



Australian Government
Inspector-General of Biosecurity

Biosecurity risk management of international express airfreight pathway for non-commercial consignments

REVIEW REPORT NO. 2019-20/03



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Cataloguing data

Inspector-General of Biosecurity 2020, *Biosecurity risk management of international express airfreight pathway for non-commercial consignments*, Department of Agriculture, Water and the Environment, Canberra, July. CC BY 4.0.

ISBN 978-1-76003-295-1

This publication is available at igb.gov.au/current-and-completed-reviews

Inspector-General of Biosecurity
c/- Department of Agriculture, Water and the Environment
PO Box 858
Canberra ACT 2601
Telephone 1800 900 090
Email inspgenbiosecurity@awe.gov.au
Web igb.gov.au

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Review team and acknowledgements

Dr Naveen Bhatia assisted the Inspector-General in this review. He received support from Kerwin Abinoja and Clare Hamilton.

The Inspector-General gratefully acknowledges cooperation and advice of the Australian Government Department of Agriculture, Water and the Environment.

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Review process

Purpose

The purpose of this review is to examine the effectiveness of the Australian Government Department of Agriculture, Water and the Environment's (the department) controls and processes to manage biosecurity risks associated with the entry of non-commercial airfreight consignments.

Scope

The review considered the department's operational policies and activities to prevent the entry of biosecurity risk material into Australia through international express airfreight pathway for non-commercial consignments.

The Inspector-General focused this review to goods arriving in Australia as self-assessed clearance (SAC) goods with a stated value of less than or equal to \$1,000.

The review considered:

- Recent and expected trends in non-commercial consignments, including volume, origin, type and transporter/handler for consignments.
- How the department:
 - profiles, assesses, targets, screens and inspects international express airfreight articles
 - gathers and analyses intelligence, and maintains data on biosecurity risk material entering through this pathway
 - undertakes 'leakage survey' to ascertain 'residual risk'
 - applies mitigation measures to reduce evolving biosecurity risks.
- Robustness and efficacy of data and information technology management systems used for recording observations and outcomes, and their performance.
- Adequacy of adoption of improved technology, information gathering, surveillance, prevention, interception and verification opportunities.
- Effectiveness of the regulation of approved arrangements, including audit frequency and reporting obligations.
- General improvements to the department's management of biosecurity risks.

The review did not examine:

- The department's controls in managing biosecurity risks with pathways other than non-commercial consignments arriving by air (that is, domestic express freight, international letter mail etc.).
- Policy and activities that are the responsibility of stakeholders—other than the department, including state/territory agencies/governments, individuals and biosecurity industry participants.
- Commercial considerations.
- Procedures for treatment, destruction and re-exportation of biosecurity risk material.

Review methodology

During this review, the Inspector-General completed significant targeted consultation within and outside the department, including:

- Meetings with key stakeholders to:
 - communicate review's objectives and scope
 - outline responsibilities
 - identify risks related to the review and any appropriate mitigation strategies
 - obtain initial background information regarding review objective
 - provide an opportunity for all parties to discuss/brainstorm and seek points of clarification about the proposed review process.
- Discussions about preliminary data and information requirements with relevant departmental officers and requests for data and information.
- Conducting a desk audit of relevant departmental data and documentation (such as, standard operating procedures, policies and communications material), and procedures relevant to the handling of non-commercial consignments arriving by air.
- Undertaking site visits of mail centres and express airfreight depots in Sydney and Melbourne to observe and examine the department's procedures and operations in managing biosecurity risks.
- Considering potential departmental risks, including if:
 - there is tracking of substantial changes in the risk profile and other critical characteristics of the pathway
 - risk-based methodologies for profiling, screening and verification, used in detecting biosecurity risk material, are inadequate or not applied correctly by staff or industry stakeholders
 - powers under the *Biosecurity Act 2015* are inadequate to manage risks in a timely and efficient manner
 - lack of timely internal mechanisms identify and respond effectively to emerging risks
 - there are sufficient resources or capabilities available to address current and new or emerging biosecurity risks
 - standard operating procedures/instructional material used by the departmental staff are difficult to follow or outdated
 - ICT systems fail to support operational requirements and departmental processes efficiently

- stakeholders are provided with appropriate or timely information to allow them to carry out their responsibilities
- internal assurance activities identify areas of weakness.
- Considering potential external risks, including if:
 - stakeholders support business change and/or do not have the capacity to implement the required changes
 - stakeholders assist the department in delivering good biosecurity outcomes.

As required by the *Biosecurity Act 2015*, the Inspector-General presented a draft report to the Director of Biosecurity for departmental consideration. The department's response to recommendations is included in this report. Further, the Inspector-General provided a copy of the final report to the Director of Biosecurity and the Minister for Agriculture, Drought and Emergency Management.

Executive summary

There has been phenomenal growth in the number of smaller consignments crossing borders worldwide. Parcel volume rose by 17% to 74.4 billion parcels in 2017, and will surpass 100 billion mark in 2020.

Online purchases made by Australians through internet-based businesses, and other arrangements, are resulting in high volumes of low-value consignments entering Australia via airfreight. Without contemporary, comprehensive and effective biosecurity measures these small parcels can potentially bypass sanitary and phytosanitary controls increasing the risk of introducing animal, plant and environmental pests into Australia.

Governments across the globe have faced several challenges when managing biosecurity risks associated with the increase in online shopping, including:

- Increasing volumes of relatively low-value consignments moving internationally via express carriers and postal services.
- The strong demand for prompt release of goods and high-speed delivery to consignees.
- Proliferation of cyber-crime and opportunistic exploitation of supply chains.
- Manual and resource-intensive risk management procedures for low-value e-commerce shipments performed in real-time at the border.

These challenges are often exacerbated due to deployed infrastructure for automated methods of profiling, screening and other interventions at international airfreight facilities. This leaves key risk management methods lagging behind the growth, diversity and agility of this trade.

The overall assessment of the department's handling of SAC express airfreight pathway is that:

- There have been inadequate resources and senior management attention for some years as it is not the largest, most complex, nor the most contentious biosecurity risk pathway.
- It is seen as a “set-and-forget” pathway since the Increased Quarantine Intervention funding program wound back in 2012.
- Decisions or assumptions that the pathway was a low biosecurity risk appear to have become folklore, despite the rapid growth and changes in the quantity and type of material entering Australia.
- Relatively rapid manager/staff turnover, and poor documentation of decisions on risk assessment and resource-level changes has led to many assumptions about the pathway's risk level and processes.
- The main component of the risk mitigation options available, namely desktop processing of self-assessed declarations, is done well. However, there has been inadequate effort to investigate further to check if the self-assessment is accurate, or if there is a breach through an inadvertent mis-declaration or deliberately fraudulent misrepresentation.
- There appears to be inadequate contemporary knowledge and intelligence about the intricacy of the non-Conference of Asia Pacific Express Carriers (CAPEC) airfreight cohort, and its biosecurity risk profile.
- Engagement by the department with modern, highly capable companies operating in the express airfreight pathway has been inadequate. The intent of the *Biosecurity Act 2015* is that businesses and personnel involved with inward airfreight movement are accountable for minimising the entry of biosecurity risk material, and the department is accountable for ensuring their compliance with obligations.
- Before Operation Fraser in late 2019, there appears to have been insufficient use of targeted surveillance and verification approaches. Even the use of random or targeted free-line surveillance surveys using detector dogs appears to have been very limited.
- There is no known standard framework and methodology for annual regular review of the trends, risks, processes and adjustment options for each biosecurity risk pathway. This results in the department being unable to justifiably re-allocate resources consistent with the risk-return (resource-to-risk) principle, and lower overall residual biosecurity risk to Australia.
- The department is unlikely to get ahead of Australia's biosecurity challenge unless it focuses on working with import-related companies to systemise biosecurity risk mitigation into as many pathways and businesses as practical.

This report includes 25 recommendations illustrating the extent of improvements that are considered necessary. The improvements required to reduce biosecurity risks are neither complex nor necessarily costly to the department. However, they will require a different approach from the past, including closer industry and business partnerships and more extensive use of contemporary co-regulatory arrangements.

Recommendations

The full departmental response to the recommendations is at Appendix A.

Recommendation 1

The department should implement measures identified in its 2019 threat and vulnerability scan report to strengthen biosecurity controls for self-assessed consignment pathway.

Recommendation 2

The department should:

- review and expand class 14.3 approved arrangements to other states to cover all CAPEC and non-CAPEC members to strengthen biosecurity risk management across the SAC pathway
- upgrade management systems to automate inspection of goods by industry under the arrangement to improve effectiveness.

Recommendation 3

The department should develop a defined audit regime for class 1.2, 1.3 and 14.3 approved arrangements, with a strong focus on audits being conducted unannounced.

Recommendation 4

The department must develop and apply management systems that ensure senior managers have routine access to operational data, variance reports, threat and risk assessments, and resource allocations so that credible 'resource-to-risk' decision-making becomes routine.

Recommendation 5

The department should apply a basic project management model to business risk assessment and improvement, and all significant business testing (for example, Operation Fraser) and improvement projects and processes.

Recommendation 6

The department should liaise with its scientific staff (subject matter experts) for design and launch of all surveys, and assurance and verifications activities across all pathways, and seek and consider advice from subject matter experts before varying these programs.

Recommendation 7

The department should develop a schedule of assurance activities targeting non-CAPEC members across Australia.

Recommendation 8

The department should establish a standard approach to risk pathway mapping and decision-making, including biosecurity risk trends, pathway threats, critical control points, intervention measures, audit and verification reports, change decisions, review milestones, overall pathway risk assessment and improvement plan and accountabilities.

This pathway assessment and management documentation should be routinely available and understood by the accountable First Assistant Secretary. It should also be formally reviewed at least annually by all materially relevant First Assistant Secretaries and signed off by the Deputy Secretary.

Recommendation 9

The department should expand Import Management System (IMS) to include SAC consignments handled and processed by non-CAPEC members.

Recommendation 10

The department should:

- implement all recommendations from Operation Fraser and report its progress against its self-determined improvement timetable to the Inspector-General in January 2021
- regularly undertake more such operations in all regions to strengthen its operational controls to ensure biosecurity risks entering Australia via the SAC pathway are being adequately addressed.

Recommendation 11

The department should explore possibilities of working with CAPEC and non-CAPEC members to develop X-ray scanning algorithms for targeted biosecurity risk material, including obtaining intelligence, screening imagery and other technology for SAC consignments from their overseas operations.

Recommendation 12

Rather than using country of origin profile as sub-criteria for non-compliance response activities, the department should incorporate these criteria to routinely target goods from high-risk countries entering via the air cargo SAC pathway.

Recommendation 13

The department should collaborate with the Australian Border Force to:

- integrate a consignment blacklisting control in the ICS using artificial intelligence-driven risk profiling to reduce mis-declarations of SAC consignments
- determine how best to incorporate available improved technologies and systems for use in document assessments of SAC consignments and in biosecurity screening, more broadly.

Recommendation 14

The department should apply the necessary funding to enable SAC automation to be initiated at the earliest opportunity, and re-assign resulting surplus staff resources to pathway audit and verification activities.

Recommendation 15

The department should move quickly to ensure that all CAPEC facilities have the necessary infrastructure to support efficient completion of targeted surveillance and verification operations, such as completed under Operation Fraser. For non-CAPEC entities, audits by department staff should include intelligence gathering to inform planning for potential targeted surveillance and verification operations.

Recommendation 16

The department should, as a priority, explore opportunities to expand access to information and information sources held by CAPEC and non-CAPEC members. Preferably, in collaboration with Australian Border Force through legal and technically sound options.

Recommendation 17

The department should work with CAPEC members to explore improvements in technological infrastructure to modernise screening for more accurate detection of biosecurity risk material. This would increase the speed of operation for CAPEC members and reduce the department's intervention for assessment and regulatory action.

Recommendation 18

The department should expand the detector dog program consistent with the increase in SAC consignment numbers to utilise dogs in targeted surveillance and verification operations minimising entry of biosecurity risk material into Australia.

Recommendation 19

The department should better optimise the efficiency and effectiveness of risk mitigation for SAC consignments by:

- having greater flexibility in staff recruitment to enable an agile response to growth and shift in both workload and risk profile for the express airfreight pathway
- engaging with CAPEC members regarding improved co-regulatory arrangements that would enable effective risk mitigation for express airfreight at the lowest practical cost and disruption for airfreight operators and partners.

Recommendation 20

The department should immediately review its resourcing arrangements and optimise deployment of such capital equipment to improve the cost-effectiveness of biosecurity risk mitigation in airfreight facilities.

Recommendation 21

The department should use surveillance and intelligence on pests and diseases outbreaks in partner countries to enhance the rate of screening of SAC consignments originating in selected high-risk countries.

Recommendation 22

The department should routinely undertake targeted operations and assurance activities in the express airfreight pathway for SAC consignments to assess and promote compliance with biosecurity measures, including social media campaigns.

Recommendation 23

The department should review its operational program for legal standing and validity to ensure that resources are optimally utilised to manage risks across all pathways.

Recommendation 24

The department should develop an operational policy framework for biosecurity officers to exercise regulatory powers to issue infringement notices and civil penalties for non-compliance with provisions under the Act relating to the management of biosecurity risk associated with imported goods.

Recommendation 25

The department should expand Department of Agriculture Cargo Consultative Committee (DCCC) membership to include the air cargo arm of Australia Post.



Rob Delane
Inspector-General of Biosecurity

3 July 2020

Assessment of the department's biosecurity measures for non-commercial express airfreight consignments

Measures in place	IGB assessment	Recommendation no.
Non-commercial air cargo: <ul style="list-style-type: none"> Biosecurity risks Risk assessment Overarching policy SAC declaration Biosecurity risk management 	Unsatisfactory	1, 2, 3
Pathway integrity threats assessment: <ul style="list-style-type: none"> Air cargo volumes Emerging pathway biosecurity risks. 	Unsatisfactory	4, 5, 6, 7, 8
Efficacy of biosecurity screening: <ul style="list-style-type: none"> Types of risk profiles Process of risk profiling and assessment Profiling and targeting Enhanced screening for improved declaration Improvement directions. 	Unsatisfactory	9, 10, 11, 12, 13, 14
Infrastructure and screening capability: <ul style="list-style-type: none"> Typical infrastructure at approved airfreight depots Volume of SAC articles handled at approved airfreight depots Reporting obligations of CAPEC and non-CAPEC members Data management systems used by CAPEC and non-CAPEC members Suggestions for improvement. 	Unsatisfactory	15, 16, 17, 18
Coordinated, agile management arrangements with efficient cooperation: <ul style="list-style-type: none"> Inter-department management arrangements Inter-division management arrangements. 	Satisfactory	Nil
Resourcing arrangements: <ul style="list-style-type: none"> Adequacy of resources Integrated Business model Resource agility or responsiveness Investing in co-regulatory arrangements. 	Unsatisfactory	19, 20
Staffing ramp-up capability: <ul style="list-style-type: none"> Personnel deployed at air cargo depots Staff competence and workload. 	Satisfactory	Nil
Ongoing monitoring and adjustment of intervention measures: <ul style="list-style-type: none"> Countries of origin with high biosecurity risks Heightened intervention measures Relaunch of the biosecurity social media campaign. 	Unsatisfactory	21, 22
Regulatory powers and ability to apply regulation: <ul style="list-style-type: none"> Non-compliance handling Regulatory powers Legality of free-line surveillance survey Operational policy framework. 	Unsatisfactory	23, 24, 25
Data and information management	Satisfactory	Nil
Communication with industry	Satisfactory	26

Note: The IGB assessment rating for each measure integrates the ratings for sub-items.

Chapter 1

Non-commercial air cargo

Digital technology—mobile phones, the internet and electronic payment systems—have revolutionised the way businesses and consumers are selling and buying goods. Exponential growth in international e-commerce has resulted in new trade patterns, including an increase in business-to-consumer and consumer-to-consumer transactions.

Due to the phenomenal growth in the number of smaller consignments crossing borders worldwide, parcel volumes rose by 17% to 74.4 billion parcels in 2017 (up from 63.6 billion in 2016) and are expected to surpass 100 billion in 2020. These small parcels can potentially bypass normal sanitary and phytosanitary controls, increasing the risk of introducing animal, plant and environmental pests into new territories.

Australia is seeing a higher volume of low-value consignments from online purchases made through internet-based businesses, increasing potential biosecurity risks. The majority of international online purchases are non-commercial imports that arrive by air (express airfreight) and have a value equal to or less than A\$1,000.

Additionally, extensive and efficient airfreight services, and readily-available international communication has made it much easier for organised criminal groups to utilise express airfreight pathways to send small consignments containing either prohibited/illicit goods (Australian Crime Commission 2009) or potential biosecurity risk material to Australia (Freight and Trade Alliance 2018).

Consequently, the Inspector-General narrowed the focus of this review to goods arriving in Australia as self-assessed clearance (SAC) goods with a stated value of less than or equal to \$1,000.

1.1 Biosecurity risks

Items arriving in Australia that are either purchased online or sent as gift from family or friends are not easily identifiable to courier companies, freight forwarders or the department. Consequently, online purchases are assessed with all other mail and cargo items arriving into Australia.

Pre-arrival information supplied to the department for items arriving as commercial sea and air cargo, allows it to be screened and assessed before arrival at the Australian border. By contrast, for SAC consignments arriving at the Australian border, the level of pre-arrival information available is not as detailed as for items imported under Full Import Declaration. Consequently, border clearance processes for SAC consignments are more labour intensive than for commercial cargo.

The department cannot physically inspect all goods imported into Australia due to the substantial volume and is reliant on information readily available to assess biosecurity risks. Items are sometimes released without the necessary checks (IGB 2015).

Volumes of SAC cargo items are likely to increase, as is the risk of prohibited or high biosecurity risk items. The department must continue to improve its systems to ensure that items of biosecurity concern are located and assessed effectively and efficiently.

Materials that pose a biosecurity risk, which are frequently intercepted in the SAC pathway, include:

- Animal materials—meat products of unidentified origin, feathers, animal skulls, used horse saddles, etc.
- Insects—infested foods and timber items
- Plant materials—plant-based foods, seeds, timber with bark
- Prohibited packaging—boxes that were previously used for packing fresh food and meat products
- Soil—used equipment contaminated with soil.

These biosecurity risk materials require mitigation action (either treatment or destruction).

1.2 Risk assessment

The national biosecurity system is complex and multilayered. It involves many pre-border, border and post-border activities to reduce the risk of biosecurity threats entering Australia.

The department manages biosecurity risk before and at Australian borders, intercepting potential pests and materials that could carry pests and diseases into the country. The department's risk-based management system aims to focus biosecurity resources on the pests, diseases and pathways that could cause the most significant damage to Australia (IGB 2019b).

Determining the level of biosecurity risk posed by imported SAC consignments is essential to set up appropriate risk-based awareness, prevention and surveillance programs. Beale et al. (2008) emphasised the importance of obtaining information relevant to the risk pathway to assess the threat it poses to Australia:

Australia can only know which risk pathways and commodities are most threatening if it has collected and analysed relevant information. This information ensures that biosecurity agencies can respond appropriately, including possibly modifying import requirements (Beale et al. 2008, p. 161).

The department may conduct a formal risk analysis for live animals and plants, and other high-risk goods such as animal- and plant-based products, to permit imports under strict biosecurity conditions. A similar formal risk analysis is not undertaken for SAC consignments as the presence of biosecurity risk materials could only be identified after opening the consignment. The Inspector-General has previously expressed concern to the department that if the level of attempted illegal entry of pork products into Australia via SAC pathways roughly matched that which occurred via the Australia Post pathway, then a very serious situation existed (IGB 2020).

Risk assessments help identify pathways of pest, disease and weed introduction and exposure. However, quantitative information on pest introduction pathways such as SAC goods remains very scarce and incomplete, making it difficult to estimate the actual magnitude of the risks.

A sound program of scheduled and episodic intervention, and availability of practical information systems, would enable the department to apply appropriate measures and level of resources to intercept the majority of biosecurity risk material arriving via the SAC pathway.

The department conducts regular threat assessments on certain aspects of cargo entry pathways, which may include the type of entities or goods, and environmental or commercial requirements. For example, in 2016 the department conducted a risk threat and vulnerability assessment considering:

1. Regulatory non-compliance issues—mis-declared cargo with concealed viable plant material, commercial food and live fish etc.
2. Low intervention pathways—commercial air cargo, sea travellers and crew, and sea SAC.
3. Regulatory control testing—random sampling at inspection points at the border and auditing of approved arrangement premises.

The report identified several areas for improvement, which the department confirmed are yet to be explored.

Recommendation 1

The department should implement measures identified in its 2019 threat and vulnerability scan report to strengthen biosecurity controls for self-assessed consignment pathway.

Department's response: *Agreed.*

The department is using information from the 2019 threat and vulnerability scan to assist with prioritising and directing activities focussed on confirming and strengthening biosecurity controls. This is coupled with an ongoing body of work in targeted operations and development of business as usual assurance activities that are undertaken in the self-assessed consignment pathway. The department is also working through recommendations from Operation Fraser that outlined opportunities to strengthen biosecurity controls on the pathway.

In late 2019, the department initiated the second round of threat/vulnerability scanning. The department is also progressing data analytic work on a machine learning intervention tool to:

1. gain insight into new patterns of material non-compliance (by continually receiving information), and
2. look for a point in time anomalies for specific reassessment or human intervention.

The Australian Border Force uses electronic profiles—developed by the department—to screen SAC consignments. If a SAC consignment matches a profile, that consignment is referred to the department's Import Management System for CAPEC members and to SAC database for non-CAPEC members.

The department assesses documentation for all commercially imported goods to ascertain compliance with import requirements. However, approximately 95% of SAC consignments are cleared in the Integrated Cargo System without a documentation assessment. Document assessment only occurs for the SAC consignments referred to the department following a profile match.

Express airfreight consignments that are screened as compliant are cleared for delivery. Consignments assessed as either potentially containing goods that require an import permit, prohibited or carrying biosecurity risk material are further examined by opening of the consignment.

The consignments opened by staff at facilities covered by approved arrangements (see 1.5 Biosecurity industry participants) and their contents checked by the relevant border agency to assess compliance with Australia's import requirements against the declaration made in accompanying documentation.

Goods that are not permitted into Australia are forfeited and destroyed. Some goods may require treatment (at the importer's expense) before they are allowed into Australia. The cost of treatment for international mail is \$75 per item. Alternatively, goods that may need to be returned to the sender are charged at \$95 per item. If any attempt has been made to conceal the goods, for example requesting the supplier to pack goods in a manner designed to hide or make them difficult to identify, the importer may be subject to an investigation and possible criminal prosecution.

The department has not prosecuted anyone for a contravention of the *Biosecurity Act 2015* involving goods imported via the SAC pathway since the Act came into force on 16 June 2016.

Mail articles identified with prohibited imports or quarantine [biosecurity] risk material are seized and their details entered into the seizure database of the relevant agency. The seizure data then forms the basis of future targeting analysis (ANAO 2014).

As most seizures come from screened consignments, processes to monitor risks in unscreened consignments are important to provide a comparable assessment of risk between screened and unscreened consignments. Between 2013 and 2019, the department used an assurance activity, free-line surveillance survey (see 2.2.1 Free-line surveillance survey). This was replaced with Air Cargo (non-commercial) Compliance Verification (ACNCCV) survey model in April 2020 (see 2.2.2 Air Cargo non-commercial compliance verification).

The department primarily relies on previous findings and data gathered from biosecurity interceptions/seizures to assess the level of risk in the SAC pathway to:

- develop and design targeting activities—particularly around mis-declared goods, such as bird's nest declared as gaskets, fresh plants as artificial plants and documents consigned between scientific researchers
- either refine or create a new threat assessment approach relating to particular seizures by analysing the patterns of imports and declarations made on accompanying documentation
- gain a point in time verification whether or not the risk settings are appropriate.

1.3 Overarching policy

In 2016, the *Quarantine Act 1908* was repealed and replaced with the *Biosecurity Act 2015*. The department implemented a revised [SAC business policy](#) that encompassed high-level overview on how SAC cargo is assessed, inspected and charged for clearance, which aligns to the new legislation and charging guidelines.

Before the new legislation was introduced in June 2016, the department used a model that was based on a unit (Air Cargo Unit) approach where staff carried out the Integrated Cargo System—a database owned and managed by the Department of Home Affairs—screening function, document processing and the physical inspection at approved arrangements.

The department created a separate business area (Biosecurity Operations division) to manage inspection of incoming goods, including SAC consignments. This organisational structure resulted in the creation of two separate groups (and consequent split of staff resources) to facilitate at-border activities: the Assessment and Client Contact Group (for document assessment), and the Inspections Group.

1.4 SAC declaration

Under Section 71 of the *Customs Act 1901* (Customs Act), the owner of specified low-value goods or a person acting on behalf of the owner, must complete a SAC declaration:

- regarding the low-value goods to be sent to Australia
- information for processing, including consignee and consignor names, goods description, delivery location and company or business names.

This information is entered in the Integrated Cargo System and compared against profile criteria to assess goods entering Australia in SAC consignments for mitigation of biosecurity risks. The Customs Act also requires places to be approved as 77G premises to hold, unpack and examine goods that are subject to customs control.

In 2011 the department—through Conference of Asia Pacific Express Carriers (CAPEC) members—introduced the SAC Paperless Initiative to automatically extract industry consignment data into its screening database, to replace paper-based document assessment for SACs.

Reporting obligations of express airfreight operators are covered in section 4.3.

1.5 Biosecurity industry participants

The *Biosecurity Act 2015* enables the department to approve public or private industry entities (or biosecurity industry participants) and premises (or approved arrangements) to carry out certain biosecurity risk management activities, in accordance with specified conditions. Approved arrangement holders enter into a legal obligation with the department agreeing to maintain appropriate biosecurity standards and protocols when conducting biosecurity risk management activities. Compliance with the conditions of approved arrangements are monitored with limited or occasional regulatory oversight (IGB 2019).

The department may approve biosecurity industry participants for receiving, physical containment, storage, inspection and treatment of incoming goods. They are also approved to undertake assessment of documentation of the risk status of imported goods, without the department's supervision. Obligations of both the biosecurity industry participants and the department are covered in [Approved Arrangements—general policies](#) published on the department's website.

There are currently three key biosecurity industry participants—handling express airfreight cargo entering Australia—under approved arrangements: Australia post, and CAPEC and non-CAPEC group members.

1.5.1 Australia Post

Australia Post handles a large volume of express airfreight cargo entering Australia ([Table 1](#)). There are a range of different ways in which mail pathway items that may not be significantly different from some SAC consignments are managed by the department.

This report did not assess the Australia Post express mail pathway, as the Inspector-General has already reviewed this in his previous report (IGB 2020).

1.5.2 CAPEC members

The Conference of Asia Pacific Express Carriers (CAPEC group) represent the major express air courier services operating nationally: DHL, FedEx, TNT and UPS. These companies focus on fast, door-to-door delivery of goods around the world within 24 to 48 hours, and process a significant number of SAC couriers (consignments) entering Australia.

1.5.3 Non-CAPEC members

International express airfreight companies that are neither part of Australia Post nor the CAPEC group are referred to as 'non-CAPEC' members. Since January 2013 approximately 650 non-CAPEC air courier brokers have operated in Australia—handling non-commercial express air cargo consignments. Non-CAPEC members handle substantial volume of SAC consignments entering Australia, don't have their premises approved as class 14.3 approved arrangements, and continue to process SAC consignments either under:

- approved arrangement class 1.2 (Air cargo terminal),
- approved arrangement class 1.3 (Sea and airfreight depot (restricted)), or
- section 77G depot (*Customs Act 1901*) (approved customs brokers).

1.5.4 New approved arrangements class 14.3

In 2018, the department established a new approved arrangements class 14.3 (Inspection of air cargo) permitting biosecurity industry participants to:

- manage biosecurity risks and perform inspections in accordance with departmental requirements
- use their own premises and people without constant supervision by the department
- more efficiently move cargo allowing for quicker delivery to the importer
- reduce the allocation of departmental resources to low-risk activities.

A biosecurity industry participant approved to hold approved arrangement class 14.3 is authorised to carry out biosecurity assessment and management activities in relation to specified air cargo goods that are:

- reported in the Integrated Cargo System as a SAC declaration
- subject to a *Goods Inspect Required* biosecurity direction by the department. This direction—only applied to cargo report SACs and short-form SACs—enables the department to screen and assess the SAC declaration in the SAC database.

Before the department established approved arrangements class 14.3 for air cargo, both the CAPEC and non-CAPEC members managed biosecurity risk associated with SAC consignments under approved arrangement for either air cargo terminals (class 1.2) or sea and airfreight depots (restricted) (class 1.3).

Biosecurity industry participants holding class 1.2 and 1.3 approved arrangements must follow specific departmental directions to manage biosecurity risks associated with imported goods. These directions must meet certain prerequisites before biosecurity industry participants can enact a direction to manage a specific risk. This regulatory control, on class 1.2 and 1.3 approved arrangements holders, impacts on their business efficiency as additional regulations can result in the slow processing of imported goods.

In comparison, class 14.3 offers greater flexibility and efficiency as it enables biosecurity industry participants to manage biosecurity risk using their own systems and inspection procedures, so long as it meets departmental requirements. Under class 14.3, biosecurity industry participants are unable to directly release SAC goods from biosecurity control in their premises. They are required to submit a 'request for release' to the department for actioning. All requests are emailed to the SAC team. The biosecurity industry participant is then notified of the release outcome via subsequent Import Management System reports and/or updated messaging in the Integrated Cargo System.

At the time of writing this report, there were only 3 class 14.3 premises—operated one each by DHL, FedEx and TNT, in Sydney (NSW). These businesses also handle SAC airfreight in terminals in Adelaide, Brisbane, Darwin, Melbourne and Perth. UPS is also a CAPEC member but has not yet opted to have any of their premises approved as a class 14.3 approved arrangement.

When the new arrangement was introduced, both the department and CAPEC members agreed to gradually phase implementation—starting with Sydney-based premises. This would allow for better regulatory oversight and monitoring of the arrangement's ongoing viability before broader implementation. It was CAPEC members' preference to start with Sydney-based premises as the vast majority of SAC consignments transition through the city and all key CAPEC members operate from there.

The Inspector-General has not received a credible explanation as to why expansion of class 14.3 to CAPEC premises in other capital cities has not occurred.

Recommendation 2

The department should:

- review and expand class 14.3 approved arrangements to other states to cover all CAPEC and non-CAPEC members to strengthen biosecurity risk management across the SAC pathway
- upgrade management systems to automate inspection of goods by industry under the arrangement to improve effectiveness.

Department's response: *Agreed.*

The department will continue to work with industry to understand why adoption has not been attractive, including system effectiveness.

1.5.5 Management of CAPEC and non-CAPEC member premises

To ensure that biosecurity risks are managed according to the class requirements, the department audits all approved arrangements against the policies published on the department's website.

The department recently commenced a risk-based approach to auditing by assigning a priority level to different approved arrangement classes. This approach ensures the focus is on entities posing a higher risk. Priority 1 and 2 audits are considered a higher risk and are conducted unannounced, where possible.

All premises under a class 1.2 (air cargo terminal) or 1.3 (sea/airfreight depot) are classified as a priority 3 and audited annually, unless under a probation listing—for which the premise is audited twice within 180 days. These audits are conducted with prior notice to the owner (announced). However, failing an audit moves the premise to an unannounced audit.

In the past audit cycle, the department audited 447 premises operated by about 650 non-CAPEC members across Australia. Of these, 35% were non-compliant. Seventy-three per cent of all announced audits conducted had a non-compliance rate of 33%. Twenty-seven per cent of unannounced audits had a non-compliance rate of 39%. The apparent higher rate of non-compliance detected during unannounced audits supports that such audits should be unannounced to ensure entities aren't 'preparing' for the department conducted audits.

The Inspector-General in a previous report (IGB 2019a) noted that until 2019 the department did not have any regime of unannounced audits, and recommended:

[Recommendation 3] The department should implement a program of unannounced, randomly timed and risk-based audits of approved arrangements, rather than scheduled and announced audits, wherever possible.

The department agreed with this recommendation, and responded:

... The department has recently increased the number of unannounced audits as a proportion of the total number of audits conducted, and will continue to increase randomly timed unannounced audits as part of the audit program of approved arrangements, where possible...

An unannounced audit program puts industry on notice that they can be audited at any time. Unannounced audits are most effective when the approved arrangements is conducting operations. The frequency should be based on the biosecurity risks managed by the approved arrangements, compliance history, or specific reasons to suspect a non-compliance. This finding is consistent with the former Inspector-General's observation that random audits and checks are more effective at detecting non-compliance than scheduled visits, and noted:

Encouraging industry self-regulation and quality assurance programs through the supply chain, with government as the regulator of last resort, is a key means of achieving compliance while reducing unnecessary regulation. However, the pendulum can swing too far towards remote assessment and reliance on industry operating approved arrangements. Self-regulation needs to be monitored more closely, with more risk-based, unannounced spot audits of approved arrangements (IGB 2019a).

Many AA [approved arrangements] operators have little incentive apart from business continuity to fully apply required biosecurity risk management measures. Unannounced audits, especially of busy facilities and those handling high-risk goods, must be increased, and a range of prompt and effective sanctions implemented for different levels of non-compliance (IGB 2019a).

The Inspector-General noted that the department is adjusting its risk-based audit work program to include more unannounced audits, especially where there are higher rates of non-compliance. He recommends that the department should adopt a defined rate and frequency for both announced and unannounced audits of class 1.2, 1.3 and 14.3 approved arrangements, with half of all audits are conducted unannounced.

Recommendation 3

The department should develop a defined audit regime for class 1.2, 1.3 and 14.3 approved arrangements, with a strong focus on audits being conducted unannounced.

Department's response: *Agreed.*

The department notes that classes 1.2 and 1.3 are currently considered Priority 3 audits—i.e. lower risk audits that can be conducted announced or unannounced. The department's preference is to conduct all audits unannounced, where possible, and within existing resources.

Chapter 2

Pathway integrity threats assessment

The short intervention time available for border agencies and the volume of consignments coming across the border make it attractive for both consignor and the consignee to ship prohibited goods via express airfreight pathway. The methods used to avoid Australian Border Force's intervention are either the same as those used by importers of biosecurity risk material or the means used have the potential to be used for illegally moving biosecurity risk material. Typically, the methods used to gain entry include:

- Declaring goods as innocuous items that would not normally attract either Australian Border Force's or the department's interest such as machinery parts, clothing or books.
- Declaring items to be synthetic versions of a particular commodity to 'pass' a visual screening.
- Declaring items that would appear as a similar size and shape such as seeds or pills declared as beads.
- Substituting prohibited goods with permitted 'version'.
- Reducing profiling opportunity on nominal details and addresses, such as either using parcel lockers or the 'scattergun' method of importing whereby smaller quantities are imported over multiple consignments on the assumption that some of the consignments will get through without detection.

It is not the consignor's choice which airfreight clearance process is used at the border. The clearance process is determined by trade import requirements relevant to individual consignments (for example, the value of imported goods).

2.1 Air cargo volumes, 2017–19

Between 2017 and 2019, about 156 million air cargo consignments entered Australia ([Table 1](#)). The numbers increased from 46.5 million (2017) to 57.7 (2019) million. Of these, non-CAPEC members handled the highest numbers of consignments (60.8 million), followed by Australia Post (55.9 million) and CAPEC members (39.3 million).

During the same period, CAPEC members had the highest number of consignments referred (990,000) followed by non-CAPEC members (177,000) and Australia Post (98,000). Interestingly, the numbers of referred consignments dropped as the total number of consignments increased between 2017 and 2019. Similarly, CAPEC members also reported a higher number of incidents (1,508), followed by non-CAPEC members (1,109) and Australia Post (23).

Again, CAPEC members recorded the highest number of non-compliant consignments at 38,173 for the 3 year period, whereas these numbers were significantly lower for non-CAPEC members at 10,919. Australia Post only recorded 95 non-compliant consignments.

TABLE 1 Air cargo volume handled by Australia Post, and CAPEC and non-CAPEC members, 2017–19

Airfreight handler category	Year	Total volume (million) ^a	Referred (thousand) ^b	Incidents (no.) ^c	Non-compliant (no.) ^d
Australia Post					
	2017	15.9	25	0	34
	2018	18.6	43	0	8
	2019	21.4	30	23	53
	Total	55.9	98	23	95
CAPEC members					
	2017	12.7	380	467	10,287
	2018	13.2	350	633	16,099
	2019	13.4	260	408	11,787
	Total	39.3	990	1,508	38,173
Non-CAPEC members					
	2017	17.9	69	230	1,189
	2018	20	68	440	1,553
	2019	22.9	40	439	8,177
	Total	60.8	177	1,109	10,919

a Represents 'air cargo returns' (ACR) that arrived during the year that were referred to an 'establishment code' premises known to be Australia Post premises. **b** Represents ACR items sent/referred by Home Affairs' ICS to the Department of Agriculture and Water Resources' SAC database. **c** Unique count of entry numbers with an incident identified (for example, pest insect). **d** Total number of direction failures, including export, destroyed, disposed and inspection failures.

The department explained the variability in handling of air cargo consignments by three different cohorts ([Table 1](#)) as:

The Department has reviewed the data. A number of elements will account for the variability across air freight consignments. The data provided appears to incorporate both Air Freight through Australia Post provider as well as Express Mail. Express Mail is not SAC. Any compliance data related to Express Mail is managed separately via the MAPS [Mail and Passenger Pathways System] system, therefore it seems that the data being used to make conclusions about variability is not a complete dataset.

Additionally, the types of client contracts that are held by CAPEC and non-CAPEC operators will also influence the types of intervention. For example, if an operator has a client that ships large volumes of electronics, they will have lesser intervention rates as these goods are unlikely to be of biosecurity concern. Conversely, shippers of goods that may require inspecting such as medicinal products, are likely to have much higher rates of intervention. The volume of these consignments per operator sits outside of the Department's control.

The Inspector-General did not receive an updated/complete dataset with the above explanation to draw conclusions about variability in management of biosecurity risk by the three different cohorts handling low-value express airfreight.

Recommendation 4

The department must develop and apply management systems that ensure senior managers have routine access to operational data, variance reports, threat and risk assessments, and resource allocations so that credible ‘resource-to-risk’ decision-making becomes routine.

Department’s response: *Agreed.*

A number of management dashboards are in production or advanced development. These include operations and compliance dashboards, providing volumetric, resource allocation and performance reporting to senior managers.

2.2 Emerging pathway biosecurity risks

The SAC pathway is a high volume, short-transit pathway that potentially offers high reward, low risk opportunities for people seeking to engage in non-compliant activity. This pathway, with inadequate monitoring and controls, appears to be at risk of exploitation. There are two basic risk areas that the department must manage:

- Monitoring changes in risk sources, type and volumes and adjust its methods and resources appropriately.
- Ensuring the methodology or measures applied are effective in preventing biosecurity risk materials entering via the pathway.

The Inspector-General has not been assured by the information provided by the department that it has an appropriately structured, disciplined and agile approach to mitigating the SAC biosecurity risk. There is no basis for concluding that the department is well-equipped to stay ahead of the continuing rapid evolution in this area and the exploitation by casual or sustained criminal players seeking to bring biosecurity risk materials into Australia for personal gain.

It appears the department has assumed the inherent risk that a reputable online supplier would falsely declare items is low, as they would not gain significant benefit or advantage by doing so. However, the risk that smaller online sellers—selling items online through a major online platform—will declare items incorrectly is higher. The risk of suppliers making incorrect declarations appears to be higher when goods are sent privately (IGB 2015).

Before this review, the Inspector-General had not been provided with significant evidence to support the department’s assumption the SAC pathway is currently low risk, across all handling entities and entry points. However, the ongoing risk of current and future deliberate criminal activity cannot be discounted.

During the African swine fever outbreak in 2018–19, the department undertook more intense surveillance of the Australia Post mail pathway. This surveillance identified high-levels of illegal consignments of pork products entering Australia via this pathway (IGB 2020). For example, in the Express Mail Service, over 2.9 tonnes of pork and pork products were seized, with only 37% correctly declared.

If exploitation of the SAC airfreight pathway via CAPEC and non-CAPEC entities is anything like the level seen for pork through Australia Post in this period then the pathway presents a significant biosecurity risk to Australia.

This example further highlights the department's selective approach for managing biosecurity risks in international mail pathways, with clearly more robust processes and systems in place than for SAC pathway.

2.2.1 Free-line surveillance survey

The department developed a free-line surveillance survey program to monitor the overall risk status of the air cargo pathway. Implemented between 2013 and 2019, the survey involved X-ray screening of all consignments from randomly selected flights to estimate the rate of consignments that haven't been captured by the department's profiles.

In 2013, the department implemented free-line surveillance at CAPEC (express airfreight) premises. The department worked collaboratively with Australian Border Force and used these surveys to ascertain screening effectiveness of non-CAPEC members handling air cargo, including SAC consignments.

To support the implementation of the program, the department drafted a strategy in consultation with the then Australian Centre of Excellence in Risk Analysis (ACERA; now Centre of Excellence for Biosecurity Risk Analysis) and an in-house statistician. This draft strategy—rolled out in June 2013 and was never finalised—considered:

- developing a template for data collection
- identifying minimum sampling requirements
- a methodology for calculating leakage rates, and
- a formula for calculating the overall effectiveness of the system.

The process involved X-ray screening of all air cargo consignments for biosecurity risk materials as they were unloaded from air containers (from randomly selected flights) that had not been captured by the department's profile(s) (see 3.1 Types of risk profiles). If a consignment is identified as having potential biosecurity risk material during screening it is checked to ascertain if it has also hit a SAC profile in the ICS (that is, if it had an electronic hold applied to it). The SAC profiles in the ICS target certain words and phrases in the free text goods descriptions provided on SAC declarations.

These surveys provided assessment and assurance about the rigour of the department's profiling, assessment and screening techniques; which, in turn, helped make adjustments to existing controls to reduce likelihood of biosecurity risk material from entering Australia.

As part of this program, between 2013 and 2017, the department screened more than 365,000 SAC consignments ([Table 2](#)). X-ray screening of SAC consignments decreased significantly over this period from 152,875 in 2013 to only 8,045 in 2019 ([Table 2](#)). Overall, this represents a 94.7% reduction over the 7 years.

Officers physically inspect randomly selected consignments when they are not held by the department's profiles but there is reasonable ground to suspect a consignment may contain biosecurity risk material. Between 2013 and 2019, of the 365,171 screened SAC consignments, the biosecurity officers identified 523 for physical inspection ([Table 2](#)). During this period, 123 of 523 SAC consignments opened for inspection were found to carry biosecurity risk material.

TABLE 2 Free-line surveillance survey outcomes for self-assessed clearance consignments, Australia-wide, 2013–19

Self-assessed clearance consignments (no.)	2013	2014	2015	2016	2017	2018	2019	Total (no.)
X-ray screened	152,875	110,965	41,184	16,663	14,183	21,256	8,045	365,171
Opened for inspection after X-ray	187	143	59	28	33	67	6	523
Found to carry biosecurity risk material	31	30	17	6	11	23	5	123
Treated or destroyed (per category)								
Plant material	16	12	10	3	5	12	4	62
Animal material	3	7	6	2	1	11	1	31
Prohibited packaging	8	8	1	0	4	0	0	21
Insects	2	2	0	0	1	0	0	5
Soil	2	1	0	1	0	0	0	4
Total	31	30	17	6	11	23	5	123

The reduction in the number of consignments surveyed across years appears to be largely reflective of the availability of operational resources to undertake screening in any given year. Since the start of the program, the department has undergone numerous changes, with restructuring, reprioritisation of operational requirements and resource availability being the main underlying reasons. The spike in the number of re-screened consignments in 2018 is attributable to one location having detector dog capacity to undertake verification screening.

Plant material (such as plant-based food, twigs, leaves, stems, seed, wood, bark and coffee beans) recorded the highest detection rates—making them the most common biosecurity risk material intercepted on the SAC pathway (Table 2). Intercepted animal material included meat and meat products (including pork) of unidentified origin, dog chews, feathers, animal skulls and used horse saddles. Insects were recorded in food and timber items, and prohibited packaging included boxes that appear to have been previously used for packing fruit, meat and eggs.

The Inspector-General noted that the frequency of detection of plant-based foods or products in SAC consignments increases during cultural festival months, such as Chinese New Year, Diwali and Ramadan. In addition, the former interim Inspector-General noted variability in the type of air cargo received in Australia across regions:

... Perth receives large volumes of soil and rock samples for testing because of extensive mining operations, and associated analytical facilities, in Western Australia. Other regions generally would not receive these goods. It is important that all regions undertake free line surveillance to ensure the department manages biosecurity risks across all types of cargo and regions. This would increase the likelihood that profiles are working effectively (IGB 2015).

The interim Inspector-General recommended that:

[Recommendation 6] The department should ensure that all regions perform free line surveillance activities regularly to determine if the department's profiles and assessment and screening techniques are efficient and effective (IGB 2015).

2.2.1.1 Poor planning and implementation

The Inspector-General noted a lack of consistency and no systematic approach in the implementation of the free-line surveillance program by the department.

Due to poor implementation of free-line surveillance activity the department sampled a very small subset of SAC consignment. As the samples were neither randomly selected nor representative of the volume entering Australia, parcel checks through X-ray screening ([Table 2](#)) failed to provide meaningful outcomes. For example, between 2013 and 2019, only 523 consignments were opened for manual inspection after X-ray re-screening. Although detection data did not show any trends over the years, apparently the reduced rate of X-ray screening resulted in a reduced number of biosecurity risk material detections.

In his earlier African swine fever report, the Inspector-General noted that:

The department screens 100% of EMS [Express Mail Service] articles and parcels from China through the mail centres. However, this pathway represents no more than 20% of parcels arriving in Australia. It is unclear how many parcels are screened for pork and pork products through the self-assessed clearance (SAC) airfreight pathway. However, if pork products were only 50% as prevalent in other airfreight pathways as has been recorded in the EMS pathway, then as many as 5,400 items and 7 tonnes of pork may be entering via the airfreight pathways (IGB 2020).

The major shortcomings of the free-line surveillance program included:

1. *Poor implementation of draft survey strategy*—the Inspector-General noted that the department developed a draft strategy in consultation with CEBRA and a statistician before the launch of free-line surveillance. It also developed Work Instructions and other guiding material for the staff to systematically undertake free-line surveillance at target locations across Australia. However, poor implementation of ‘draft’ policy over the 7 years failed to generate meaningful data that the department could have utilised to strengthen controls in SAC pathway.
2. *Sample size not based on the statistical model*—in a complete disregard to the draft policy, the department reduced surveys to just one location (Adelaide) in 2017 and 2019 ([Table 3](#)). Sampling at only one location does not provide a large enough sample size for comparative analysis. For an appropriate comparative analysis, data for at least 3 locations should have been collected each year. In addition, comparing this data with an increase in SAC volumes since 2013 indicates serious gaps in capturing quality screening data (detected biosecurity risk material) for comparative analysis, which the department relies on to inform its policies for the SAC pathway.
3. *Ambiguous sampling regime*—inconsistency/ambiguity in choosing samples at selected locations for free-line surveillance does not align with the statistical model. Surprisingly, the samples collected at the sole survey location (Adelaide) in 2017 and 2019 were not representative of all air cargo. The data collected was for just two or three flights in a day. Ideally, for targeted surveys like free-line surveillance, a defined window of sampling (say, a contiguous full week) with 100% intervention rate would have enabled the department to address the variability in time and day the flights land at targeted locations.

4. *Haphazard and inappropriate choice of survey locations*—clearly, the department’s approach in choosing locations for the conduct of free-line surveillance across Australia was flawed. To begin with, the department selected 4 locations to conduct the free-line surveillance survey (Table 3). However, over the years, survey locations were dropped to just 1 or 2. The department hasn’t provided any satisfactory explanation of how it selected locations for the survey. For a randomised sample size, locations should have been chosen based on the volume of SAC consignments entering major points of entry across Australia to ideally cover high, medium and low traffic entry points.

TABLE 3 Free-line surveillance survey locations, 2013–19

Year	Location
2013	Adelaide, Brisbane, Melbourne, Sydney
2014	Adelaide, Brisbane, Melbourne, Sydney
2015	Adelaide, Brisbane, Melbourne, Sydney
2016	Adelaide, Melbourne, Sydney
2017	Adelaide
2018	Adelaide, Darwin
2019	Adelaide

5. *Inconsistent recording of data*—discrepancies were noted in the way data was recorded. The department acknowledged that these discrepancies were due to inconsistent recording by the biosecurity officers in the data portal.
6. *Low confidence in screening outcomes*—a definite/consistent trend in the detection of biosecurity risk material across locations is not expected. However, over the years, the large variability in detection rates—due to low sample size—fails to provide confidence in the collected data.

From these observations and the reasons noted in the preceding section, the Inspector-General concludes that the whole exercise of free-line surveillance was poorly planned and executed. It appeared to be more of a ‘formality’ than a ‘commitment’, which delivered a very limited value for the efforts and resources it consumed.

This program demonstrated disregard to the premise of ‘risk-based intervention’ on which Australian biosecurity is based. This disregard is shown by the choice of locations where the department conducted the survey on SAC consignments, which appear to have been chosen for convenience rather than the likelihood of risk. This assumption is based on consistent inclusion of Adelaide as a survey location—likely either due to easy availability of manpower at this location or to manage a staff member’s downtime, compared to busier locations, such as Sydney and Melbourne. Interestingly, the department did not include Adelaide as a location in a targeted operation (see 3.2.1 Operation Fraser).

Conducting free-line surveillance at randomly selected locations would have enabled the department to identify locations with the highest risk and forecast where future risks are likely to occur. Survey outcomes can also be compared with profile results to assess the operational effectiveness of profiling systems. These outcomes could assist the department in identifying locations where profiling systems are not accurately detecting biosecurity risks, which could enable the prioritised allocation of resources to those locations.

The Inspector-General did not see evidence during this review that the department consistently applies a basic project management approach to reviewing risk pathways including:

- scoping and conducting assessment and improvement processes
- approval and system improvement changes
- closure.

The department's management needs to set clear milestones for all its programs and ensure they are executed in accordance with technical requirements. Regular checks and reports on the known and emerging risks and reporting into the department's overall risk and audit framework is needed. Without such system-wide discipline, significant resources are being wasted. This also means that there is no basis for risk-based resource re-allocation, and the residual biosecurity risk to Australia is inappropriately high.

It is of particular concern to the Inspector-General that the department has focused its targeted assurance and verification activities to 5 major entities—Australia Post (at a high level) and CAPEC members (limited based largely on a desk-top assessment of consignee declaration). With approximately 650 non-CAPEC members operating across Australia the department has not undertaken any assurance activity since 2013 to ascertain the effectiveness of these operators in mitigating biosecurity risk. Developing a schedule of assurance and verification activities for non-CAPEC members operating across cities is necessary to ensure ongoing compliance with regulatory requirements and the effectiveness of biosecurity controls.

Recommendation 5

The department should apply a basic project management model to business risk assessment and improvement, and all significant business testing (for example, Operation Fraser) and improvement projects and processes.

Department's response: *Agreed.*

The department accepts there should be continuous improvements in the way programs are designed and reviewed, that capture a broader range of associated risk.

Recommendation 6

The department should liaise with its scientific staff (subject matter experts) for design and launch of all surveys, and assurance and verifications activities across all pathways, and seek and consider advice from subject matter experts before varying these programs.

Department's response: *Agreed.*

Since mid-2019, the department has adopted a co-design approach to assurance and verification activities which brings together subject matter experts at the start of the design process.

Recommendation 7

The department should develop a schedule of assurance activities targeting non-CAPEC members across Australia.

Department's response: *Agreed.*

The department has implemented a range of assurance activities across the SAC pathway inclusive of non-CAPEC members. A recommendation from Operation Fraser to implement a business as usual assurance program in the airfreight pathway has commenced. It is anticipated that non-CAPEC members will be included in future phases of this program. Additionally, ongoing assurance via targeted operations capability will continue to be deployed across non-CAPEC members.

2.2.2 Air cargo non-commercial compliance verification survey

The department replaced a limited and legally unsound free-line surveillance survey in November 2019 and launched the new Air Cargo (non-commercial) Compliance Verification (ACNCCV) survey in April 2020. The Inspector-General noted the department's advice that:

- The ACNCCV is based on the Clopper Pearson Beta Inverse model, which the CEBRA had developed for the Sea Cargo Compliance Verification scheme.
- The department commenced Phase one of the ACNCCV on 27 April 2020 to test the validity of the model for non-commercial air cargo handled by CAPEC members.
- An initial base sample size was set to 7000 (annual). However, due to operational resource constraints and concerns about regulatory impact, the department implemented a reduced initial sample size of 3650 (annual) to be reviewed after 6 months of operation.
- The survey commenced in one CAPEC premise in Sydney on 27 April 2020, nationally across all CAPEC member premises (except Cairns) on 13 May 2020. Due to operational reasons, the Cairns premises commenced survey on 17 June 2020.

In the past decade the former Inspectors-General emphasised the need for an independent assurance program to ascertain border biosecurity controls are working efficiently. Realising the importance of the department's cargo compliance verification program ([Box 1](#)), former Inspectors-General recommended implementing and/or expanding the program across all pathways (IIGB 2016; IGB 2017; IGB 2019a). A previous Inspector-General report also noted several examples where cargo compliance verification findings led to stronger risk management (see Box 2 in IGB 2019b). However, despite agreeing to these recommendations, the progress has been extremely slow or has deteriorated with cargo compliance verification inspections highly reduced—especially during 'surge' periods (IGB 2017; IGB 2019b).

Box 1 Cargo compliance verification

The department replaced the Import Clearance Effectiveness program with the CCV program in 2013. In the program, the department randomly selects imported containerised sea cargo for inspection that would not typically be directed for inspection. This inspection program aims to:

- ensure that import controls are operating effectively
- provide information on emerging biosecurity risks, including from commodities which are not typically directed for inspection.

The inspections are conducted at a very low rate—that is, less than 0.5 per cent of consignments. The randomly selected sample allows the department to reliably conclude the compliance of sea cargo entering Australia.

A typical inspection encompasses biosecurity officers looking for biosecurity risk material—contamination with soil, animal or plant material—and checking the compliance of accompanying documentation. Inspections typically include the imported goods, packing material, and cleanliness of the internal and external surfaces of the container. The action taken by the biosecurity officer will depend on the level of biosecurity risk identified. The issue may be resolved on-site or the consignment may require re-direction to an approved arrangement premise for investigation or treatment.

In the context of above observations, the department must commit to allocating sufficient dedicated resources (funding, logistics and personnel) to running the cargo compliance verification program for a prolonged and uninterrupted period, across all pathways. In addition, it must ensure staff competence and systematic recording of data in a highly functional central repository to enable real-time analysis and generation of reports to inform relevant policies and procedures.

Recommendation 8

The department should establish a standard approach to risk pathway mapping and decision-making, including biosecurity risk trends, pathway threats, critical control points, intervention measures, audit and verification reports, change decisions, review milestones, overall pathway risk assessment and improvement plan and accountabilities.

This pathway assessment and management documentation should be routinely available and understood by the accountable First Assistant Secretary. It should also be formally reviewed at least annually by all materially relevant First Assistant Secretaries and signed off by the Deputy Secretary.

Department's response: *Agreed.*

The department will develop and implement an improved overall pathway biosecurity risk assessment and management strategy.

Chapter 3

Efficacy of biosecurity screening

The department has a range of methods to detect the entry of biosecurity risk materials through express air cargo pathways into Australia. Operations continue to be run to test these methods and to find improvements. Further, new technology such as artificial intelligence is being developed to enhance screening and identification.

Imported air (and sea) cargo risk profiling is managed by the department through the Integrated Cargo System (ICS)—a database owned and managed by the Department of Home Affairs. ICS is the only method of reporting the movement of goods, including the shipment type, across Australia's borders. The department uses ICS to identify and flag imported consignments with an elevated biosecurity risk profile. Biosecurity officers may use ICS to gather further information on imported consignments or to place or lift holds on identified shipments.

3.1 Types of risk profiles

The department's risk profiles work by word matching as they compare descriptions of SAC consignments with a set of profile criteria to identify potential biosecurity risks. As such, the usefulness of the profiles depends almost entirely on the accuracy of entry of the consignment description by the consignee in the ICS.

Profile criteria may include:

- general descriptors (for example, 'meat', 'fruit' and 'vegetable') to identify broad commodity types, or
- specific descriptors such as 'fresh pork', 'fresh apples' and 'fresh broccoli' to target specific commodities.

If the descriptors of a SAC consignment match a profile criteria in the ICS it is identified as having potential biosecurity risks, and referred to the department for screening and inspection.

In addition, the department also uses other profiles, including:

- name based profiles (either consignee or consignor)—that identify entity names associated with biosecurity risk regardless of the goods description
- non-compliant entity profiles—used by NCAR and Enforcement to identify generally with combinations of names and address fields consignments for entities that have a non-compliance history

- targeting profiles—used by the department for targeted operations (such as Operation Fraser)
- verification sampling profiles—used for a randomised selection of CAPEC in each port.

At June 2020, the department had 1361 active SAC profiles in the ICS.

The SAC National Coordination Centre (SAC NCC)—set up by the department in 2014—regularly enhances profiles using intelligence, data analytics, trends and emerging risks. This national approach to profiling helps maintain consistency in the department's screening of SAC consignments to target high- and medium-risk goods regardless of port of entry in Australia. However, the SAC pathway remains very heavily dependent on the integrity of consignee declarations.

3.2 Process of risk profiling and assessment

All SACs are reported into the ICS. For assessment purposes, the department profiles refer consignments considered to contain biosecurity risk material to:

- the SAC database—for non-CAPEC members, with data maintained across ICS-SAC-AIMS databases
- the IMS database—for CAPEC members, with data maintained across ICS-IMS-AIMS databases.

The process of profiling SAC consignments encompasses screening of profile referrals in the ICS by the department's assessment officers. If the assessment of consignments in SAC or IMS identify the goods, that:

- require management of biosecurity risk (for example, presentation of import documentation, inspection, sampling/testing, treatment or movement to an Approved Arrangement), such consignments (entries) are upgraded to and managed in the AIMS database. Biosecurity risk is then managed via issuing of 'biosecurity directions' in AIMS.
- do not require management of biosecurity risk (such as, nil biosecurity risk material, goods meeting import requirements), such consignments are released from biosecurity control directly from SAC or IMS.

The officers within Assessment Group regularly provide feedback to the Profiling and Targeting team on profile 'hits' that they assess to improve profiles and more targeted intervention, where possible.

The IMS is limited to assessing goods processed by CAPEC members only, and does not have a provision of recording data for non-CAPEC members. Clearly, exclusion of non-CAPEC members skews the dataset on the movement of SAC goods across premises in capital cities. Consequently, the tracking and assessment of associated biosecurity risks is hindered by the exclusion of information on SAC consignments entering via non-CAPEC member premises. The department advised the Inspector-General that it uses a 'combined data model' to track consignments across the SAC and IMS systems. However, no further details were provided.

The Inspector-General noted that the department is progressing the Biosecurity Integrated Information System (BIIS) program and IMS project to replace the SAC and AIMS databases for end-to-end management of biosecurity risk (see Chapter 10: Data and information management). This will enable enhanced data capture of decision-making and management of biosecurity risk across CAPEC and non-CAPEC member premises.

Recommendation 9

The department should expand Import Management System (IMS) to include SAC consignments handled and processed by non-CAPEC members.

Department's response: *Agreed.*

It remains the department's intention to include non-CAPEC members in IMS, having only rolled out to CAPEC thus far.

The Inspector-General noted that pending endorsement of the BIIS/IMS investment roadmap, the IMS project capability roadmap will see all CAPEC and non-CAPEC consignments managed within IMS. This will eliminate the need to upgrade to AIMS by March 2021 (Package 2 of the investment roadmap). The Inspector-General did not receive any further information on this from the department for further assessment.

3.2.1 Operation Fraser

Until recently, the department appears to have considered non-commercial express airfreight pathway, a low-risk pathway. In mid-2019—during the peak of African swine fever outbreak overseas—the Inspector-General requested the department to provide relevant data to enable him to ascertain whether or not the non-commercial express airfreight pathway was being exploited for illegal entry of pork products into Australia. The illegal imports of pork and pork products present a serious threat of introducing African swine fever and the foot-and-mouth disease virus into Australia. The Inspector-General had proposed the department to consider undertaking a review of the airfreight pathway in collaboration with his support team.

Between 18 November and 23 December 2019, the department ran a compliance campaign named Operation Fraser. Operation Fraser sought to test current regulatory controls for the mitigation of African swine fever entering Australia via both air and sea pathways from 3 African swine fever-affected countries: China, Vietnam and Hong Kong. The operation involved several of the department's internal multi-disciplinary teams and collaboration with the Australian Border Force.

To test the accuracy of goods' declarations in the self-assessed clearance sea and air cargo pathways, the department developed and implemented 111 screening profiles in the Integrated Cargo System. The department's screening regime (conducted at 100% intervention rate) identified 881 SAC consignments that appeared to carry potential biosecurity risk material and were opened for inspection. Of these 881 consignments:

- 859 consignments (97.5%) were compliant (that is, did not carry any biosecurity risk material)
- 2 (originated in an African swine fever-affected country) were mis-declared, contained 4 types of meat products and tested positive for the African swine fever virus
- 14 contained non-pig meat, which is a high-risk biosecurity material
- 13 presented non-biosecurity risks related to goods covered by Australian Border Force provisions
- 7 consignments were reported twice by CAPEC.

Overall, Operation Fraser identified the following weaknesses in the SAC pathway:

- Entities and individuals deliberately mis-declared and attempted to conceal actionable biosecurity material.
- Whether deliberately or inadvertently, a large variety of biosecurity risk material is entering Australia via SAC pathway.
- Due to the free-text nature and high transaction volume of the SAC pathway, it is challenging to profile and screen non-commercial cargo accurately.
- Effective management of this pathway relies on a 'layered approach' to identify and manage risks to the appropriate level.

To strengthen existing operational controls, recommendations from Operation Fraser were:

1. Establishing a business as usual process for verification of non-biosecurity risk goods description reporting on SAC pathway.
2. Assessing whether machine learning can provide enhanced non-compliance detection capability while minimising impacts on departmental resourcing.
3. Closing knowledge gaps regarding the intent of Australian based hot pot restaurants to smuggle animal origin ingredients for hospitality end-use.
4. Increasing number of tools available to treat non-compliance on the pathway, codify escalation threshold and consider efficacy.
5. Increasing border detection capability span for high threat biosecurity concerns.
6. Increasing Inspection Group's situational awareness of emerging concealment methods aiming to defeat border inspection controls.
7. Standardising business as usual processing of non-compliant SAC profile matches, including Agricultural Import Management System shortcut to reduce inadvertent 'document release' of profile-matched Integrated Cargo System and SAC non-compliant transactions.

The department has advised the Inspector-General that it is progressing these recommendations and aims to complete by December 2020.

Operation Fraser provided valuable insights, including uncovering several shortcomings that the department must address at the earliest opportunity. The Inspector-General noted that the department is currently deploying 'Operation Fraser 2' for express airfreight biosecurity risk mitigation. The department has not shared any details of Operation Fraser 2 with the Inspector-General to enable him to evaluate its robustness, through the review of:

- its objectives (that is, covers air cargo (SAC) pathway only or also covers sea cargo (SAC) pathway)
- the breadth of coverage across regions
- appropriateness of the length of the program (timeframe, including start and end dates)
- adequacy and robustness of methodology (especially, sample size, sampling regime and locations)
- schedule of activities covered, including milestones
- provisions for regular/ongoing oversight by relevant executives to ensure the success of the operation.

Recommendation 10

The department should:

- implement all recommendations from Operation Fraser and report its progress against its self-determined improvement timetable to the Inspector-General in January 2021
- regularly undertake more such operations in all regions to strengthen its operational controls to ensure biosecurity risks entering Australia via the SAC pathway are being adequately addressed.

Department's response: *Agreed.*

The department has commenced implementing the recommendations from Operation Fraser and aims to complete the implementation of these by January 2021.

The department will continue to undertake targeted operations in the SAC pathway and has already deployed the second phase of Operation Fraser. Furthermore, there is current planning for additional activities in the pathway targeting a range of biosecurity risks and non-compliance behaviours. These activities will include targeting at a national level and focus on testing the effectiveness of controls and opportunities to strengthen them.

3.2.2 Use of technology and intelligence sharing for screening

In 2019 the department initiated work on the integration of artificial intelligence (AI) technologies such as automation for biosecurity screening. The benefits of artificial intelligence technologies include:

- enhanced SAC and ICS screening efficiency and effectiveness
- improved targeting of inspection activities
- the ability to adapt to rapidly emerging biosecurity risk threats.

The department relies on ongoing surveillance and intelligence programs to better target high-risk goods and pathways. Under the MoU, the two border agencies—the Department of Agriculture, Water and the Environment, and the Department of Home Affairs (Australian Border Force)—share surveillance and intelligence outcomes in conducting joint biosecurity screening and investigations. For example, the department and Australian Border Force were jointly involved in intelligence sharing during the course of Operation Fraser, which aimed to verify the efficacy of current regulatory controls on the SAC pathway. In addition, the department utilises the Integrated Cargo System (ICS)—a database owned and managed by Home Affairs and used by the department to report the movement of cargo, including SAC consignments, across Australia's borders.

The department does not have formal intelligence sharing arrangements with CAPEC or non-CAPEC members. It was unclear whether CAPEC members with significant international presence receive relevant intelligence from parent/sister operations overseas. This would be useful in detecting trends in non-compliant consignments and also help improve at-border risk mitigation or management.

In building a more accountable partnership with express airfreight operators, the department should share intelligence collected through its own sources with the industry to ensure quick action for mitigation of risks entering Australia via the express airfreight pathway.

Recommendation 11

The department should explore possibilities of working with CAPEC and non-CAPEC members to develop X-ray scanning algorithms for targeted biosecurity risk material, including obtaining intelligence, screening imagery and other technology for SAC consignments from their overseas operations.

Department's response: *Agreed.*

The department is already exploring opportunities to work with CAPEC and non-CAPEC members to deploy X-ray scanning algorithms for targeted biosecurity risk material. A trial of deploying 3D auto-detection algorithms in the air cargo pathway is being planned for 2021. The department is currently liaising with other agencies which have partnered with IT companies on the development of biosecurity algorithms for 2D X-ray units. The department is investigating options to participate in this program. If it is possible to successfully develop biosecurity algorithms for 2D X-ray units, the next stage could involve partnering with CAPEC members who have similar X-ray equipment to trial the deployment of auto detection algorithms for goods imported in Australia.

3.3 Profiling and targeting

3.3.1 Profile types

The department primarily uses two types of profiles for assessing SAC consignments:

1. *Description profiles*—these are used to target SAC consignments based on the description of the goods contained inside. For example, a description profile containing the word 'Alpaca' may be used to target SAC consignments that contain animal-derived material from alpacas, such as raw wool.
2. *Entity profiles*—these are used to target SAC consignments based on the name of the entity importing the goods. For example, an entity profile for an importer name such as 'Australian Laboratory Services' may be used to target consignments imported by a specific company for potential biological risk concerns.

In addition, the department uses other secondary profiles, including:

- consignor name—in SAC profiling by matching the consignor details reported in accompanying declarations
- country of origin—used most often for enforcement activities.

Creating a new primary profile type based on country of origin would allow for targeting of high- and medium-risk SAC goods from countries where there is a known risk. This approach is supported by intelligence data from biosecurity interceptions, which shows the origin of goods is a clear indicator for identifying consignments containing biosecurity risk materials.

For example, a country profile could be used to target assessment of SAC consignments originating from nations with serious disease outbreaks (such as the recent African swine fever). This would allow consignments from disease-affected areas to be quickly targeted—enabling the department to segregate such consignments that may contain high- or medium-risk goods.

Secondary information sources can also help determine periods when biosecurity risks generally peak on the SAC pathway due to large volumes of consignments entering Australia, for example, international cultural events. In particular, the Inspector-General recommends the department to undertake such targeted operation in all regions, especially in the weeks leading up to festival seasons such as, Chinese New Year, Diwali, Ramadan, and Valentine's Day, when the number of imported consignments increases substantially.

Given the outbreak of African swine fever in several neighbouring countries, the department must ensure associated biosecurity risks are adequately managed. Using secondary data sources in conjunction with a country of origin profile criteria may assist biosecurity officers in identifying elevated risk periods in advance—allowing for adequate preparation to mitigate the risk of surges of high- and medium-risk goods entering via the SAC pathway.

The Inspector-General noted that the incorporation of the country of origin profile and use of information sources for screening is currently used by the department for the mail pathway. The department's capability in targeting high- and medium-risk goods on the SAC pathway can be improved by adopting a similar approach for assessing SAC consignments by integrating a country of origin profile and using secondary data sources. Targeted assurance and verification activities during peak risk periods such as global cultural festivals should be a core part of improved risk mitigation measures.

The Inspector-General noted that secondary data sources are not directly related to the imported goods. They are used to create specific profiles for monitoring and enforcement purposes, thereby helping to focus the department's effort in biosecurity education and awareness campaigns.

Recommendation 12

Rather than using country of origin profile as sub-criteria for non-compliance response activities, the department should incorporate these criteria to routinely target goods from high-risk countries entering via the air cargo SAC pathway.

Department's response: *Agreed.*

The department will incorporate relevant country of origin criteria (and cultural events) based on information collected. This information, once analysed, will be progressed with policy owners to identify biosecurity risk and seasonality and establish a process to have them built into relevant profile criteria.

3.3.2 Import declaration profiling

All short-form SACs can be reported by either importers or someone acting on their behalf—provided they are registered in the Integrated Cargo System. Each SAC declaration requires basic information, including the identity of the sender and importer, consignment details and goods description, delivery location and company or business names. SAC declarations are lodged electronically in the Integrated Cargo System. As consignment details are based on information provided by the overseas sender of the goods, the accuracy is reliant on the details provided and being correctly entered into the Integrated Cargo System.

The information is then matched with the department's profiles as a primary screening method for assessing SAC consignments for potential biosecurity risk.

As the type of airfreight in SAC pathway is typically low-value non-commercial goods, it seems likely that the majority of these will be sent privately. It is common for people overseas to send low-value goods to their families in Australia using express airfreight services. However, the expansion of exploitation of the SAC pathway by small-scale criminal players cannot be discounted. The usefulness of profile criteria as a screening tool for these types of activities is limited due to minimal information provided by the consignor. False or mis-declaration of consigned goods is not likely to yield an alert for targeted screening by a biosecurity officer.

The risk of mis-declaring SAC consignments cannot be eliminated given that the department has no control over the actions of the consignor and consignee. However, steps can be taken to further minimise the risks for this pathway. It would be worthwhile strengthening current controls to deter or minimise false declarations.

One way would be by integrating into the Integrated Cargo System a process of SAC consignment blacklisting using the department's artificial intelligence-driven risk profiling system. This feature would trace inconsistent information on SAC consignments back to the original consignor and consignee. Information recorded by the consignor and the consignee is automatically compared. The party determined to be liable for recording false information is given a warning notice, sent via available contact information. Multiple warning notices may result in appropriate penalties—such as blocking the sending or receiving of goods via express airfreight until accurate record-keeping has been demonstrated. Investigating how a blacklisting control can be incorporated into existing systems may increase the compliance rates of accurately declaring SAC consignments.

Recommendation 13

The department should collaborate with the Australian Border Force to:

- integrate a consignment blacklisting control in the ICS using artificial intelligence-driven risk profiling to reduce mis-declarations of SAC consignments
- determine how best to incorporate available improved technologies and systems for use in document assessments of SAC consignments and in biosecurity screening, more broadly.

Department's response: *Agreed.*

The department actively collaborates with the Australian Border Force. The department has trialled machine learning to predict non-compliance, including mis-declaration, and is currently exploring implementation options either through the ICS, the department's systems or a combination.

3.2.3 Post-profiling document verification

SAC consignments that are screened and assessed as compliant through profiling are cleared for delivery. If profiling assesses consignments as potentially containing prohibited goods or biosecurity risk material, they are automatically referred to the department for document assessment. This assessment involves verifying consignment documentation, such as invoices and mandatory declarations to better determine if the consignment potentially contains prohibited goods or biosecurity risk materials.

After document assessment, some consignments may be directed to the department for physical inspection, which is usually due to the likely presence of biosecurity risk material or lack of appropriate documentation. Consignments are released after inspection if no biosecurity risk material is detected and the consignment meets document requirements. Consignments requiring further biosecurity risk intervention are upgraded to the department's Agriculture Import Management System.

3.2.4 Automation for document verification

In March 2019, the department began work on a project to explore the use of automation technology (artificial intelligence) to enhance its capability to verify document accompanying SAC consignments. The benefits of automation technology include:

- enhanced the efficiency and effectiveness of SAC and Integrated Cargo System screening
- improved targeting of inspection activities
- improved the ability to adapt to rapidly emerging biosecurity threats.

The department commenced a 'proof of value' project for automation to test a suite of technologies, including robotic process automation, artificial intelligence, machine learning, natural language processing and a cognitive 'IQ Bot'. The 'proof of value' project targeted automation of import documentation assessment in the Full Import Declaration pathway. It successfully demonstrated a fully automated assessment of a defined set of minimum documentation requirements. Following the success of the 'proof of value' automation project in July 2019, the department developed a business case and project proposal for consideration and approval by the Biosecurity Research and Innovation Steering Committee to progress the project.

In September 2019, the department adopted the ‘proof of value’ automation project and it was expected to ‘Go Live’ in the first half of 2020. However, the project got delayed largely due to awaiting security approvals and ICT environment stability issues. It is currently undergoing technical and business verification testing in the production environment, with operational deployment expected in July or August 2020.

In addition to the initial ‘proof of value’ automation project scope that targeted automation of import documentation assessment in the Full Import Declaration pathway, the department is also progressing further work to roll out to the SAC pathway. This stand-alone project, which entails an expansion of the automation technology to the SAC pathway, is currently being scoped for development pending approval of funding.

Recommendation 14

The department should apply the necessary funding to enable SAC automation to be initiated at the earliest opportunity, and re-assign resulting surplus staff resources to pathway audit and verification activities.

Department’s response: *Agreed.*

Exploratory work has been progressed on SAC automation. Efficiencies in staff utilisation realised from automation will be reinvested in higher risk activities, including increased verification and assurance. In redeploying staff, consideration will be given to the pre-requisite attributes and competencies required for certain roles, for example departmental audit staff.

The department must work collaboratively with the Australian Border Force on this and all similar technology advancement projects. The department should undertake a joint border agency analysis of screening methods for biosecurity profiling to identify opportunities for improvements. These collaborations can potentially result in further efficiency gains, including quicker assessment of documentation accompanying SAC consignments and improved biosecurity screening (Recommendation 13).

3.4 Enhanced screening for improved declaration

All SAC consignments entering Australia should receive enhanced automated screening given the evidence of repeated non-compliance and the apparent incentives to mis-declare shipments. For example, Operation Fraser showed that targeted consignments did not always contain the declared products.

Rigorous assessment and manual inspection of SAC consignments is unlikely to be sufficient to guard against non-compliant behaviour. One way to help deter such non-compliant behaviour would be to implement an updated declaration—to capture more detailed information about the goods and consignee—for all non-commercial airfreight consignments entering Australia, by better enabling artificial intelligence to assist in identification of flawed or false declarations. This option would require engagement with the Department of Home Affairs and international consultation, as well as consultation with Australia Post, and CAPEC and non-CAPEC members for implementation at a level that would provide practical deterrence to non-compliance.

3.5 Improvement directions

The department's biosecurity measures for express airfreight (SAC) pathway rely too heavily on document assessment, supported by some algorithm-enhanced decision-making. Historically, around 10% of profile referrals result in an Agriculture Import Management System entry as a result of screening and assessment processes, noting multiple profile referrals may relate to a single entry/consignment.

The low frequency of biosecurity intervention in the express airfreight pathway is of particular concern. It is well-known that clever consignors can be adept at providing high quality, compliant documentation. They can also be adept at producing seemingly credible yet false documentation and websites for offshore businesses. Issues highlighted in the department's internal detailed 2016 Preliminary Air Cargo Pathway Threat Assessment report appear to have received little subsequent attention. A new threat assessment was completed in August 2019, which coincided with the initiation of this review by the Inspector-General.

Based on fieldwork across regions, a review of the legislation and discussions with regional managers, staff and key stakeholders, it can be concluded that the current biosecurity framework for airfreight cargo is unsatisfactory. Evidence from both the fieldwork observations and discussions points to a necessary policy paradigm shift towards a risk assessment-based biosecurity process. Special emphasis should be put on a collaborative industry-driven supply-chain biosecurity and the urgent need to harmonise air cargo biosecurity procedures Australia-wide.

Chapter 4

Infrastructure and screening capability

There is significant variation in the infrastructure at facilities handling non-commercial SAC goods. This variation has a flow on impact to the ability of facilities to process and screen goods received for biosecurity risk materials. Data shows that improvements can be made at all facilities in terms of their detection equipment and resources.

4.1 Typical infrastructure at approved airfreight depots

Infrastructure requirements for class 1.2 approved arrangement air freight depots are documented on the department's [website](#). Although large variations in infrastructure exist between different types of facilities, there are significant parallels between CAPEC and Australia Post facilities where both deal with significant volumes of non-commercial imports. Despite this, screening methods differ at each group of facility.

4.1.1 CAPEC member facilities

Only 1 CAPEC member facility (FedEx in Sydney) has 2D X-ray capability. In addition, UPS—a CAPEC member—also has a 2D X-ray capability in Melbourne but their premises are not approved as a class 14.3 approved arrangement. These facilities usually have a single inspection bench for manual screening with a small dedicated area for holding imported goods.

CAPEC facilities with X-ray units installed utilise this capability by exception rather than on a regular or routine basis as routine screening consists of manual inspection of goods flagged via SAC declarations and presented to officers by facility staff. The Inspector-General was advised that the X-ray machine in one CAPEC facility had not been used by the department for at least 4 years.

Some CAPEC members have CT/3D X-ray units for aviation security screening as part of their global operations overseas. However, none of the CAPEC members are utilising 3D X-ray within their Australian facilities.

During fieldwork, the Inspector-General noted that an in-line 2D X-ray scanner—owned and installed by the department at one of the CAPEC member facilities in Sydney in June 2016—had not been used for the past 4 years ([Figure 1](#)). The department advised the Inspector-General that due to non-availability of staff (staffing caps), they could not deploy a staff member to run the scanner. The scanner was previously used for free-line surveillance and assurance-based screening.

4.1.2 Non-CAPEC member facilities

Except at one location in Brisbane that has 2D X-ray capability, these facilities typically do not have X-ray units for screening of SAC consignments. Facilities have variations in infrastructure and usually have a single inspection bench with a small dedicated area for holding imported goods.

No routine screening of consignments by X-ray, detector dogs or manual screening occurs at these premises other than when an inspection activity is booked and scheduled as a result of the department's profiling and assessment.

At both CAPEC and non-CAPEC member facilities, a biosecurity officer manually inspects those consignments that have been profiled by either the department for further assessment or referred by Australian Border Force or approved arrangements holders.

FIGURE 1 An unused in-line 2D X-ray scanner installed by the department at a CAPEC member facility in Sydney, October 2019



4.2 Volume of SAC articles handled at approved airfreight depots

Between 2016 and 2019 there was a significant variation in the number of SAC consignments that are referred to the department for assessment between CAPEC and non-CAPEC facilities.

4.2.1 CAPEC member facilities

In four years, between 2016 and 2019, more than 1.4 million entries of SAC consignments were referred to the department. These entries—handled by CAPEC members—decreased substantially from about 450,000 in 2016 to 260,000 in 2019 (Table 4), with about 910,000 entries finalised based entirely on document assessment. CAPEC members also finalised 400,000 entries after inspection and upgraded about 110,000 entries due to non-compliant documentation. After failing inspection, 16,000 entries were also upgraded for further action.

Approximately 269 entries remained unfinalised.

TABLE 4 Self-assessed consignments entry outcomes, CAPEC members, 2016 to 2019

Entry outcomes	2016	2017	2018	2019	Total	Percentage of total entries
Finalised after assessment	300,000	240,000	220,000	150,000	910,000	65
Finalised after inspection	120,000	110,000	94,000	76,000	400,000	29
Upgraded after assessment	24,000	27,000	28,000	29,000	110,000	7.9
Upgraded after inspection	3,100	4,300	4,200	4,600	16,000	1.1
Unfinalised	6	25	54	184	269	0.02
Found to carry biosecurity risk material (no.)	580	12	23	82	626	0.04
Total	450,000	380,000	350,000	260,000	1,400,000	100

Note: All figures are rounded to two significant figures; **Upgraded** refers to entries that are either awaiting assessment or inspection and may involve a combination of unresolved, duplicated, amended or outstanding entries.

4.2.2 Non-CAPEC member facilities

Between 2016 and 2019, non-CAPEC members handled approximately 442,000 SAC entries referred to the department (Table 5). This is less than one-third of the number of SAC entries processed by CAPEC members (442,000 vs. 1.4 million). There was also a notable reduction of more than 50% from 160,000 in 2016 to 76,000 in 2019.

About 401,000 entries were finalised after document assessment, which also shows more than 50% reduction in the entries between 2016 and 2019. Non-CAPEC members inspected 12,500 entries and upgraded about 22,300 entries in AIMS after assessment, which required further assessment and inspection. Six thousand more entries were upgraded after inspection.

Approximately 2,039 entries remained unfinalised.

TABLE 5 Self-assessed consignments entry outcomes, non-CAPEC members, 2016 to 2019

Entry outcomes	2016	2017	2018	2019	Total	Percentage of total entries
Finalised after assessment	150,000	86,000	100,000	65,000	401,000	90.1
Finalised after inspection	3,000	3,500	3,600	2,400	12,500	2.8
Upgraded after assessment	6,700	5,100	5,700	4,800	22,300	5.0
Upgraded after inspection	1,100	1,100	2,000	1,800	6,000	1.3
Unfinalised	59	200	280	1,500	2,039	0.5
Found to carry biosecurity risk material (no.)	234	249	416	432	1,331	0.3
Total	161,000	96,000	112,000	76,000	445,170	100

Note: All figures are rounded to two significant figures; **Upgraded** refers to entries that are either awaiting assessment or inspection and may involve a combination of unresolved, duplicated, amended or outstanding entries.

4.2.3 Relative performance of CAPEC and non-CAPEC members, 2017–19

Data in [Table 4](#) and [Table 5](#) shows large variability in the processing of SAC consignments between CAPEC and non-CAPEC members, especially in:

- The total number of SAC entries finalised—based entirely on document assessment—by CAPEC and non-CAPEC members.
- Non-CAPEC members finalised 26% more entries than CAPEC members (90% vs. 65%).
- CAPEC members finalised a significantly higher number of entries after inspection (28%) than non-CAPEC members (3%).

It remains unclear to the Inspector-General as to why this huge variability in finalised entries between CAPEC and non-CAPEC members exists. The lower number of entries finalised by CAPEC members, and the higher number of consignments inspected by them, has not had the desired industry uptake to significantly impact the variability.

The Inspector-General suggests that the department should, as a priority:

- investigate variability in the levels of entries finalised by CAPEC and non-CAPEC members, and
- expand class 14.3 approved arrangements to cover non-CAPEC members for better regulatory control (Recommendation 2).

Similarly, the number of unfinalised entries were almost 25-times higher in case of non-CAPEC (0.5%) than for CAPEC (0.02%) members. This outcome is particularly surprising given that non-CAPEC members handled only about one-thirds of CAPEC members, but their performance in handling and clearing is clearly unsatisfactory.

The Inspector-General noted that entries that remained unfinalised may be the result of:

- Duplicated entries—a result of the cargo reporter/courier/broker making multiple entries of a single consignment in the Integrated Cargo System. Duplication is an administrative anomaly as a result of courier/broker double-handling or change of details (for example, re-cutting airway bills).
- Amended or reactivated entries—a result of the cargo reporter/courier/broker amending the original finalised entry in the Integrated Cargo System. Amendments are an administrative anomaly as a result of courier/broker changing cargo details in the Integrated Cargo System for commercial purposes.
- Outstanding entries—a result of the cargo reporter/courier/broker not presenting the consignment for assessment/inspection after reporting the consignment in the Integrated Cargo System. These typically refer to goods being held pending assessment/inspection at the time of data reporting. Some non-CAPEC members choose not to pursue assessment/inspection and will hold goods until it is commercially viable to bulk dispose of goods using an approved arrangement.

The Inspector-General noted that the department reports and actions outstanding entries in SAC database weekly. The department liaises internally and with couriers/facility managers to resolve outstanding entries.

Recommendation 15

The department should move quickly to ensure that all CAPEC facilities have the necessary infrastructure to support efficient completion of targeted surveillance and verification operations, such as completed under Operation Fraser. For non-CAPEC entities, audits by department staff should include intelligence gathering to inform planning for potential targeted surveillance and verification operations.

Department's response: *Agreed.*

The department's audit function will continue to gather intelligence as part of the audit process to further inform targeted surveillance and verification operations. There is scope, however, to explore enhancements to systems to better support the capture and analysis of collected intelligence.

4.3 Reporting obligations of CAPEC and non-CAPEC members

The *Biosecurity Act 2015* requires persons in charge of goods that are subject to biosecurity control to notify the department of reportable biosecurity incidents. Events that are reportable biosecurity incidents about relevant goods are described in Biosecurity (Reportable Biosecurity Incidents) Determination 2016.

CAPEC and non-CAPEC members are obliged to report all events of biosecurity incidents that happen during the handling of SAC consignments. Incidents that must be reported, include events relating to:

- goods that are prohibited goods, conditionally non-prohibited goods or suspended goods
- conditionally non-prohibited goods
- goods generally.

The Act requires notices for goods to be unloaded in Australia, which must:

- include the information about the goods that are prescribed by the regulations
- be given in the manner, and to the person, prescribed by the regulations
- be given at the time, or during the period, prescribed by the regulations (which may be before or after the goods are unloaded as referred to in subsection (1))
- be in a form or forms approved by the Director of Biosecurity.

Details about the prescribed requirements can be found under Part 1: Chapter 2 of the Biosecurity Regulation 2016.

The department was unable to provide the Inspector-General with records of compliance reporting. While education and awareness campaigns are apparently conducted, no evidence was provided of these activities nor their impact on the quality of reportable information. Whatever is the reason, the department does not appear to have a commitment nor processes that support an appropriate level of accountability for both the department and major airfreight operators.

4.4 Data management systems used by CAPEC and non-CAPEC members

The Inspector-General:

- Noted that the department neither had access to CAPEC and non-CAPEC members' data management systems nor had it explored partnering with CAPEC members to explore options for using these established commercial systems as a possible way of contributing to mitigating biosecurity risk.
- Recognises that the department sees the broader collection of relevant data (including from industry/companies) provides richer, timelier information for a stronger risk mitigation outcomes along the biosecurity continuum.

However, the department should, as a priority, explore opportunities to expand access to commercial information and information sources. Current information gaps exist as the department cannot secure sufficient funding for the expansion of its own systems. Preferably, the department should do this in collaboration with the Australian Border Force through legally and technically sound options.

Recommendation 16

The department should, as a priority, explore opportunities to expand access to information and information sources held by CAPEC and non-CAPEC members. Preferably, in collaboration with Australian Border Force through legal and technically sound options.

Department's response: *Agreed.*

The department will continue to explore further opportunities for collaboration with industry and the Australian Border Force (ABF). The department recognises the importance of information sharing and collaboration with industry and has a specific express air freight engagement forum with CAPEC. The department routinely collaborates with the ABF, Australia Post and industry more broadly through forums such as the DCCC.

4.5 Suggestions for improvement

Following his visits to CAPEC member facilities in Sydney and Melbourne, the Inspector-General remained unconvinced that measures in place for express airfreight are sufficient to mitigate the biosecurity risks entering Australia through this growing and evolving pathway.

The express airfreight biosecurity measures rely heavily on document assessment by the departmental officers, who use algorithm-enhanced information from departmental databases.

It seems clear that clever consignors can provide high-quality, compliant and seemingly credible yet false documentation. They can also easily produce websites for offshore businesses. Therefore, the low frequency of intervention in the express airfreight pathway is of concern.

Incidentally, during his visit to a CAPEC member premise in Sydney, the Inspector-General witnessed opening of a SAC parcel by departmental officer that carried potentially serious un-documented biosecurity risk material. It is a serious concern that this one incident may indicate a pattern of significant quantities of high-risk material is entering Australia through this pathway. It is also open to question as to whether criminal players are using this pathway to 'pulse' despatch illegal material into Australia.

4.5.1 3D technology

In section 4.1 Typical infrastructure at approved airfreight depots, it was shown that a majority of premises currently only have 2D X-ray facilities, many of which are not in use.

As noted in the recent Inspector-General review into the department's response to managing the biosecurity risk of African swine fever (IGB 2020), the 3D X-ray technology now available is both faster and more effective than existing 2D technology. 3D technology has benefits for the CAPEC members (and larger non-CAPEC members) outside of biosecurity screening as it can conduct explosive and dangerous goods screening on the same line.

3D technology has the added benefit that it enables screening to be conducted remotely, reducing operational impact and could be made resource neutral across existing 3D X-ray capability. Utilising this technology would allow for a multi-agency approach, increasing collaboration with partner agencies, such as the Australian Border Force, for detection of dangerous and prohibited customs items.

Given the large volumes of SAC consignments handled and processed by CAPEC members, an opportunity exists to modernise/upgrade the existing screening capability at CAPEC facilities with the introduction of 3D X-ray Real-Time Tomography (RTT) units. The department's arguments for such modernisation would be contingent on its adoption of enhanced verification, sampling and profiling activity of the non-commercial air express parcels/consignments pathway.

Recommendation 17

The department should work with CAPEC members to explore improvements in technological infrastructure to modernise screening for more accurate detection of biosecurity risk material. This would increase the speed of operation for CAPEC members and reduce the department's intervention for assessment and regulatory action.

Department's response: *Agreed.*

The department is exploring opportunities to work with CAPEC members to deploy X-ray scanning algorithms for targeted biosecurity risk material. The department is looking to undertake a pilot program during 2021 involving the installation and operationalisation of an RTT@110 3D X-ray to test its capability in an airfreight depot for the effective screening for biosecurity risks using computer auto detection algorithms.

The department is also currently liaising with other agencies which have partnered with IT companies on the development of biosecurity algorithms for 2D X-ray units.

The use of this technology is in line with the recommendation from the World Customs Organization:

The dynamic and global nature of E-Commerce requires governments to be proactive and forward-thinking, leveraging future technologies to proffer solutions to emerging Ecommerce challenges. Ongoing innovation is needed including cooperation with the private sector and academia (World Customs Organization 2018).

4.5.2 Detector dog capability

Meat and meat products are high-risk goods as they could carry African swine fever and foot-and-mouth virus, and other exotic animal disease pathogens. This risk is particularly relevant in the context of SAC consignments, as the Inspector-General's review on the adequacy of preventative border measures to mitigate the risk of African swine fever noted that:

It is unclear how many parcels are screened for pork and pork products through the self-assessed clearance (SAC) airfreight pathway. However, if pork products were only 50% as prevalent in other airfreight pathways as has been recorded in the EMS [Express Mail Service] pathway, then as many as 5,400 items and 7 tonnes of pork may be entering via the airfreight pathways (IGB 2020).

Several recent Inspectors-General reports (IGB 2019b; IGB 2019c; IGB 2020) have previously emphasised (and recommended) utilising detector dog capability across multiple pathways, including cargo, and international travellers and mail. In one recent report, the Inspector-General noted that detector dogs were the most effective method of intercepting undeclared meat (53%) followed by 2D X-ray (32%). The Inspector-General recommended:

[Recommendation 1] The department should improve the rate and effectiveness of screening mail and passengers, by both X-ray and by detector dogs. The department should increase the number and prioritise the use of detector dogs to fully use the mobility and versatility of dogs to screen across a range of environments including carousels, cargo and conveyances for targeted and random screening (IGB 2019c).

The department currently uses detector dogs to conduct screening on moving conveyor belts carrying targeted mail items at international mail facilities. It would require minimal (if any) changes to infrastructure at CAPEC and non-CAPEC member facilities to utilise detector dogs for better screening of SAC consignments.

The mobility of detector dogs allows the department to rapidly deploy them to areas or regions that require increased screening. Detector dogs provide a distinct tactical advantage in detecting undeclared biosecurity risk material over other screening methods, including the ability to:

- screen large numbers of consignments in a short period
- be trained as multipurpose detectors because of their excellent sense of smell and strong retrieval drive
- be impartial as dogs are not subject to well-known human bias (IGB 2019c).

The Inspector-General also recommends random sampling of non-profiled goods utilising a combination of detector dogs, X-ray or manual intervention from biosecurity officers at CAPEC and non-CAPEC member facilities. This would provide a better understanding of the risk posed by these goods and potentially deter deliberate non-compliance through the perception of significantly increased detection and prosecution risk.

Recommendation 18

The department should expand the detector dog program consistent with the increase in SAC consignment numbers to utilise dogs in targeted surveillance and verification operations minimising entry of biosecurity risk material into Australia.

Department's response: *Agreed.*

The department agrees with the recommendation to utilise detector dog teams for targeted surveillance and verification operations. Intermittent targeted surveillance and verification operations can be implemented within current capacity but an expansion to more routine operations would likely require an increase in capacity which is a matter for Government.

Chapter 5

Coordinated, agile management arrangements with efficient cooperation

At the start of 2019–20, the department apparently considered express airfreight pathway a low risk pathway. The Inspector-General's request for evidence in support of this claim and subsequent discussions with the departmental executives yielded little evidence to support historical management decisions, but led the department to undertake a targeted operation (see 3.1.1 Operation Fraser) to ascertain the level of risk this pathway likely to pose as online ordering and international airfreight both grows and evolves rapidly.

5.1 Purpose and functions of sub-classes

The department manages certain responsibilities under the *Biosecurity Act 2015* through collaboration with other government agencies. In most cases this is through a formal arrangement such as a memorandum of understanding. The memorandum of understanding sets out the representation, working relationship, expectations, responsibilities and duties of both departments at strategic, policy and operational levels. The department has biosecurity agreements with the Department of Defence, Department of Health and the Department of Home Affairs (Australian Border Force).

The department and Australian Border Force regulate Australia's international borders and work together to inform the express airfreight industry of their targeting priorities for screening and assessment of biosecurity risks in SAC goods.

Goods imported into Australia require classification under the *Customs Tariff Act 1995*, which is administered by the Australian Border Force. On 21 July 2011, the then Department of Agriculture and the then Australian Customs and Border Protection Service signed a memorandum of understanding, defining each party's biosecurity and border protection responsibilities. This memorandum of understanding has since been updated.

The department works collaboratively with the Australian Border Force, engages and shares information with it through various channels, including regular meetings, briefs and emails. For example, to raise awareness about African swine fever, the department provided posters, stickers and information to CAPEC members for distribution to their onshore depot staff and overseas partners. The department also provided similar material to the Australian Border Force seeking its cooperation for enhanced vigilance in the air cargo pathway (IGB 2020).

Anecdotal information indicates that the Australian Border Force has much more frequent and widespread presence in the operational areas of CAPEC facilities than the department.

5.2 Inter-division management arrangements

The department appears to consider that the biosecurity divisions cooperate well together. However, both internal and external feedback to the Inspector-General leads to a somewhat different provisional conclusion about the relationship between divisions, and its impact on organisational agility, efficiency and effectiveness in mitigating biosecurity risks.

This interpretation is consistent with the former Inspectors-General, who also reported several relevant issues, including:

- lack of clarity of risk owners' role, and other staff across divisions (and within branches of biosecurity division), generally (IGB 2019d)
- failure to anticipate issues requiring quick action for management/mitigation (IGB 2017)
- complicated mechanisms for information sharing and control (IIGB 2015)
- poor decision-making and communication (IIGB 2014).

These ongoing issues partly account for the longer than reasonably expected delays in planning, initiating and finalising Operation Fraser, major delays in providing relevant data and other relevant information/evidence to the Inspector-General, and several months' delay in completion of this report.

Considering the scale and complexity of biosecurity operations, this matter is a key component of the Inspector-General's next review, *The adequacy of the department's operating model to effectively mitigate biosecurity risks pre-border and at-border in evolving risk and business environments*.

Chapter 6

Resourcing arrangements

Persistent rapid growth in the importation of goods purchased through e-commerce and increased utilisation of relatively low-cost airfreight services poses a potential biosecurity risk management challenge to Australia in self-assessed express airfreight pathway.

In 2019, the global e-commerce market size was A\$2.8 trillion (US\$2.0 trillion), which is 11.3% larger than 2018. By 2021, the market is forecast to grow by 25%.

Australia is currently the 10th largest e-commerce market in the world by revenue. It is expected to continue to grow over the upcoming years and forecast to be A\$35.2 billion by 2021. In February 2019, 80.8% of Australians shopped online. By 2021, this is projected to be around 85.2% or around 22 million Australians will be buying online ([WebAlive 2019](#)).

Resources provided for these rapidly emerging challenges will lag behind the growth in demand for related trade services and biosecurity risk management. There is no valid reason for this other than:

- poor planning
- resource allocation and re-allocation
- modernisation of biosecurity functions to more cost-effectively achieve biosecurity outcomes
- potentially, poor cost-recovery to offset timely resource allocation to emerging demands.

Many aspects of international trade and travel have, and will continue to be, impacted by the COVID-19 pandemic. However, after a brief disruption, partly due to aircraft unavailability, it now appears that online purchasing and international airfreight will continue to grow rapidly.

As trade volumes and global biosecurity threats increase, pressures on the air cargo pathways and associated biosecurity risk management by the department will also grow.

6.1 Adequacy of resources

Appropriate border biosecurity risk management measures to prevent the entry of unwanted pests or diseases into Australia require long-term funding. Between 2013–14 and 2017–18, frontline inspector numbers fell by 25%, but the volume of incoming sea and air cargo, mail and passengers continued to rise steadily, as did accompanying biosecurity risks (IGB 2017).

Between July and December 2019, the department undertook numerous recruitment rounds for ongoing, non-ongoing and casual staff to provide workforce flexibility and surge capacity—employing 70 officers across regions (Table 6): 32 in Victoria, 17 in NSW, 12 in WA, 8 in Queensland and 1 in NT.

Across the pathways, 45 officers were deployed in the Travellers pathway, followed by 20 in Cargo pathway and remainder of 5 in International Mail pathway (Table 6). No additional staff from this recruitment round were deployed to the airfreight SAC pathway. The Inspector-General noted that the department's integrated business model (see 6.2 Integrated business model) provides for re-assignment of staff in response to demand.

The department recovers a proportion of the costs of delivering biosecurity inspections from industry. Increasingly, it cannot recruit and train enough staff to be ready for predicted workload surges in a timely or effective manner, as it would exceed its allocated staff number cap.

TABLE 6 Biosecurity officer deployment across pathways, 1 July to 31 December 2019

Location	Numbers	Travellers pathway	Mail pathway	Cargo pathway	Vessels pathway
NSW	17	9	0	8	0
NT	1	1	0	0	0
QLD	8	8	0	0	0
SA	0	0	0	0	0
VIC	32	15	5	12	0
WA	12	12	0	0	0
Total	70	45	5	20	0

This lack of resources results in industry not being provided with adequate, prompt inspection and regulatory services. Industry needs this service and is prepared to pay for it, as without it there are further costs and delays.

Governments have generally demonstrated a strong commitment to reducing public costs by various means, including imposing increased cost-recovery and average staffing level caps. Biosecurity activities funded by cost-recovery as well as critical biosecurity assurance and oversight functions, should be exempt from staffing caps. This exemption will allow the department to employ and train adequate staff to manage increased imports and biosecurity risks.

Similarly, the diversion of resources for crisis management in other parts of the biosecurity system is not sustainable. It will increasingly imperil Australia with risks of other severe pest or disease incursions, and trade disruption (IGB 2019c).

Recommendation 19

The department should better optimise the efficiency and effectiveness of risk mitigation for SAC consignments by:

- having greater flexibility in staff recruitment to enable an agile response to growth and shift in both workload and risk profile for the express airfreight pathway
- engaging with CAPEC members regarding improved co-regulatory arrangements that would enable effective risk mitigation for express airfreight at the lowest practical cost and disruption for airfreight operators and partners.

Department's response: *Agreed.*

The department continues to explore alternative recruitment methods, including the engagement of external recruitment agencies. The department is also working to optimise its existing workforce through implementation of a scheduling and workforce management system and through the expansion of its integrated business model.

The implementation of co-regulatory arrangements is an ongoing priority for the department. The department will continue to advocate and collaborate with policy owners, CAPEC and non-CAPEC members, to progress this strategy and other efficiencies using co-design approaches.

6.2 Integrated business model

The Inspector-General was advised by the department that during 'surge' periods (such as the influx of international travellers from African swine fever affected countries or brown marmorated stink bug season) it deploys its workforce to meet demand influenced by changing risk and informed targeting using the integrated business model.

The model supports increased workforce capability across inspection activities and facilitates the deployment of biosecurity officers based on demand based on evolving risk, data and intelligence. The model is further advanced to respond to the redeployment of biosecurity officers from airports and to deploy biosecurity officers to undertake inspections for assurance purposes including to manage periodic targeting and surge capacity.

Deployment of biosecurity officers to undertake inspections in the SAC pathway is based on bookings, in response to trade volume and demand for inspections. The department augmented workforce capacity within the integrated business model. However, it appears that the SAC pathway has had an inadequate number of staff deployed over some years.

This lack of staff is particularly concerning to the Inspector-General given the popularity of online shopping amongst Australians, the clear rise in exploitation of global digital networks to aid petty crime and more concerted and larger-scale exploitation of supply chain weaknesses. The Inspector-General has not seen evidence that the department has reviewed the workforce requirements to enable ramp-up of biosecurity measures at relevant approved arrangements.

In the current situation, when the volume of SAC consignments entering Australia and outbreaks of significant animal diseases (such as African swine fever) is on the increase, the department should review its resourcing arrangements. It should also optimise the deployment of such capital equipment to improve the cost-effectiveness of biosecurity risk mitigation.

Recommendation 20

The department should immediately review its resourcing arrangements and optimise deployment of such capital equipment to improve the cost-effectiveness of biosecurity risk mitigation in airfreight facilities.

Department's response: *Agreed.*

The department is progressing workforce transformation initiatives concurrently with capital and technology solutions to optimise resource attribution in accordance with risk and respective risk control across the supply chain and pathway.

In consultation with the Department of Home Affairs and the Australian Border Force, the department is investigating the possibilities of shared agreements for the use of existing X-ray equipment owned by airfreight facilities for biosecurity risk and customs threat screening.

The department needs to be resourced sufficiently to enable it to continue to maintain an ongoing and appropriately trained workforce capable of meeting increased biosecurity risk mitigation demands. It should seek a government commitment to new revenue streams that will ensure adequate long-term funding for biosecurity risk management. Funding growth and/or redeployment should commensurate growth in online shopping and biosecurity risks. There needs to be sufficient flexibility within the funding model to enable investment in the most appropriate combination of staffing, new technology, and industry or inter-government partnerships.

The anticipated Biosecurity Imports Levy—recommended by the 2017 [Intergovernmental Agreement on Biosecurity Review](#)—was expected to be legislated in 2020. However, due to significant pushback from importers and industry groups who warned the levy would reduce the competitiveness of Australia's freight supply chain and result in higher costs for consumers, the levy was abandoned by the Australian Government in May 2020. The government has committed to providing the necessary funding via normal appropriation arrangements. This change in direction is a significant setback for the department as it has left a gap in delivering the level of resource agility necessary for the department to be able to deliver the required biosecurity outcomes cost-effectively.

The department will continue to rely on its ongoing cost-recovery program and financial appropriation from the government for specific biosecurity programs. This is consistent with the former Inspector-General's observation:

In the future the department may be able to reduce border effort by using automated systems and offshore schemes. However, it cannot even implement its existing risk management policies properly due to staffing pressures. This is greatly slowing development of new and adaptive policies. Adequate long-term resourcing of current programs and frontline inspection services—and ongoing development of improved systems—will be essential to long-term biosecurity risk management. Without this, Australia risks being overwhelmed by biosecurity threats posed by increasing trade volumes and changing global pest and disease threats (IGB 2018).

6.3 Resource agility or responsiveness

It is now well-established worldwide in areas of professional risk management that risks must be:

- implemented at, or as close as practical, to the source of the risk
- prioritised wherever resources are constrained.

Resources are rarely so plentiful that full resourcing can be applied to mitigate all risks, at all times to the satisfaction of all stakeholders. This means that in all prevention areas of Australia's biosecurity system, risk and mitigating resources need to be prioritised.

The 'resource-to-risk' approach is akin to the 'risk-return' approach (Beale et al. 2008), and the Inspector-General considers it to be fundamentally important to optimising the prevention of biosecurity risk material entering Australia.

Despite the evidence of significantly reduced intervention for this pathway, the department has maintained that resourcing has not been reduced on the SAC pathway. The department argues that it allocates resources based on biosecurity risk in accordance with risk profile referrals. It is deploying capacity to undertake targeted operations and assurance-based inspections. It is argued that this is underpinned by assurance-based verification and targeted operations. However, the department's approach to allocate staff resources on the basis of referrals generated from risk profiles does not permit routine allocation of resources to verification and targeted operations.

The department maintains it is using data and intelligence to better inform risk compliance and regulatory intervention. However, it has not provided any evidence of its use of data and intelligence to inform risk compliance and regulatory intervention, in particular, for airfreight SAC pathway.

The department needs to continue to allocate available resources to optimise overall biosecurity risk mitigation in an agile and responsive manner. This will help mitigate biosecurity risk, consistent with Australia's appropriate level of protection.

The department informed the Inspector-General that due to COVID-19 restrictions, biosecurity officers have had a significantly reduced workload. The department redeployed some biosecurity officers to undertake assurance-based inspections and targeted operations in the express airfreight pathway. However, despite a specific request, the Inspector-General did not receive any specific data or information from the department to support this claim.

From the department's response, and the Inspector-General's fieldwork observations and discussions with staff, the Inspector-General concludes that:

- It is likely that border biosecurity resources will not keep pace with the current upward trends in SAC consignment numbers, variety of goods imported, flight origins and increasing offshore risks. Particularly, if the ingenuity of companies involved with border biosecurity to innovate, adopt new technology, better use available data and other intelligence, is ignored.
- It seems sensible and necessary that financing arrangements and staff recruiting/training are put in place at the leading edge of forecast growth. This will minimise the gap between demand generated by growing SAC consignment numbers and the numbers of trained staff or alternative output delivery options. However, on the apparent resistance to increasing biosecurity staffing to match the rate of growth in trade, there to be only two short- to medium-term options for the government of the day:
 - acknowledge that a less effective border biosecurity system and higher level of residual biosecurity risk is acceptable, or
 - makes a substantial investment in biosecurity intelligence and information systems that are integrated with other departments and commercial systems.
- Management and staff struggle to allocate available resources to deliver optimal biosecurity outcomes, especially during demands 'surges' for example, the 2018–19 brown marmorated stink bug season. However, questions remain as to whether trained staff and other operational resources are keeping pace with growth and diversification of demand. Unfortunately, many of the recent Inspector-General reports have noted otherwise (IGB 2019a; IGB 2019b; IGB 2020).

On the issue of department's inadequate responsiveness or agility (exacerbated by funding constraints) to quickly move resources to manage high ('surge') demands, the Inspector-General, in his previous report had noted, that:

The inadequate agility of biosecurity resources (financial and personnel) is a widely expressed concern. A range of comments have been advanced about biosecurity funding levels and sources, uncontrolled demands from risk owners, staff ceilings, recruitment delays, bleed of funds from import-biosecurity to subsidise export services, etc. A clear theme emerging is one of inadequate agility of resources to deal with the complexity, diversity and chronic or acute growth in risks generally or specifically (which also implies inadequate resource quantum to meet future demands, even if overall resource level is adequate to meet current demands) (IGB 2020).

It is commendable that the department is open to explore and adopt new technology and methodology solutions for quicker clearance of consignments, including advanced scanning technology and artificial intelligence-based assessment of accompanying documentation. However, the department must continue to explore such technological innovations to meet increasing demands from industry for quicker clearance of imported consignments. Technological innovations must be applied nationally for consistent outcomes.

6.4 Investing in co-regulatory arrangements

As a regulator, the government should invest more effort in developing co-regulatory arrangements with industry through quality assurance programs that will effectively mitigate biosecurity risk without imposing regulation. However, co-regulation needs to be monitored closely, with the department regularly conducting risk-based and unannounced spot audits to monitor performance. Higher levels of random inspection of screening activities may be relaxed once the agency has demonstrated compliance by co-regulated businesses. However, it would be unwise to revert to previous levels of trust in consignee declarations.

The key clients of the biosecurity system are the Australian community, industries and the environment. Recognising this, the department needs to strike a better balance between facilitating the efficient trans-border movement of goods, and ensuring that biosecurity risks are effectively managed. For example, the department has been working very effectively in collaboration with Australia Post to mitigate African swine fever and other biosecurity risks in the mail and parcel pathway.

The department cost-recovers for the delivery of its biosecurity regulatory function from all entities, including from Australia Post's international mail gateway facilities. For international mail, the *Biosecurity Act 2015* imposes responsibility on Australia Post to mitigate biosecurity risks from its mail and parcel business streams. The department should engage with the cargo arm of Australia Post in co-regulation of biosecurity measures in the SAC pathway. This should include the purchase or leasing, and operation of 3D scanners operated by Australia Post—subject to agreed standards, and audit and verification activities undertaken by the department. This would change the staffing and capital imposts on the department for this pathway, bring it into line with approaches that will need to be taken in other commercial pathways, and reduce the number and scale of requests for budget funding approval.

Chapter 7

Staffing ramp-up capability

7.1 Personnel deployed at air cargo depots

Since January 2015 the department's Inspections Group is managing class 14.3 approved arrangement verification inspection requirements through existing inspection bookings. There is no specific full-time equivalent (FTE) attribution of biosecurity officers at these premises. Biosecurity officers undertake inspections at these premises based on their workload across a range of import pathways. Biosecurity officers and premises are informed of scheduled inspections via IMS directions. During fieldwork, the Inspector-General was advised that airfreight operators were receiving required support in inspecting parcels set aside by them for biosecurity officers to clear at their premises.

7.2 Staff competence and workload

Training helps enhance the effectiveness of the inspection process thereby strengthening the overall system to manage biosecurity risks. Before starting to inspect mail and general airfreight independently at Australia Post, CAPEC and non-member premises, biosecurity officers attain mandatory base-level competency (Tier 1). This officer competency—based on Inspections Group's competency grid—is governed through Group's Competency and Verification Frameworks. The Inspector-General noted that biosecurity officers also routinely undergo training, job card assessments and verification to ensure their competence, and inspections are undertaken in accordance with the department's relevant standard operating procedures.

Chapter 8

Ongoing monitoring and adjustment of intervention measures

8.1 Countries of origin with high biosecurity risks

Movement of goods between countries can pose a serious risk of entry and establishment of pest, diseases and weeds in Australia. Effective pre-border and at border biosecurity risk control measures are needed to mitigate this risk.

Before the arrival of goods, importers or brokers acting on their behalf, must provide pre-arrival information for cargo arriving into Australia to the department. This information enables the department to use its electronic risk profiles (see 3.1 Types of risk profiles) to identify and manage associated biosecurity risks at the border.

The increased detection rates of biosecurity risk material in airfreight SAC consignments may reflect an increased carriage rate from certain countries. However, the department only uses 'country of origin' as a sub-criterion to screen the airfreight SAC consignments for enforcement activities and does not routinely record countries of origin for SAC consignments (see 3.3.1 Profile types). Unavailability of this data prohibits the department from identifying high-risk countries and consequent measures for biosecurity. This is consistent with Robinson et al. (2015), who noted:

Estimating the non-compliance rate of a pathway is essential in order to assess the risk of the environment, and to make defensible decisions about the allocation of inspection efforts. Counts of articles inspected and articles found to have BRM [biosecurity risk material] are necessary for estimating the pathway non-compliance rate, and inspection counts by cohorts (cub-pathway) are needed in order to perform profiling within a pathway, for example, identifying and prioritizing high-risk countries of origin for mail articles.

The increased detection rate may also be partly due to increased surveillance activities undertaken at CAPEC and non-CAPEC member premises. However, the department has conducted very limited surveillance in SAC pathway and at class 1.2, 1.3 and 14.3 approved arrangements (Recommendation 15).

Until late 2019, the department undertook a random verification activity, free-line surveillance (see 2.2.1 Free-line surveillance survey) in the air cargo pathway, including for SAC consignments. The department used the limited information collected from this activity to:

- identify the overall effectiveness of profiles in managing biosecurity risks,
- create or amend profiles (as necessary), and
- monitor the overall risk status of this pathway, including identifying emerging risks and patterns of non-compliant behaviour.

On 29 April 2020 the department introduced Air Cargo (non-commercial) Compliance Verification (ACNCCV) survey model in the air cargo pathway.

Recommendation 21

The department should use surveillance and intelligence on pests and diseases outbreaks in partner countries to enhance the rate of screening of SAC consignments originating in selected high-risk countries.

Department's response: *Agreed.*

The department intends to enhance the rate of screening of SAC consignments from high-risk countries informed by contemporary data and intelligence.

8.2 Heightened intervention measures

Generally, across all high-risk pathways, the department takes a proactive approach using notifications of outbreaks and emergencies from WHO/OIE/IPPC, [ProMED](#) and [International Biosecurity Intelligence System](#). The department monitors the incidence and severity of human, animal and plant diseases around the world so that targeted measures can be undertaken as needed.

Given the recent outbreak of serious pig disease (African swine fever) in neighbouring South-East Asian and South Pacific countries, and the high levels of cargo trade and passenger movements from them, these countries present the highest current risk.

Express airfreight provides a fast pathway into Australia, allowing biosecurity risk materials (including, disease propagules) to enter the country from a high-risk country within a few hours. Therefore, it is important that the department reviews its controls—especially for non-CAPEC members (see 1.5.3 Non-CAPEC members).

The department relies heavily on using electronic profiles (and updating them based on intelligence and compliance outcomes) for the screening of SAC articles entering Australia. The two profiles the department mainly uses to capture information about consignments across all pathways include general descriptors and specific descriptors (see 3.1 Types of risk profiles). These profiles are designed to capture biosecurity risks based on goods' description and from all countries—not just from specific countries.

Recommendations in Operation Fraser report provided limited insight on how to strengthen the biosecurity on this pathway. The sooner the recommendations in Operation Fraser report are implemented, the easier it will be to close the identified gaps.

In addition, Inspector-General recommends measures that the department should apply to minimise chances of pests and diseases entering Australia via airfreight pathway, including:

- incorporation of relevant additional criteria (such as, 'country of origin') into electronic risk profiles (see 3.1 Types of risk profiles) for improved screening of all express airfreight consignments (Recommendation 12)
- increased targeted operations/campaigns and assurance activities, similar to Operation Fraser, during peak times (that is, ahead of cultural festivals, such as Chinese New Year, Diwali and Ramadan, and events, such as Valentine's Day) (Recommendation 15)
- increased assurance activities, similar to free-line/ACNCCV-type surveillance, to ascertain efficacy of its at-border operations (see 2.2.1 Free-line surveillance survey and 2.2.2 Air cargo non-commercial compliance verification survey).

These requirements will need to be applied nationally, on a risk-based target basis, partly to minimise the risk of 'gaming' by consignors of the most favourable entry point into Australia.

8.3 Relaunch of the biosecurity social media campaign

An independent review of Australia's quarantine and biosecurity arrangements (Beale et al. 2008) stressed that biosecurity is a responsibility shared between government, industry and the community. All Australians can contribute to maintaining Australia's biosecurity status by:

- complying with best biosecurity practice such as, not buying goods online without checking what is permitted for import
- helping address biosecurity issues such as, reporting suspected exotic pests, weeds or diseases on or in imported goods.

To maintain and improve Australia's biosecurity status the department, as a regulatory agency, need to strengthen engagement with the community about biosecurity issues.

In March 2018, the department launched a series of short videos titled 'Don't be a Jeff'. This social media campaign aimed at raising awareness about biosecurity and the public's responsibility.

During the COVID-19 pandemic, the closure of local businesses and practice of physical distancing led to a huge increase in online shopping. In response to this, the department in May 2020 relaunched 'Don't be a Jeff' campaign through its Facebook and Twitter accounts. The campaign was aimed at educating the public about online buying of high-risk goods, such as food, seeds, plants, meat and pet food as they potentially pose a biosecurity risk to Australia and may not be permitted.

It is recommended that the department should engage with key industry bodies including, Australia Post, CAPEC and non-CAPEC members, overseas postal services and international authorities, to expand the awareness of the campaign to high-risk countries to target airfreight pathways, especially using social media platforms.

Recommendation 22

The department should routinely undertake targeted operations and assurance activities in the express airfreight pathway for SAC consignments to assess and promote compliance with biosecurity measures, including social media campaigns.

Department's response: *Agreed.*

The department is using information from the 2019 threat and vulnerability scan to assist with prioritising and directing activities focussed on confirming and strengthening biosecurity controls. This is coupled with an ongoing body of work of targeted operations and development of business as usual assurance activities in the self-assessed consignment pathway. The department is also working through recommendations from Operation Fraser that outlined opportunities to strengthen biosecurity controls on the pathway.

The department utilises key tools such as social media campaigns to educate and promote compliance with biosecurity import conditions and will explore more opportunities to raise awareness with key cohorts in this pathway.

Chapter 9

Regulatory powers and ability to apply regulation

The *Biosecurity Act 2015* provides the overarching legislation, which enables the department to assess and ensure effective management of biosecurity risks associated with imported goods, including SAC consignments.

A broad range of regulatory provisions in the *Biosecurity Act 2015* (Appendix B Provisions in the *Biosecurity Act 2015* for the management of biosecurity risks associated with imported air cargo) enables biosecurity officers to effectively carry out their duties when assessing and mitigating biosecurity risks associated with all imported goods. For example:

- Chapters 3 (Managing biosecurity risks: goods) and 6 (Managing biosecurity risks: monitoring, control and response)—provide regulatory powers to biosecurity officers to inspect goods and take samples
- Chapter 7 (Approved Arrangements)—provides biosecurity officers with regulatory powers to give directions to approved arrangement holders to manage biosecurity risks, including for SAC goods that are processed at class 14.3 approved arrangement premises.

9.1 Non-compliance handling

The department identifies non-compliance in SAC goods when biosecurity officers record them in the non-compliance form. The form is submitted and automatically registered in the department's Non-Compliance Information Repository. The department assesses and allocates the non-compliance to the relevant internal area ([Box 2](#)) for further action. SAC data is collated in the Non-Compliance Information Repository enabling the department to generate reports related to SAC goods.

A summary of the department's processes of recording, assessment and response or referral of non-compliance found at the audit of approved arrangements is provided in [Box 2](#) (adopted from IGB 2019a).

Box 2 Recording, assessment and response or referral of non-compliances

On completion of each audit, the auditor provides the approved arrangement holder with a written audit report, containing the audit result (pass or fail), details of evidence and findings of compliance and/or non-compliance, and records audit findings in Quarantine Premises Register. The audit result is determined by the number and classification of non-compliances found during the audit. One or more critical non-compliance, three or more major non-compliances, or seven or more minor non-compliances, will result in a failed audit, and moving the approved arrangement back to the probation audit rate.

Auditors are responsible for assessing and dealing with minor and major non-compliances and issue directions for the approved arrangement holder to rectify these in a specific timeframe, through corrective action requests.

Failing rectification, a new corrective action request is issued. The department may issue three such requests for the same non-compliance. Auditors must notify any critical non-compliance found to the Audit and Assurance Group's (AAG) Program Integration, Assurance and Capability (PIAC) section, which must assess each one and notify the approved arrangement holder in writing within five days by a critical non-compliance notice.

This may result in a critical corrective action request, movement to the probation audit rate and/or a show cause process. Continuing failed audits result in escalation to the department's Non-Compliance Assessment and Response section and initiation of a notice to show cause why the approved arrangement should not be suspended or revoked (see Figure 2 in IGB 2019a).

Non-compliance detected outside of an audit and redline reports are assessed and referred by NCAR's Triage, Assessment and Management (TAM) team. Once assessed, the four primary recipients of non-compliance reports are:

- Enforcement team—to initiate criminal sanctions, if required
- NCAR's Regulated Entities Team—to apply administrative sanctions
- AAG—regulatory and policy sanctions
- Other program areas.

In August 2018, the department developed a non-compliance reporting form, which frontline biosecurity officers use to report non-compliances in the SAC pathway. Since then, the department has recorded a total of 340 non-compliance incidents.

Some non-compliance reports are recorded for information only, where the assessment has been determined as a one-off incident with education provided to the consignee in the form of a seizure notice. In all cases, the information is treated as intelligence collection and adds to the broader analytical information.

The Inspector-General noted that the department has:

- not issued any infringement notices or commenced civil penalty proceedings for non-compliance with provisions on the management of SAC goods, and
- only issued either letters of warning or letters of action.

In the absence of additional data about the non-compliance incidents for non-commercial airfreight data, it is difficult for the Inspector-General to draw conclusions and recommend improvements to further strengthen biosecurity of SAC pathway. Further questioning could include:

1. How were non-compliances reported before August 2018 when the new non-compliance reporting form was developed and implemented?
2. How many of 340 non-compliances are for CAPEC and non-CAPEC members?
3. Does the department classify non-compliances into categories (critical, moderate, non-critical etc.) for action?
4. Why have none of the 340 non-compliances resulted in the issuance of any infringement notice or civil penalty?
5. How many letters of warning/actions has the department issued to date by year?
6. What are some of the examples where biosecurity officers have reported non-compliances they detected in the SAC pathway such as, mis-declaration of goods, etc.?
7. Does the department have a repository (electronic database/system) to record infringement notices and civil penalties it issues for non-compliances?

9.2 Regulatory powers

The Act provides biosecurity officers appropriate regulatory powers to investigate non-compliance and issue infringement notices, civil penalties, enforceable undertakings and injunctions. In many cases, this is done in conjunction with powers under the *Regulatory Powers (Standard Provisions) Act 2014*.

In addition, the Act provides regulatory powers for biosecurity officers to:

1. enter premises to monitor and investigate compliance with the Act and enforce regulations. This includes entering approved arrangement class 14.3 premises for regulatory compliance
2. inspect goods and premises
3. take samples of imported goods
4. apply penalties for providing false or misleading information or documents.

9.3 Legality of free-line surveillance survey

After ceasing free-line surveillance survey activity in November 2019, the department on 12 June 2020 advised the Inspector-General:

The activity was progressively ceased over a number of years in part due to resourcing constraints but also due to a concern that the activity was not sufficiently supported by the new legislation.

This was confirmed in October 2018 with legal advice indicating the Biosecurity Act did not provide the legal basis for inspection and seizure of goods that were no longer within biosecurity control.

At this time most activity ceased though records indicate that some activity continued in one jurisdiction. By November 2019 all free-line surveillance had ceased. Other options had been investigated, such as getting written consent from CAPEC members, however the legal advice didn't support this approach.

As the new *Biosecurity Act 2015* came into force on 16 June 2016 and free-line surveillance survey was ceased in November 2019, the following questions are apparent:

1. Why did the department wait for legal advice for more than 2 years before realising that free-line surveillance survey was no longer valid as the new Act did not permit seizure of goods?
2. Why did the department not resolve legal uncertainties ahead of the new Act coming into force, given that there was a window of opportunity (the 'transition period') of approximately 1 year when the department upgraded several other policies and procedures?
3. Why hasn't the department resolved the issue of 'legal basis' by pursuing amendments to the Act to cover what clearly generated an additional workload for scarce resources and increased residual biosecurity risk?
4. Has the department received clearance from its Legal Counsel about the new ACNCCV survey? If yes, how is this different from free-line surveillance survey?

The Inspector-General advocates that the department:

- needs to have a sound understanding of the drivers for both increased residual biosecurity risk and increased resource demand for intervention measures, which may be removed from the frontline of function delivery, and
- should avoid 'interim' arrangements (such as, arbitrarily reducing recommended sample size) and other 'quick-fixes' to its programs, in favour of a planned, documented, reviewed and accountable continuous improvement program.

Recommendation 23

The department should review its operational program for legal standing and validity to ensure that resources are optimally utilised to manage risks across all pathways.

Department's response: *Agreed.*

In reviewing its operational programs, the department will ensure legal standing and validity are criteria.

9.4 Operational policy framework

The current *Biosecurity Act 2015* provisions do not appear to provide adequate regulatory power and agility for biosecurity officers to escalate compliance action for significant breaches of SAC airfreight provisions. The department has an operational policy framework for the issuing of infringement notices and civil penalties in various import pathways including airports, seaports and cargo. However, there is currently no equivalent policy framework for imported goods (cargo).

On this issue, the Inspector-General, in a previous report noted, that:

There is an urgent need to develop better policies, processes and training, to enable biosecurity officers to manage and respond to critical AA [approved arrangement] non-compliance promptly but fairly and consistently. It is equally important that officers are trained in correct evidence gathering to ensure immediate suspensions can be justified.

The department should consider policy to apply direct penalties for serious non-compliance and impose administrative sanctions or on-the-spot fines for less serious non-compliance (IGB 2019a).

The Inspector-General is convinced that even when there are grounds for revocation or suspension of an approved arrangement, prescriptive legislative requirements make it very difficult to take immediate action. This is likely because the department does not have an operational policy framework for non-compliance or regulatory intervention tools on the SAC pathway. Developing a policy framework for issuing infringement notices and civil penalties for non-compliance on imported goods will enhance the regulatory capability of frontline staff.

The Inspector-General recommends a policy framework—outlining the decision and escalation points to respond to non-compliance and intervention tools for issuing of infringement notices and/or civil penalties—is developed and implemented as soon as possible. This would act as a deterrent for false declarations of SAC consignments and other biosecurity breaches.

Recommendation 24

The department should develop an operational policy framework for biosecurity officers to exercise regulatory powers to issue infringement notices and civil penalties for non-compliance with provisions under the Act relating to the management of biosecurity risk associated with imported goods.

Department's response: *Agreed.*

The department has an operational policy framework (supported by IT systems and instructional material) for biosecurity officers to issue infringement notices and otherwise deal with non-compliance at first points of entry.

Policy and guidance material is also being developed for the broader use of civil sanctions (i.e. infringement notices, civil penalty orders, injunctions and enforceable undertakings).

Chapter 10

Data and information management

The department manages biosecurity and imported food risks associated with imported cargo through the use of particular criteria in the Integrated Cargo System. Based on these criteria, data obtained from information lodged within the Integrated Cargo System is assessed to identify potential biosecurity and imported food risks.

For all cargo types, matching conditions aimed at a broad target (such as a tariff code, goods description and entity) are key tools for the referral of cargo of biosecurity and imported food concern from the Integrated Cargo System through to the Agriculture Import Management System or Mail and Passenger System database.

For SAC consignments arriving by air and sea, the details of goods matching certain risk profiles are sent to one of the department's systems to support further risk assessment and/or intervention:

- Agriculture Import Management System—to assess risk, target and record real-time processes, such as entry management, point-to-point movement of imported goods and inspection findings as part of arrival clearance procedures, and directions for re-export or destruction of failed consignments.
- Self-assessed cargo (SAC) database—to further assess risks and intervention measures for goods entering Australia via sea and air express airfreight pathways, and valued at A\$1,000 or less.
- Import Management System—for assessment, inspections and clearance of goods imported by SAC Paperless clients ([Box 3](#)).

Goods that do not match a risk profile are cleared to continue the import process without further intervention.

Any actions that occur within the department's systems are communicated back to Integrated Cargo System, which then communicates the actions to the relevant client. Actionable goods are referred to the department for further assessment, which may include document assessment, inspection and the application of relevant risk mitigation measures such as treatment, destruction or re-export.

The department generates a lot of new data every day, but that data has limited value if it lacks the information management systems to capture and analyse it. As part of Agricultural Competitiveness White Paper funding in 2015, the department has been investing in better IT systems and analytics, and has established a dedicated biosecurity analytics capability.

Under the flagship Biosecurity Integrated Information System program, the department is consolidating biosecurity information to create a repository of data that can be used for biosecurity analysis. The department argues that once completed this will:

- improve the department's ability to collect, collate, store, analyse and share biosecurity information
- help the department to effectively and efficiently deliver the regulatory function, by focusing on areas of highest risk and reducing efforts in low-risk areas
- support biosecurity officers to provide timely and better informed decisions underpinning agricultural imports and exports.

The department's work on the new Import Management System is commendable as it is apparently providing a seamless workflow for biosecurity officers assessing and inspecting SAC consignments entering Australia ([Box 3](#)).

Based on experiences with other government information, and reports and comments from the department, it seems likely significant additional and ongoing investment in intelligence, information and decision-support systems will be required.

Box 3 Import Management System

The Import Management System is a web-based portal that provides an integrated user experience supporting end-to-end processes for assessment, inspections and clearance of imported goods.

The Import Management System is used by Biosecurity Operations staff who assess, inspect and monitor SAC consignments imported by SAC Paperless clients. All CAPEC members (DHL, TNT, UPS and FedEx) use this system, and it has considerably improved the clearance rate for imported SAC consignments. Over the next 12–18 months, the department will apparently deliver the required capabilities to expand the type of cargo processed in the system, such as non-CAPEC members and Full Import Declarations.

The department has developed several key features and functionalities in the Import Management System, including:

- a decision matrix—enables biosecurity officers to consistently record the decisions when determining the outcome of an assessment or inspection
- an entry event log—captures these decisions, key assessment and inspection event information
- recording of document evidence functionality
- more detailed reporting.

The Import Management System is interfaced to Power BI to produce reports that can be used by biosecurity managers, supervisors and policy officers. This feature is quite useful as it will support the staff in real-time decision-making. The new functionality will enable all entries to be managed in the Import Management System and improve how the department generates and issues enforceable directions and provides clear instructions that are aligned to legalisation.

The department argues that it will increase its transparency and enforceability.

The department has identified further functionality to be built in the system, including scanning technology to increase automation and consistency for all CAPEC SAC Declarations and Cargo Report Referrals. This functionality will apparently enhance profile risk modelling and reduce the number of false positives that officers are currently required to process.

The department did not provide the Inspector-General with a specific timeframe for the development and deployment of the future functionality to improve SAC risk mitigation.

Chapter 11

Communication with industry

For effective planning and delivery of any biosecurity management program, the government and industry need to adequately understand each other's perspectives and appropriately share responsibility for mutually beneficial outcomes. The department communicates with key industry stakeholders involved in the air cargo supply chain through various channels and peak bodies. It also keeps industry informed of policy changes through industry advice notices and website updates. The department encourages industry to use the available biosecurity reporting channels.

Three main platforms where the department engages formally with industry, include:

- the Department of Agriculture Cargo Consultative Committee
- the department and CAPEC forum
- Trade and Goods Compliance Advisory Group.

11.1 Department of Agriculture Cargo Consultative Committee

The Department of Agriculture Cargo Consultative Committee (DCCC) is a committee for the department, international trade and international logistics service provider industries to consider practical and strategic biosecurity-related international trade/logistics issues.

The committee meets a minimum of 3 times per year and its membership includes representatives from CAPEC, customs brokers, freight forwarders and other members of the supply chain.

The department provides quarterly reports with data on volumes, physical intervention and non-compliance rates to the members regularly. However, the Inspector-General noted that Australia Post also handled a large volume of SAC consignments, but is not a member of the Department of Agriculture Cargo Consultative Committee. The Inspector-General recommends that the department should extend an invitation to all key stakeholders, including the air cargo arm of Australia Post.

Recommendation 25

The department should expand Department of Agriculture Cargo Consultative Committee (DCCC) membership to include the air cargo arm of Australia Post.

Department's response: *Agreed.*

The Department has an existing regular dialogue with Australia Post and Home Affairs on issues relevant to the mail and air freight pathways but will also expand the DCCC membership to include the Australia Post air cargo arm.

11.2 Department and CAPEC forum

This forum provides an opportunity for the department and CAPEC members to discuss strategic biosecurity related to trade, logistics and system issues and review the initiatives in the non-commercial air cargo pathway. These meetings are held twice a year. Continuous improvement options for SAC airfreight risk mitigation, using a recognised structure and accountable management approach, does not appear to have been a topic for significant attention in recent years.

11.3 Trade and Goods Compliance Advisory Group

The Trade and Goods Compliance Advisory Group is a collaborative forum for industry, the Australian Border Force and the department to recommend solutions to trade and goods compliance issues. Meetings are chaired by the Australian Border Force and are held twice a year. Its membership represents industry groups on behalf of carriers, importers, cargo and logistic service providers, customs brokers and other stakeholders involved in the supply chain.

Appendix A

Agency response



Australian Government
Department of Agriculture,
Water and the Environment

ANDREW METCALFE AO
SECRETARY

22 June 2020

Mr Rob Delane
Inspector-General of Biosecurity
Australian Government Department of Agriculture, Water and the Environment
GPO Box 858
CANBERRA CITY ACT 2601

Dear Mr Delane

Thank you for your letter of 17 June 2020 and for providing your review report, *Biosecurity risk management of international express air freight pathway for non-commercial consignments*, for our response. I appreciate the opportunity to respond to your findings and recommendations.

The department acknowledges that there has been a reduced focus on the express air freight pathway in recent years as it is a lower risk pathway and therefore resources have been deployed to areas that present a higher biosecurity threat. In acknowledging this reduced focus, we proposed an early review of the air freight pathway and we very much welcome your observations on areas for improvement. While we have gained a level of assurance from the recent targeted operation—*Operation Fraser*—that the pathway appears to be confirmed as lower risk at this time, we agree that it will be important to institute and maintain a framework of routine testing and verification to identify and manage any change in risk in a timely manner.

As we embark on a program of regulatory practice improvement for our new organisation more broadly, your review serves as a reminder of the importance of sound planning, documentation, risk management and decision-making when delivering our regulatory responsibilities in order to provide confidence to government and the community that biosecurity risks continue to be appropriately managed.

We agree with all the recommendations outlined in your review and will be implementing them in full as a matter of priority. We have provided our formal management comments in response to your recommendations in the attached document. We do not consider that there are matters referenced in your report that would be prejudicial to the public interest and therefore consider that it can be made publically available.

If you require further clarification, please contact Peta Lane (peta.lane@awe.gov.au) or Emily Canning (emily.canning@awe.gov.au).

Best wishes


Andrew Metcalfe AO

Department of Agriculture, Water and the Environment responses to recommendations

Recommendation 1

The department should implement measures identified in its 2019 threat and vulnerability scan report to strengthen biosecurity controls for self-assessed consignment pathway.

Response:

Agreed.

The department is using information from the 2019 threat and vulnerability scan to assist with prioritising and directing activities focussed on confirming and strengthening biosecurity controls. This is coupled with an ongoing body of work in targeted operations and development of business as usual assurance activities that are undertaken in the self-assessed consignment pathway. The department is also working through recommendations from Operation Fraser that outlined opportunities to strengthen biosecurity controls on the pathway.

Recommendation 2

The department should:

- review and expand class 14.3 approved arrangements to other states to cover all CAPEC and non-CAPEC members to strengthen biosecurity risk management across the SAC pathway
- upgrade management systems to automate inspection of goods by industry under the arrangement to improve effectiveness.

Response:

Agreed.

The department will continue to work with industry to understand why adoption has not been attractive, including system effectiveness.

Recommendation 3

The department should develop a defined audit regime for class 1.2, 1.3 and 14.3 approved arrangements, with a strong focus on audits being conducted unannounced.

Response:

Agreed.

The department notes that classes 1.2 and 1.3 are currently considered Priority 3 audits—i.e. lower risk audits that can be conducted announced or unannounced. The department's preference is to conduct all audits unannounced, where possible, and within existing resources.

Recommendation 4

The department must develop and apply management systems that ensure senior managers have routine access to operational data, variance reports, threat and risk assessments, and resource allocations so that credible 'resource-to-risk' decision-making becomes routine.

Response:

Agreed.

A number of management dashboards are in production or advanced development. These include operations and compliance dashboards, providing volumetric, resource allocation and performance reporting to senior managers.

Recommendation 5

The department should apply a basic project management model to business risk assessment and improvement, and all significant business testing (for example, Operation Fraser) and improvement projects and processes.

Response:

Agreed.

The department accepts there should be continuous improvements in the way programs are designed and reviewed, that capture a broader range of associated risk.

Recommendation 6

The department should liaise with its scientific staff (subject matter experts) for design and launch of all surveys, and assurance and verifications activities across all pathways, and seek and consider advice from subject matter experts before varying these programs.

Response:

Agreed.

Since mid-2019, the department has adopted a co-design approach to assurance and verification activities which brings together subject matter experts at the start of the design process.

Recommendation 7

The department should develop a schedule of assurance activities targeting non-CAPEC members across Australia.

Response:

Agreed.

The department has implemented a range of assurance activities across the SAC pathway inclusive of non-CAPEC members. A recommendation from Operation Fraser to implement a business as usual assurance program in the airfreight pathway has commenced. It is anticipated that non-CAPEC members will be included in future phases of this program. Additionally, ongoing assurance via targeted operations capability will continue to be deployed across non-CAPEC members.

Recommendation 8

The department should establish a standard approach to risk pathway mapping and decision-making, including biosecurity risk trends, pathway threats, critical control points, intervention measures, audit and verification reports, change decisions, review milestones, overall pathway risk assessment and improvement plan and accountabilities.

This pathway assessment and management documentation should be routinely available and understood by the accountable First Assistant Secretary. It should also be formally reviewed at least annually by all materially relevant First Assistant Secretaries and signed off by the Deputy Secretary.

Response:

Agreed.

The department will develop and implement an improved overall pathway biosecurity risk assessment and management strategy.

Recommendation 9

The department should expand Import Management System (IMS) to include SAC consignments handled and processed by non-CAPEC members.

Response:

Agreed.

It remains the department's intention to include non-CAPEC members in IMS, having only rolled out to CAPEC thus far.

Recommendation 10

The department should:

- implement all recommendations from Operation Fraser and report its progress against its self-determined improvement timetable to the Inspector-General in January 2021
- regularly undertake more such operations in all regions to strengthen its operational controls to ensure biosecurity risks entering Australia via the SAC pathway are being adequately addressed.

Response:

Agreed.

The department has commenced implementing the recommendations from Operation Fraser and aims to complete the implementation of these by January 2021.

The department will continue to undertake targeted operations in the SAC pathway and has already deployed the second phase of Operation Fraser. Furthermore, there is current planning for additional activities in the pathway targeting a range of biosecurity risks and non-compliance behaviours. These activities will include targeting at a national level and focus on testing the effectiveness of controls and opportunities to strengthen them.

Recommendation 11

The department should explore possibilities of working with CAPEC and non-CAPEC members to develop X-ray scanning algorithms for targeted biosecurity risk material, including obtaining intelligence, screening imagery and other technology for SAC consignments from their overseas operations.

Response:

Agreed.

The department is already exploring opportunities to work with CAPEC and non-CAPEC members to deploy X-ray scanning algorithms for targeted biosecurity risk material. A trial of deploying 3D auto-detection algorithms in the air cargo pathway is being planned for 2021. The department is currently liaising with other agencies which have partnered with IT companies on the development of biosecurity algorithms for 2D X-ray units. The department is investigating options to participate in this program. If it is possible to successfully develop biosecurity algorithms for 2D X-ray units, the next stage could involve partnering with CAPEC members who have similar X-ray equipment to trial the deployment of auto detection algorithms for goods imported in Australia.

Recommendation 12

Rather than using country of origin profile as sub-criteria for non-compliance response activities, the department should incorporate these criteria to routinely target goods from high-risk countries entering via the air cargo SAC pathway.

Response:

Agreed.

The department will incorporate relevant country of origin criteria (and cultural events) based on information collected. This information, once analysed, will be progressed with policy owners to identify biosecurity risk and seasonality and establish a process to have them built into relevant profile criteria.

Recommendation 13

The department should collaborate with the Australian Border Force to:

- integrate a consignment blacklisting control in the ICS using artificial intelligence-driven risk profiling to reduce mis-declarations of SAC consignments
- determine how best to incorporate available improved technologies and systems for use in document assessments of SAC consignments and in biosecurity screening, more broadly.

Response:

Agreed.

The department actively collaborates with the Australian Border Force. The department has trialled machine learning to predict non-compliance, including mis-declaration, and is currently exploring implementation options either through the ICS, the department's systems or a combination.

Recommendation 14

The department should apply the necessary funding to enable SAC automation to be initiated at the earliest opportunity, and re-assign resulting surplus staff resources to pathway audit and verification activities.

Response:

Agreed.

Exploratory work has been progressed on SAC automation. Efficiencies in staff utilisation realised from automation will be reinvested in higher risk activities, including increased verification and assurance. In redeploying staff, consideration will be given to the pre-requisite attributes and competencies required for certain roles, for example departmental audit staff.

Recommendation 15

The department should move quickly to ensure that all CAPEC facilities have the necessary infrastructure to support efficient completion of targeted surveillance and verification operations, such as completed under Operation Fraser. For non-CAPEC entities, audits by department staff should include intelligence gathering to inform planning for potential targeted surveillance and verification operations.

Response:

Agreed.

The department's audit function will continue to gather intelligence as part of the audit process to further inform targeted surveillance and verification operations. There is scope, however, to explore enhancements to systems to better support the capture and analysis of collected intelligence.

Recommendation 16

The department should, as a priority, explore opportunities to expand access to information and information sources held by CAPEC and non-CAPEC members. Preferably, in collaboration with Australian Border Force through legal and technically sound options.

Response:

Agreed.

The department will continue to explore further opportunities for collaboration with industry and the Australian Border Force (ABF). The department recognises the importance of information sharing and collaboration with industry and has a specific express air freight engagement forum with CAPEC. The department routinely collaborates with the ABF, Australia Post and industry more broadly through forums such as the DCCC.

Recommendation 17

The department should work with CAPEC members to explore improvements in technological infrastructure to modernise screening for more accurate detection of biosecurity risk material. This would increase the speed of operation for CAPEC members and reduce the department's intervention for assessment and regulatory action.

Response:

Agreed.

The department is exploring opportunities to work with CAPEC members to deploy X-ray scanning algorithms for targeted biosecurity risk material. The department is looking to undertake a pilot program during 2021 involving the installation and operationalisation of an RTT@110 3D X-ray to test its capability in an airfreight depot for the effective screening for biosecurity risks using computer auto detection algorithms.

The department is also currently liaising with other agencies which have partnered with IT companies on the development of biosecurity algorithms for 2D X-ray units.

Recommendation 18

The department should expand the detector dog program consistent with the increase in SAC consignment numbers to utilise dogs in targeted surveillance and verification operations minimising entry of biosecurity risk material into Australia.

Response:

Agreed.

The department agrees with the recommendation to utilise detector dog teams for targeted surveillance and verification operations. Intermittent targeted surveillance and verification operations can be implemented within current capacity but an expansion to more routine operations would likely require an increase in capacity, which is a matter for Government.

Recommendation 19

The department should better optimise the efficiency and effectiveness of risk mitigation for SAC consignments by:

- having greater flexibility in staff recruitment to enable an agile response to growth and shift in both workload and risk profile for the express airfreight pathway
- engaging with CAPEC members regarding improved co-regulatory arrangements that would enable effective risk mitigation for express airfreight at the lowest practical cost and disruption for airfreight operators and partners.

Response:

Agreed.

The department continues to explore alternative recruitment methods, including the engagement of external recruitment agencies. The department is also working to optimise its existing workforce through implementation of a scheduling and workforce management system and through the expansion of its integrated business model.

The implementation of co-regulatory arrangements is an ongoing priority for the department. The department will continue to advocate and collaborate with policy owners, CAPEC and non-CAPEC members, to progress this strategy and other efficiencies using co-design approaches.

Recommendation 20

The department should immediately review its resourcing arrangements and optimise deployment of such capital equipment to improve the cost-effectiveness of biosecurity risk mitigation in airfreight facilities.

Response:

Agreed.

The department is progressing workforce transformation initiatives concurrently with capital and technology solutions to optimise resource attribution in accordance with risk and respective risk control across the supply chain and pathway.

In consultation with the Department of Home Affairs and the Australian Border Force, the department is investigating the possibilities of shared agreements for the use of existing X-ray equipment owned by airfreight facilities for biosecurity risk and customs threat screening.

Recommendation 21

The department should use surveillance and intelligence on pests and diseases outbreaks in partner countries to enhance the rate of screening of SAC consignments originating in selected high-risk countries.

Response:

Agreed.

The department intends to enhance the rate of screening of SAC consignments from high-risk countries informed by contemporary data and intelligence.

Recommendation 22

The department should routinely undertake targeted operations and assurance activities in the express airfreight pathway for SAC consignments to assess and promote compliance with biosecurity measures, including social media campaigns.

Response:

Agreed.

The department is using information from the 2019 threat and vulnerability scan to assist with prioritising and directing activities focussed on confirming and strengthening biosecurity controls. This is coupled with an ongoing body of work of targeted operations and development of business as usual assurance activities in the self-assessed consignment pathway. The department is also working through recommendations from Operation Fraser that outlined opportunities to strengthen biosecurity controls on the pathway.

The department utilises key tools such as social media campaigns to educate and promote compliance with biosecurity import conditions and will explore more opportunities to raise awareness with key cohorts in this pathway.

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Response:

Agreed.

In reviewing its operational programs, the department will ensure legal standing and validity are criteria.

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The department should develop an operational policy framework for biosecurity officers to exercise regulatory powers to issue infringement notices and civil penalties for non-compliance with provisions under the Act relating to the management of biosecurity risk associated with imported goods.

Response:

Agreed.

The department has an operational policy framework (supported by IT systems and instructional material) for biosecurity officers to issue infringement notices and otherwise deal with non-compliance at first points of entry.

Policy and guidance material is also being developed for the broader use of civil sanctions (i.e. infringement notices, civil penalty orders, injunctions and enforceable undertakings).

Recommendation 25

The department should expand Department of Agriculture Cargo Consultative Committee (DCCC) membership to include the air cargo arm of Australia Post.

Response:

Agreed.

The Department has an existing regular dialogue with Australia Post and Home Affairs on issues relevant to the mail and air freight pathways but will also expand the DCCC membership to include the Australia Post air cargo arm.

Appendix B

Provisions in the *Biosecurity Act 2015* for the management of biosecurity risks associated with imported air cargo

Chapter	Section	Provision
3	119	Goods brought into Australian territory are subject to biosecurity control
	120	Notice must be given of goods to be unloaded in Australian territory
	121	Notice of goods to be unloaded in Australian territory—requirement to give additional or corrected information
	122	Power to obtain extra information relating to goods covered by a notice under section 120
	123	Biosecurity risk assessment powers
	124	Direction to secure goods
	125	Inspecting goods and taking samples
	126	Asking questions about goods
	127	Requiring documents relating to goods to be produced
	128	General direction to move or not to move goods
	132	Specific direction on the movement of goods (for example, specific time, manner, duration)
	133	Treatment of goods
	134	Treatment that is likely to damage goods
	135	Export of goods
	136	Destruction of goods
	162	When goods brought into Australian territory are released from biosecurity control
	163	Notice releasing goods from biosecurity control
	164	Revoking notice releasing goods from biosecurity control
	173	Prohibited goods
	174	Conditionally non-prohibited goods
6	317	Direction to secure goods or conveyance
	318	Inspections and taking samples of goods or premises
	319	Asking questions about goods or premises
	320	Requiring documents relating to goods or premises to be produced

Glossary

Agriculture Import Management System (AIMS)	<p>A system managed by the Department of Agriculture, Water and the Environment which has records of quarantine entries for goods entering Australia. It provides quarantine management of imported goods and non-commodity items, records the department's decisions and communicates this information to the importer/broker. AIMS is used to:</p> <ul style="list-style-type: none"> • manage biosecurity and food safety risks associated with imported cargo • track and record imported consignments • assign departmental fees and collect revenue on imported cargo.
Approved arrangement	A voluntary legislative agreement between the department and another party to carry out specified activities to manage biosecurity risks associated with imported goods.
Beale review	Independent review of Australia's quarantine and biosecurity arrangements by a panel chaired by Mr Roger Beale AO. The report <i>One biosecurity: a working partnership</i> was released by the Australian Government on 18 December 2008.
Biosecurity Act	The <i>Biosecurity Act 2015</i> (Cth). Commenced 16 June 2016 and replaced the <i>Quarantine Act 1908</i> (Cth).
Biosecurity Import Conditions (BICON) system	A departmental system used to manage and process import conditions of imported goods.
Biosecurity Industry Participant (BIP)	<p>Defined in Section 14 of the <i>Biosecurity Act 2015</i> (approved arrangement holder).</p> <p>A person who is the holder of the approval of an approved.</p>
Biosecurity risk	Potential harm to the economy, environment and human health from the negative impacts associated with entry, establishment or spread of exotic pests and diseases.
Biosecurity risk material (BRM)	Any plant and animal material, and inorganic material, that are of biosecurity risk or concern.
Biosecurity risk owner	Positions or groups within the department who are the ultimate advisors on managing specific biosecurity risks of different commodities, processes or pathways.

CAPEC group	Conference of Asia Pacific Express Couriers (DHL, FedEx, TNT and UPS).
Cargo compliance verification (CCV)	A statistical based end-point survey conducted on the containerised (full container load [FCL] and full container load consolidated [FCX]) sea cargo pathway to evaluate the effectiveness of its operational biosecurity controls. These controls include community protection profiles, document assessment and broker arrangements.
Compliance	Status whereby all aspects of a product, facilities, people, programs and systems meet regulatory requirements and, where applicable, importing country official requirements.
Department	Australian Government Department of Agriculture, Water and the Environment.
Director of Biosecurity	Secretary of the Australian Government Department of Agriculture, Water and the Environment, responsible for managing biosecurity risks and ensuring Australia's international rights and obligations are met.
Document assessment	Verification of consignment documentation (such as invoices and mandatory declarations) to determine if a consignment potentially contains prohibited goods or BRM.
Import Management System (IMS)	Departmental system to control and record importations of goods and commodities of biosecurity concern and store and track associated directions that apply to importations, their movements and treatments.
Integrated Business Model	Departmental system that deploys workforce to meet demand that is influenced by changing risk and informed targeting.
Integrated Cargo System (ICS)	A Department of Home Affairs software application for all import and export reporting and processing procedures. ICS provides electronic reporting of movement of goods across Australia's borders, and is managed by the Australian Border Force (ABF). The department uses the ICS to refer imported goods into AIMS and highlight selected commodities for intervention.
Leakage	BRM that is detected during end-point surveys, and was not detected by biosecurity intervention processes.
Mail and passenger system (MAPS)	Departmental system used for reporting purposes and record non-compliance information within the Airports, International Mail, Seaports and Detector Dogs Programs.
Minimum document requirements policy	Defines minimum requirements that must be met for all documents presented to the department to support risk assessment of imported cargo and/or packaging, for quarantine or food safety purposes.
Non-CAPEC members	International express air courier companies that are not part of the CAPEC group and process SAC consignments under approved arrangement classes 1.2 (Air cargo terminal) or 1.3 (Sea and airfreight depot (restricted)).

Risk mitigation	Implementation of biosecurity risk measures to address a known or foreseeable biosecurity risk.
Risk profiles	Generated by comparing descriptions of SAC consignments with a set of profile criteria in the ICS to identify potential biosecurity risks.
Self-Assessed Clearance (SAC)	Clearance procedure for imported non-commercial goods that have a value equal or less than A\$1,000.
Self-Assessed Clearance (SAC) National Coordination Centre (NCC) (SAC NCC)	Departmental area responsible for creating and maintaining risk profiles for assessing SAC consignments.
Self-Assessed Clearance (SAC) Pathway	The movement of imported non-commercial goods via express air courier transportation.
Screening	The use of X-rays, detector dogs and manual inspection to screen international passengers and mail for biosecurity risk material.
Training	Departmental accredited training required by a person associated with the management of biosecurity risk of an approved arrangement.

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