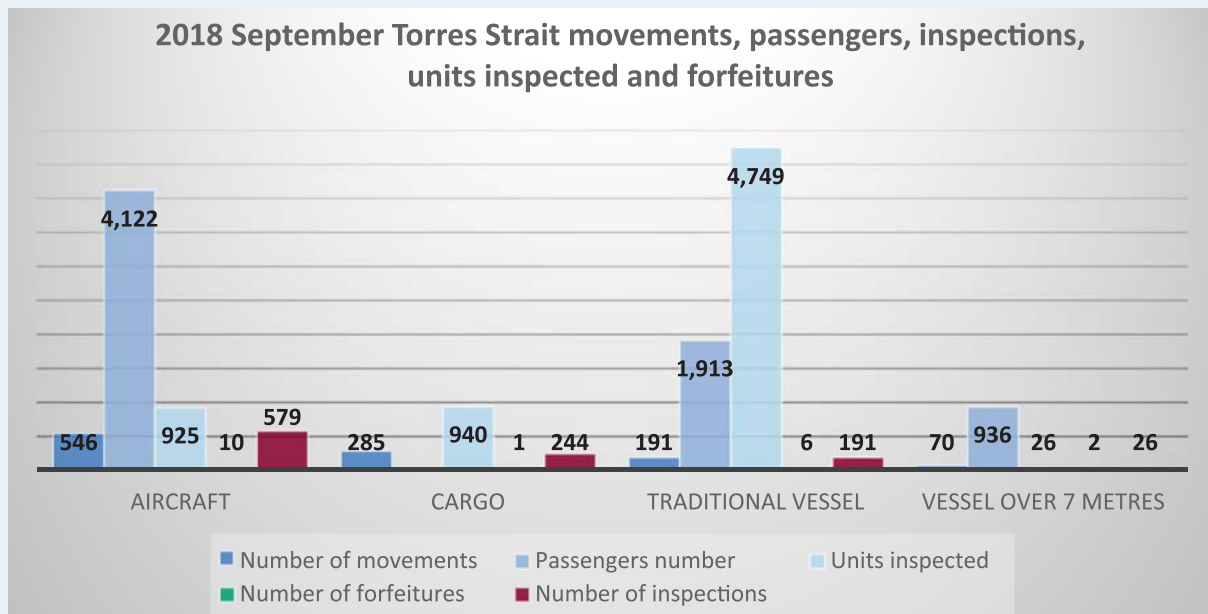
Source: Department of Agriculture and Water Resources

Does the department have effective arrangements with the Australian Border Force to support NAQS activities in the Torres Strait?

> The department's arrangements with the ABF aimed at supporting NAQS activities in the Torres Strait are mostly effective. The agreement between the departments to carry out duties on behalf of each other has not been updated following the commencement of the Biosecurity Act in June 2016. As a result, there is a risk that the biosecurity duties that ABF officers are allowed to perform are not clear.

3.31   A large number of government entities operate in the Torres Strait, at Commonwealth, Queensland and local government levels. At the Australian Government level, entities are present to administer issues related to the border with PNG and operation of the Torres Strait Treaty, international shipping traffic in difficult waters, and fisheries habitats and ecosystem resources.

3.32   In the Torres Strait, as at other international borders, the department's biosecurity officers and ABF officers (within the Department of Home Affairs) work side by side to administer immigration, customs and biosecurity regulations. For at least 15 years the two departments have entered into a suite of agreements to authorise their officers in the Torres Strait to carry out defined functions on behalf of the other entity in case of planned or unplanned events, including staff leave. The agreements also covered the use of some resources (including vehicles and office equipment) to carry out relief duties and as a longer term sharing arrangement. The arrangements aimed to provide a practical solution to working circumstances in a remote area, by continuing to deliver defined biosecurity and monitoring services when staff from one of the entities are not present on an island.

3.33   A Memorandum of Understanding, signed in 2004 between the Australian Quarantine and Inspection Service and the Department of Immigration and Multicultural and Indigenous Affairs, describes the work activities to be conducted by officers from both agencies in order to clear traditional vessels. These activities include:

- conducting a search of the vessel, and inspecting any baggage and goods on board, under false floors and water containers for prohibited items;

- seizing prohibited items for disposal or re-export to PNG; and

- issuing notices of seizure.

3.34   Following the commencement of new biosecurity legislation in June 2016, the operational conduct of biosecurity activities changed. Under the Biosecurity Act, biosecurity officers must be authorised by the Director of Biosecurity (Secretary of the department) before they are able to use the powers conferred by the legislation. These powers include:

- inspecting a vessel or goods;

- requiring a person to answer questions about the goods;

- requiring any action to be taken in relation to the movement of goods;

- requiring goods to be treated, exported or destroyed; and

- affixing a biosecurity control notice to goods.

3.35   The authorisation to undertake each of these activities is provided separately by the Biosecurity Act, and not all biosecurity officers are authorised to undertake all activities. For example, only some more senior biosecurity officers are delegated the power to affix a biosecurity control notice.

3.36   The department and ABF began updating the 2004 Memorandum of Understanding to reflect the provisions of the new biosecurity legislation and drafted a Letter of Exchange, with an expected signature date of October 2016, to replace the Memorandum of Understanding. The document, titled *Agreement for the Provision of Biosecurity Officer and Border Monitoring Officer Support in the Torres Strait*, outlines the roles and responsibilities for ABF officers performing defined functions of a biosecurity officer. It also refers to the ABF Clearance of Traditional Visitors Work Instructions that ABF officers must follow.

3.37   The defined biosecurity functions of ABF officers include asking questions about goods being moved; and with the consent of traditional visitors, inspecting the vessels or goods and securing goods for treatment, re-export, destruction or release. The Letter of Exchange further states that:

> Where consent and cooperation is not provided, the ABF officer should make note of the individual/s and report details to Department staff when they return to the island.

3.38   As at November 2018 the Letter of Exchange was not finalised or signed and work instructions had not been finalised or distributed. The department advised that the principles outlined in the 2004 Memorandum of Understanding remained in place, pending its replacement with a more contemporary exchange of letters, and that ABF officers had been verbally instructed of the changes to the biosecurity activities they are able to perform. The Department of Agriculture and Water Resources and the Department of Home Affairs also advised that they are committed to settling the Letter of Exchange and the work instructions as a priority. Given the time passed since the Biosecurity Act commenced, it will be beneficial for the department, in consultation with ABF, to finalise the arrangements, thereby providing clarity on the biosecurity duties that ABF officers are allowed to perform under the Act.

4. Performance measurement framework

Areas examined

This chapter examines whether the Department of Agriculture and Water Resources (the department) has addressed Recommendation No. 3 of Auditor-General Report No. 46 of 2011–12. It assesses the department's performance measurement and reporting framework for the Northern Australia Quarantine Strategy (NAQS).

Conclusion

The department has not addressed key aspects of Recommendation No. 3 of Auditor-General Report No. 46 of 2011–12. The department has clearly articulated NAQS' objectives, but does not have a robust performance measurement framework to assess NAQS' progress against its objectives and its effectiveness.

Area for improvement

The ANAO made one recommendation aimed at developing a performance framework that is relevant, reliable and complete, and a suggestion to use this revised framework to improve the reporting of NAQS' performance.

4.1   Auditor-General Report No. 46 of 2011–12 established that the stated objective of the NAQS program identified key activities, but did not clearly articulate NAQS' primary purpose. The department had also, at the time of the 2011–12 audit, recently revised NAQS' performance measures for border operations and developed measures for scientific surveillance and public awareness activities, but the report identified some weaknesses in relation to these performance measures and the data informing the measures.[34]

Does the department have a robust performance measurement framework to assess NAQS effectiveness?

> The department does not have a robust performance measurement framework to assess NAQS' effectiveness. The department has clearly articulated the NAQS' objectives and the new NAQS objectives, outputs and performance measures provide a clear line of sight between strategic corporate documents and business-level planning tools. However, the majority of the performance measures have significant weaknesses in terms of relevance, reliability and, collectively, completeness.

NAQS objectives, outputs and performance measures

4.2   As at October 2018, the department's website and other public documents indicated that NAQS' purpose was to 'provide an early warning system for exotic pests, weed and disease detections across northern Australia and to help address unique biosecurity risks facing the region.' NAQS' objectives are clearly articulated on the department's website (see paragraph 1.7).

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34   Auditor-General Report No. 46 of 2011–12 *Northern Australia Quarantine Strategy*, pp. 23 and 112.

4.3   In July 2016 the department brought NAQS and Operational Science Services together to be co-managed by the Science Services Group (the Group). The Group is responsible for 'the effective and efficient delivery of a range of scientific services, community engagement in northern Australia, and regulatory services in the Torres Strait, to manage biosecurity and export risks'. While maintaining a separate budget, NAQS adopts the Group's set of objectives and performance measures. The department advised that NAQS' name and objectives, as presented in public documents, are preserved because of the long history behind the program and the level of recognition among the public for the NAQS 'brand.'

4.4   From July 2018, the objectives, outputs and performance measures for the Group and for the Biosecurity Operations Division, to which the Group belongs, were revised. The department advised that in an effort to simplify and improve the measurement of the Group's performance, the objectives were reduced from seven to two, and the outputs from 11 to seven. The number of performance measures increased from nine to 14. Table 4.1 presents the Group's objectives, outputs and performance measures as at October 2018.

Table 4.1:   Science Services Group's objectives, outputs and performance measures as at October 2018

Objectives and outputs	Performance measures
Objective 1.1: Deliver innovative, flexible and responsive scientific services, community engagement, and a Torres Strait regulatory system, to meet current and emerging biosecurity and export risks.	
Output 1: Strengthen the group's ability to anticipate and proactively manage biosecurity and export risks through the implementation of continuous improvement, innovation and future design, including the delivery of specific projects aligned to the *Developing Northern Australia* and *Agricultural Competitiveness* White Papers, and National Border Surveillance (NBS) initiatives	1. Outcome of verification – implementation of recommendations 2. Developing Northern Australia, Agricultural Competitiveness White Paper and National Biosecurity Surveillance measures are implemented within agreed timeframes, budget and scope 3. Biosecurity risks effectively managed. In particular, target pests and diseases are effectively monitored for, and programs (NBS, vector, etc.) delivered within associated program plans 4. Timely diagnosis and provision of high quality and consistent risk management advice to key parties to better manage operational biosecurity risks 5. Laboratory and diagnostic audits are passed
Output 2: Implement and maintain effective operational processes and systems including improvement in data and analysis capability	6. Ongoing delivery of stream innovation initiatives (such as the Enterprise Surveillance System and Torres Strait Information System) results in improved operational performance 7. Data and reporting capabilities support operations and decision making and drive performance
Output 3: Work collaboratively and maintain strong relationships with clients and stakeholders to develop a shared responsibility to derive better biosecurity and export outcomes	4. Timely diagnosis and provision of high quality and consistent risk management advice to key parties to better manage operational biosecurity risks[a]

Objectives and outputs	Performance measures
Objective 2: Enhance and maintain Science Services Group assets and capabilities to ensure we are an effective, efficient and flexible group.	
Output 4: Build and maintain a competent, diverse, and agile workforce internally, and externally through the capability of Indigenous ranger groups and other third parties	8. Demonstrated competency of staff (link to verification)
	9. Adherence to Australian Public Service Values and Code of Conduct
	10. Positive attendance culture and management of unplanned absence
	11. Improved diversity and gender balance achieved compared to 2017-18, and awareness continues to improve
Output 5: Maintain a positive Work Health & Safety culture and the highest levels of integrity	12. Key Work Health & Safety obligations met
Output 6: Effectively operate within a sustainable financial model through the improved allocation of resources and activity aligned to risk	13. Financial operations within 5% of approved budget (taking into account approved budget and staffing changes)
Output 7: Implement effective change processes consistent with the broader division to transition SSG to meet future requirements	14. Demonstrated change leads to improved practices, processes and systems

Note a: Performance measure 4 is used for both Output 1 and for Output 3
Source: Department of Agriculture and Water Resources, *Science Services Group Business Plan 2018–19*.

4.5   The ANAO verified that the Group's 2018–19 Business Plan identifies the links between its objectives and outputs and those of the Biosecurity Operations Division. In turn, the Biosecurity Operations Division 2018–19 business plan identifies, through its purpose, the program and objectives to which it contributes in the department's 2018–19 Portfolio Budget Statement and 2018–19 Corporate Plan. As a result, there is a clear line of sight between key strategic corporate documents and business-level planning tools.

Appropriateness of the performance measures

4.6   The ANAO assessed whether the Science Services Group's performance measures were relevant, reliable and complete. This assessment is based on the characteristics of appropriate performance information as defined by the Department of Finance.[35] The detailed criteria can be found at Appendix 2. The ANAO's analysis found that the majority of the Group's performance measures have weaknesses in terms of relevance, reliability and, when considered collectively, completeness, as discussed below.

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35   Department of Finance, *Resource Management Guide 131: Developing Good Performance Information* [Internet], Australian Government, Canberra, 2015, available from https://www.finance.gov.au/https://www.finance.gov.au/sites/default/files/RMG%20131%20Developing%20good%20performance%20information.pdf [accessed 4 October 2018].

Table 4.2: **ANAO analysis of the relevance and reliability if the Science Services Group's performance measures**

	Met	Partly met	Not met
Relevance	10	1	3
Benefit	11	1	2
Focus	10	0	4
Understandable	10	1	3
Reliability	2	8	4
Measurable	2	2	10
Free from bias	9	1	4

Source: ANAO analysis of the Science Services Group 2018–19 Business Plan.

Relevance

4.7   Several measures adopted a wide focus that were not sufficiently or clearly defined. They also did not identify who would benefit from the activity and, as a result, did not enable the assessment of how the Group's output would be achieved. For example 'Measure 7 – Data and reporting capabilities support operations and decision making and drive performance' and 'Measure 14 – Demonstrated change leads to improved practices, processes and systems'.

Reliability

4.8   As a result of their lack of a clearly defined focus, most of the Group's performance measures are not readily measurable. In addition, almost no measures disclosed the method or parameters (target, timeframes or baselines) that would be used to collect data and measure performance, making it impossible to compare actual performance with expected results. The measures that referred to a measureable activity, for example 'Measure 1 – Outcome of verification – implementation of recommendations' or 'Measure 5 – Laboratory and diagnostics audits are passed', did not indicate a numerical target, such as the minimum proportion of verifications or audits that should be passed.

Completeness

4.9   The 2018–19 Business Plan defines the Group's purpose as follows:

> The Science Services Group is responsible for the effective and efficient delivery of a range of scientific services, community engagement in northern Australia, and regulatory services in the Torres Strait, to manage biosecurity and export risks. [The Group's] scientific services include diagnostics, on-and-offshore surveillance activities that report and analyse biosecurity threats, technical training, risk management advice and support to policy areas, programs, inspectors and other key stakeholders. [The Group] is client-focused, and driven by a culture of continuous improvement and collaboration.

4.10   Some fundamental activities of the Group, as referred to in the purpose, are not addressed by any of the 14 performance measures. This is the case for three listed below.

- On-and-offshore surveillance activities: a measure assessing whether surveillance activities have been conducted in line with the area and pest biosecurity risk rating would be useful

to inform stakeholders and management about the extent to which risk priorities are being met[36];

- Inspections: Inspections are presented as an important tool to manage biosecurity at the border with PNG. Assessing whether inspections are conducted consistently with the level of risk identified for specific pathways is an example of a measure that would demonstrate whether the inspections effectively support the management of biosecurity risk in the Torres Strait;

- Community engagement: public awareness activities, in particular those delivered under the 'Biosecurity Top Watch' initiative, are presented as vital by the department to deliver biosecurity responsibilities across the vast and diverse NAQS zone. A measure such as the level of positive media coverage or awareness levels in NAQS zones would help assess the performance of this program.

4.11   The performance measures identified for some of the outputs are not complete, as they do not allow the reader to form a judgement on whether the output is being achieved. For example:

- 'Output 4 – Build and maintain a competent, diverse, and agile workforce internally, and externally through the capability of Indigenous ranger groups and other third parties' is assessed against four measures, but none of these measures assess the capability of Indigenous rangers; and

- 'Output 5 – Maintain a positive work health and safety culture and the highest levels of integrity' has no measure assessing integrity levels.

Performance framework development

4.12   The development of an appropriate performance framework for NAQS has been an issue for at least ten years.

4.13   In 2007, a review of the biosecurity function commissioned by the department indicated that NAQS was in the process of reviewing its performance indicators with a view to introducing new effectiveness indicators, which would be simplified and consistent with other departmental quarantine programs.[37] The report recommended that a meaningful and complete set of performance indicators be developed for NAQS, and that the work undertaken to develop a more robust set of performance measures for the program be implemented as soon as possible.[38] In 2010, an internal audit report recommended the development of performance indicators for the scientific surveillance program.[39] As previously stated, Auditor-General Report No. 46 of 2011–12 also recommended that the department develop improved performance measures for NAQS.

4.14   The department has indicated that developing performance indicators for the biosecurity system is challenging because of the 'complex interplay of parts across supply chains, geographies,

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36   Such a measure was present in the draft set of performance measures examined by Auditor-General Report No. 46 of 2011–12 *Administration of the Northern Australia Quarantine Strategy*, p. 107.

37   Ernst & Young, *Australian Quarantine and Inspection Service, Review of Quarantine Border Security Strategies and policies*, August 2007, p. 230.

38   ibid. p. 10.

39   Quoted in Auditor-General Report No. 46 of 2011–12 *Administration of the Northern Australia Quarantine Strategy*, p. 107.

jurisdictions and stakeholders'[40] and because of the difficulties associated with collecting and measuring the impact of 'absence data'.[41] The 2017 Intergovernmental Agreement on Biosecurity Review acknowledged these challenges, but stressed that good performance information is critical to being able to tell a cohesive biosecurity performance story, and that public reporting of that performance information is also critical to maintaining the support of the community.[42] The Review recommended that external expertise be drawn upon to develop a performance framework and indicators for government biosecurity services.

4.15   Developing meaningful performance measures is critical to determine the extent to which the department is effectively managing biosecurity risk in northern Australia.

Recommendation no.3

4.16   The department develop a relevant, reliable and complete framework of measures to assess its performance in managing biosecurity risk in northern Australia.

Department of Agriculture and Water Resources response: *Agreed.*

4.17   *The department agrees to Recommendation 3 and will build upon NAQS' clearly articulated objectives and the outcomes of major biosecurity projects under the Agricultural Competitiveness and Developing Northern Australia White Papers to strengthen performance metrics. The department also notes the ANAO's finding that measuring the impact of some programs can be difficult and may require proxy indicators. The department will consider this in further developing the NAQS performance framework.*

Does the reporting of performance information demonstrate the effectiveness of NAQS' activities?

The performance reporting developed for management purposes does not demonstrate the effectiveness of NAQS' activities. The reporting provides a picture of NAQS' activity at a point in time but, due to a lack of targets, does not enable a reliable assessment of performance against intended objectives or outputs.

4.18   The Science Services Group produces or contributes to several management reports in which the Group's activities are documented:

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40   Department of Agriculture and Water Resources, *Australian Government's submission to the Intergovernmental Agreement on Biosecurity 2017 Review* [Internet], Australian Government, Canberra, 2017, p. 21, available from: http://www.agriculture.gov.au/biosecurity/partnerships/nbc/intergovernmental-agreement-on-biosecurity/igabreview/discussion-paper [accessed 24 September 2018].

41   'Absence data' refers to data that demonstrate the absence of pests. Being able to demonstrate absence from pest is at the basis of the pest status determination that enable trade and market access and underpins export certification and import regulations.

42   W. Craik, D. Palmer & R. Sheldrake, *Priorities for Australia's Biosecurity System, An independent review on the capacity of the national biosecurity system and its underpinning Intergovernmental Agreement,* Australian Government, Canberra, 2017, pp. 123 and 127, available from http://www.agriculture.gov.au/SiteCollectionDocuments/biosecurity/partnerships/nbc/priorities-for-aus-bio-system.pdf [accessed 12 October 2018].

- monthly dashboards, which are used at the Group level; and

- quarterly progress reports, a mid-year review and an end-of-year review, which are used at the Biosecurity Operations Division level, and to which the Group contributes.

4.19   To assess the extent to which the information provided in these reports informs management of NAQS' activities, the ANAO examined the information presented in the January to July 2018 monthly dashboards; and a range of quarterly progress reports and mid-year and end-of-year reviews produced during 2017–18.[43]

Monthly dashboards

4.20   Monthly dashboards are two-page documents outlining a range of summary information, including:

- key achievements, risks and issues, and planned events and activities;

- human resource, financial information, and verification (audit) activities; and

- operational highlights for the Group, including specific information on surveillance and diagnostics activities and White Papers projects.

4.21   Since January 2018 the dashboards provided a detailed snapshot of activities conducted in the reporting month and recent versions showed some trends and comparisons across time. However, key activities are reported at point in time (for example, the number of fruit fly detections, the number of animal survey activities, and White Papers projects status and achievements for the month). In addition, since no targets or benchmarks are provided, it is difficult to understand how the Group is tracking against performance measures, outputs or objectives.

Progress reports and reviews

4.22   The quarterly reports follow a template that lists the Division's objectives, and provides status information against each of the objective's outputs, risks and performance measures. The mid- and end-of-year reviews report against a similar template, with an additional section that provides a commentary against questions on staffing priorities and emerging issues, risks and opportunities. The status against each output has a three-point rating scale: 'completed', 'on track' and 'discuss'.

4.23   As previously noted, the performance measures do not indicate the method or parameters (target, timeframes or baselines) to be used to collect data and assess performance. In this context, the status rating is based on a subjective assessment of the Group's performance, and the statistics included do not provide a clear picture of progress towards a defined target. Table 4.3 provides an example of the information provided for the group's first objective and first output.

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43   As previously indicated, the Group's performance measures changed in July 2018. The reports produced against these new performance measures were not available at the time of the audit analysis.

Table 4.3: **Reporting against Objective 1, Output 1 – Mid-year review 1 July 2017 to 31 December 2017**

Objective 1: Deliver a modern, flexible and responsive biosecurity and export regulatory system under the Biosecurity Act 2015 (PBS priority) and the Export Control Act 1982				
Output 1	Risk	Performance measure	Status	Comment
Deliver regulatory services to manage biosecurity and export risks	Failure to deliver the required services to manage biosecurity and export risks	Services are delivered to effectively manage identified biosecurity and export risks	On track	Verification of inspection and clearance processes, and Australian National Quality Assurance Program testing provides assurance that biosecurity risks are being managed. 143 Biosecurity Pest and Disease Notifications were initiated over six months for significant pests and diseases (compared to 220 for the previous 12 months in 2016). 71 permits were issued for the movement of goods from the Torres Strait to the Australian mainland.

Source: Department of Agriculture and Water Resources.

4.24   After the department has revised its performance measurement framework for NAQS, in line with Recommendation no.3, it should ensure that its management reporting includes regular assessment against the revised measures.

5. Management of White Papers projects

Areas examined

This chapter examines the Department of Agriculture and Water Resources' (the department's) management structures to support the implementation of six projects funded under the *Agricultural Competitiveness White Paper* and the *Our North, Our Future: White Paper on Developing Northern Australia* and the progress of the projects.

Conclusion

The department has established robust management structures to support the implementation of the biosecurity projects funded under the White Papers. As at October 2018, four of the six projects were tracking well against time and budget.

5.1   As part of the 2015 *Agricultural Competitiveness White Paper* the Australian Government committed $200 million of the overall $4 billion investment for biosecurity surveillance and analysis to better target biosecurity risk and support market access. Through the 2015 *Our North, Our Future, White Paper on Developing Northern Australia*, $1.2 billion were committed over four years from 2015 to support the economic development of the northern part of Australia.

5.2   The White Papers provided a total of $61 million for six projects that have direct implications on biosecurity management in northern Australia.

Table 5.1:   Northern Australia biosecurity projects funded under the *Agricultural Competitiveness White Paper* and/or the *White Paper on Developing Northern Australia*

Project	Key objectives	Budget ($'000)	Timeframe
Better Data	Improve accessibility and use of biosecurity data by investing in access to historic surveillance and capability to analyse and report on biosecurity data.	980	Apr 2016 – Jun 2019
Community Engagement	Build on the existing Biosecurity Top Watch initiative to increase biosecurity awareness and expand community engagement.	4,969	Sept 2016 – Sept 2018
Modern Diagnostics	Increase and improve diagnostic services, skills and tools.	6,240	Feb 2016 – Jun 2019
Indigenous Rangers	Expand surveillance and compliance activities delivered by Indigenous ranger groups.	12,052	Nov 2015 – Sept 2018

Project	Key objectives	Budget ($'000)	Timeframe
Enterprise Surveillance System	Establish nationally consistent and efficient business processes that support surveillance, sample tracking and diagnostic activities; and develop the capability for collecting, storing, sharing, analysing and reporting on surveillance data through implementation of a modern IT system.	15,685	June 2015 – June 2018
Surveillance	Parts A – D: Increase and improve pest and disease surveillance activities	21,190	Mar 2016 – Jun 2019
Part A: Northern Plant and Animal Health	Increased collaboration with all northern jurisdictions and industry, and development of agreed approaches to priority surveillance activities including peri-urban areas.		Mar 2016 – Jun 2019
Part B: Aquatic Biosecurity Capability	Development of aquatic pest and disease surveillance capability including communications and engagement strategy.		Apr 2016 – Jun 2019
Part C: Torres Strait Infrastructure	Upgrades to 12 premises of office and residential accommodation in Torres Strait and Northern Peninsula Area.		Mar 2016 – Mar 2018
Part D: Torres Strait Data	Develop strategies, tools and systems for collation & analysis of data relating to the Torres Strait risk pathway.		June 2016 – June 2019

Source: DAWR documents.

5.3   The department expects that the White Papers funding will have a significant impact on its capacity to target critical biosecurity risks, and will help grow the evidence base supporting Australia's pest and disease status.

Does the department have a robust management structure in place to support the implementation of the White Papers projects?

> The department has established a robust management structure, combining internal and external governance structures, to support the implementation of the White Papers projects in northern Australia.

Internal governance

5.4   In April 2016, the department established the White Papers (Biosecurity) Implementation Program (the Program) to manage the implementation of a range of White Papers projects. Including the six projects focusing on northern Australia, 30 projects were part of the Program in 2017–18.

5.5   The governance structure established by the Program includes the White Papers (Biosecurity) Implementation Board (the Board), the purpose of which is to provide general oversight to all the projects funded under the two White Papers and to assess achievement against milestones. The Board, established in early 2016, is the primary governance body responsible for

implementing the Program. Chaired by the Deputy Secretary responsible for biosecurity, it reports to the department's Executive Management Committee.[44]

5.6   An Implementation Office within the Biosecurity Policy and Implementation Branch provides the overarching coordination of the White Papers projects and is responsible for reporting on Program-level implementation to the Board, including progress against milestones and budget management.

5.7   The governance structure supporting the implementation of the White Papers projects makes provisions for the following program management controls:

• an assurance framework, including internal quality reviews, audits and a benefit realisation strategy;

• risk and issue management registers, maintained at program level;and

• a change management plan that describes the process that must be followed when the project plan needs to be modified as a result of an internal or external change.

5.8   Project implementation is also supported by a range of project-level processes. These processes were consistent across all biosecurity projects funded under the White Papers, and included:

• a project plan, providing an overview of the project components, including objectives, outcomes, outputs, scope, stages, milestones and funding;

• a quality management plan, included in the project plan, which identifies for each project a list of criteria that must be met and signed off by an appropriate internal stakeholder (for instance, training material developed as part of the Indigenous Ranger project must be signed off by the Assistant Secretary Learning and Development); and

• monthly reporting on the project status to the Board, which documents the project's progress against deliverables, risk status and spending against approved budget.

5.9   Between March 2016 and August 2018, the Board met 17 times. The ANAO examined the outcomes for the four meetings conducted between February and August 2018. They demonstrate that:

• the Board has met as scheduled, every six to eight weeks;

• the meetings were attended by members of the department's senior management; and

• the projects at risk of not delivering against schedule or budget were identified and discussed, and the impact of potential delays or financial issues on the projects and program benefits were considered.

5.10   As at October 2018, two quality reviews had been conducted (August 2017 and August 2018). They were effective in alerting the Board to key risks to the overall delivery of the Program, in particular the challenges experienced in the implementation of the Enterprise Surveillance Systems project (see paragraphs 2.25 and 5.16).

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44   The Executive Management Committee is the department's key advisory body to the Secretary. The Committee's key functions include monitoring performance against strategies and priorities and providing appropriate oversight of risk management.

External governance

5.11   In late 2015, the Northern Australia Biosecurity Framework (the Framework) was established to provide a forum for governments and industry to manage the biosecurity risk in northern Australia. The Framework is implemented by a Reference Group, chaired by the department's Deputy Secretary responsible for biosecurity and including senior biosecurity representatives from the Australian, state and territory governments, Plant Health Australia and Animal Health Australia.[45] The Reference Group's purpose is to 'provide strategic advice, and support for, a collaborative approach to the delivery of biosecurity in northern Australia'.

5.12   Supported by the financial and policy framework from the White Papers, the Framework aims to:

* develop and share information on biosecurity prevention, detection and management, particularly on tropical plant and animal pests and diseases;

* encourage cooperation between governments, agricultural industries and research institutions on tropical biosecurity; and

* share resources wherever possible to deliver timely and well-informed decisions about tropical biosecurity.

5.13   The ANAO reviewed the minutes and supporting papers for the six Reference Group meetings held between March 2016 and September 2018. The Reference Group met at least twice a year since it was established. The Reference Group contributes effectively to the governance of the White Papers projects, by creating an additional level of scrutiny and transparency, and by increasing the department's accountability within the biosecurity community. For example:

* at the first meeting of the Reference Group (March 2016), the White Papers projects were presented and input was sought to test whether the priorities identified in the projects aligned with other stakeholder priorities;

* the department updated the Reference Group on the progress and achievements of the White Papers projects at each of the subsequent meetings (the update was a standing item on the agenda);

* in December 2017 the department's Deputy Secretary and Chair of the Reference Group circulated a detailed document outlining the achievements associated with the White Papers projects to the members of the Reference Group; and

* at the November 2018 meeting, the Chair provided to the Reference Group members, in anticipation of most White Papers projects funding ending in June 2019, a matrix of key White Papers initiatives including information on whether the projects would be transitioning after the White Papers funding ends.

5.14   Meeting papers show that the Reference Group focuses on cooperation and sharing information. This contributed to the Group's capacity to address gaps and reduce potential duplications in the implementation of White Papers projects.

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45   Plant Health Australia and Animal Health Australia are not-for-profit companies that aim to facilitate and coordinate interactions between industry and Australian, state and territory governments. The companies' activities are funded by government and non-government member subscriptions.

Are the White Papers projects on track to deliver against their timeframe and budget?

As at October 2018, four of the six White Papers projects contributing to NAQS activities were on track. One of the other projects, the Enterprise Surveillance System, has experienced issues that have adversely impacted on its budget and timeframes.

5.15 The six White Papers projects impacting biosecurity activities in Northern Australia have timeframes for completion between November 2015 and June 2019. Using the October 2018 status reports provided to the White Papers Implementation Board, the ANAO reviewed the progress of these projects against milestones, timeline and budget.

5.16 For four of the six projects, most milestones had been completed within agreed time tolerance (three months) and were not experiencing delays outside tolerance. Two projects were experiencing delays outside tolerance:

- Enterprise Surveillance Systems: Rated 'amber', the project was initially scheduled to be completed in June 2018. A change request was approved by the Board, with a new completion date of December 2018. As at October 2018, two milestones were delayed due to new requirements identified during the user acceptance testing phase of the production: the deployment into production of one of the four information management systems software applications included in the project (Register of Specimens and Collections Management System); and the release of the trapping module.[46] The project also required an additional budget of $2.16 million, and the department was considering reallocating the uncompleted deliverables to a new project or to business-as-usual activities.

- Surveillance: Part C: Torres Strait Infrastructure: The project objective was to upgrade 12 facilities in the Torres Strait Islands and in the Northern Peninsula Area (Bamaga). Four of these facilities were not completed as at August 2018, for reasons including delays in Indigenous Land Use Agreements negotiations. Rated 'red', it is expected that the project will be completed in March 2019, a one year delay.

5.17 The delays and other issues experienced by the Enterprise Surveillance Systems project have had an impact on its budget and on the timely completion of important deliverables. All other projects were either on budget or demonstrated an underspend, which was being monitored by the Reference Group.

Rona Mellor PSM
Acting Auditor-General

Canberra ACT
17 January 2019

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46 The trapping module is designed to house the department's surveillance data particular to insect/vector trapping programs (other than Torres Strait fruit fly trapping, which has a dedicated module within the system).

Appendices

Appendix 1   Entity responses

Australian Government

Department of Agriculture and Water Resources

Mr Grant Hehir
Auditor-General
Australian National Audit Office
19 National Circuit
BARTON ACT 2601

Dear Mr Hehir

Thank you for providing the Department of Agriculture and Water Resources (the department) with the opportunity to comment on the Australian National Audit Office's (ANAO's) proposed report on its follow-on audit of the Northern Australia Quarantine Strategy (NAQS).

The department acknowledges the ANAO's overall conclusions and findings. The department is pleased the ANAO recognises the department's progress since the previous audit in 2012, and highlights the robust approach to managing biosecurity risk.

The department agrees with the three recommendations.

The department has separately provided detailed feedback, at an officer level, on the proposed report.

The department's response, including responses to each of the recommendations, is enclosed for publication in the final report (at Attachment A and Attachment B).

I would like to thank the ANAO for the cooperation of the audit team and the professional manner in which the audit was conducted.

Thank you again for the opportunity to comment on the proposed audit report.

Yours sincerely

Daryl Quinlivan

18   December 2018

Australian Government

Department of Home Affairs

Grant Hehir
Auditor-General
Australian National Audit Office
GPO Box 707
Canberra ACT 2601

Dear Mr Hehir

Thank you for the opportunity to provide comments on the Australian National Audit Office's (ANAO) report on the *Northern Australia Quarantine Strategy – Follow on Audit.*

The Department of Home Affairs (the Department) and the Australian Border Force (ABF) acknowledge the value of the ANAO providing independent insights into the how the government entities operating in the Torres Strait can work more effectively together. The ABF and the Department of Agriculture and Water Resources (DAWR) have a long and productive working relationship in this unique operating environment which relies on cooperation to provide border security and deliver services to the Commonwealth, including the administration of immigration, customs and biosecurity regulations.

We agree that formalising a working agreement with DAWR to deal with the duties carried out on behalf of each other through a Letter of Exchange or Memorandum of Understanding would be beneficial. The ABF and DAWR, as a priority, are working to formalise a Letter of Exchange that will articulate roles, responsibilities and work instructions.

While this is occurring the ABF will continue to work under existing arrangements with DAWR to assist in the monitoring of biosecurity and quarantine risks.

Yours sincerely

Mark Brown

Chief Audit Executive

December 2018

Appendix 2   Criteria for assessing the relevance, reliability and completeness of performance information

The following criteria were presented in Auditor-General Report No. 58 2016–17 *Implementation of the Annual Performance Statements Requirements 2015–16.* The criteria reflect the Department of Finance's guidance to support the Commonwealth performance framework.[47]

	Criteria	Characteristics	Explanation
Individual assessment	**Relevant** *A relevant performance criterion assists users' decision making in regard to an entity's progress in fulfilling its purpose.*	Benefit *The performance criterion clearly indicates who will benefit and how they will benefit from the entity's activities.*	The performance criterion should explain who will benefit from the activity and how the recipient benefitted.
		Focus *The performance criterion should address a significant aspect/s of the purpose, via the activities.*	The performance criterion should assist significantly in informing whether the purpose is being achieved.
		Understandable *The performance criterion should provide sufficient information in a clear and concise manner.*	The performance criterion should be stated in plain English and signal the impacts of activities to inform users.
	Reliable *A reliable performance criterion allows for reasonably consistent assessment of an entity's progress in fulfilling its purpose.*	Measurable *The performance criterion should use information sources and methodologies that are fit for purpose.*	The performance criterion should be capable of being measured to demonstrate the progress of fulfilling the purpose. This includes documenting a basis or baseline for measurement or assessment, for example a target or benchmark.
		Free from Bias *The performance criterion should be free from bias and where possible, benchmarked against similar activities.*	The performance criterion should allow for clear interpretation of results and provide an unbiased basis for assessment.

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47   Department of Finance, *Resource Management Guide 131: Developing Good Performance Information* [Internet], Australian Government, Canberra, 2015, available from https://www.finance.gov.au/ [accessed 4 October 2018].

	Criteria	Characteristics	Explanation
Overall assessment	**Complete** *Performance criteria allow for the overall assessment of an entity's progress in fulfilling its purpose to inform users' decision making.*	Balanced *The performance criteria should provide a balanced examination of the overall performance story.*	The performance criteria should reflect a balance of measurement types (effectiveness and efficiency), bases (quantitative and qualitative) and timeframes (short, medium and long-term).
		Collective *The performance criteria should collectively address the purpose.*	The performance criteria should demonstrate the extent of achievement against the purpose.