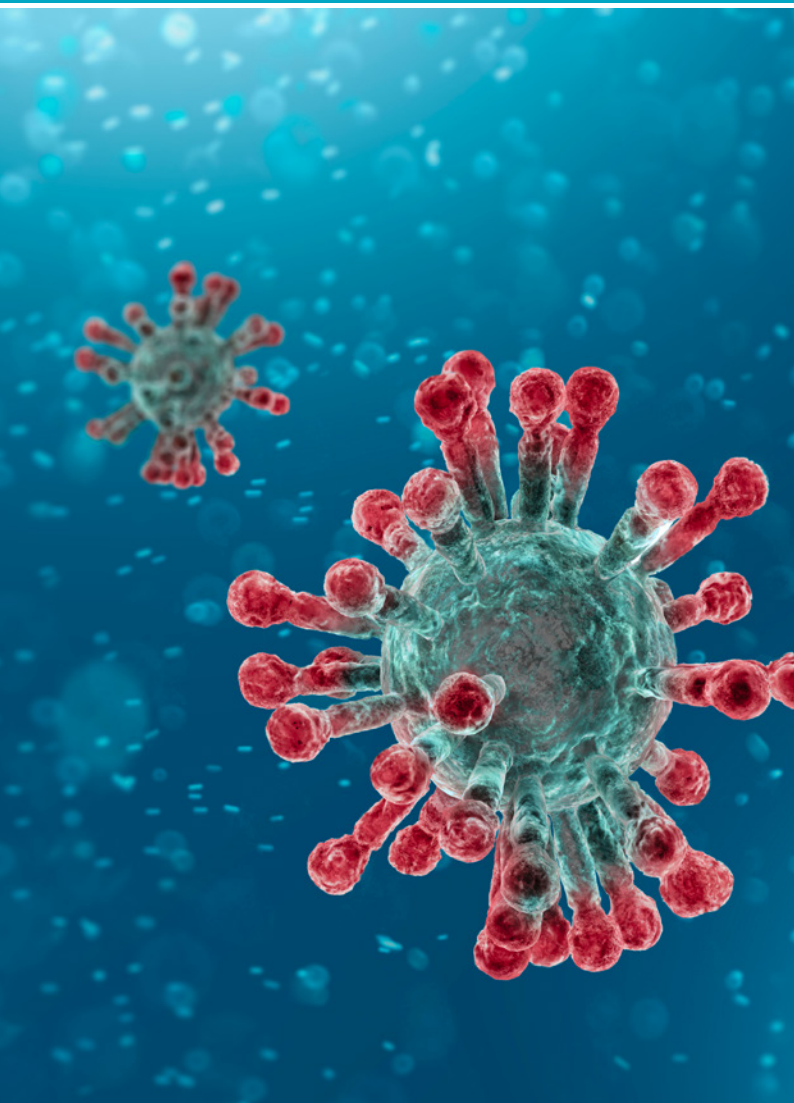




Australian Government
Inspector-General of Biosecurity

Confidence testing for at-border delivery of critical human biosecurity functions – *Ruby Princess* cruise ship incident

REVIEW REPORT NO. 2020-21/02



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Chapter 1

Executive summary

This report makes numerous references to the role of the Commonwealth Department of Agriculture (Agriculture) in pursuing, via the Department of Health (Health), amendments to the Biosecurity Act 2015 (Cth) and the Memorandum of Understanding (MoU) between the 2 departments. The Inspector-General considers that, to improve Australia's preventative measures for Listed Human Diseases, the recommendations in this report must be implemented.

The Inspector-General's remit is within the scope of Agriculture's biosecurity responsibilities. The Inspector-General considers that it is clearly Agriculture's responsibility, as a signatory to the bilateral MoU with Health, to progress with Health changes that will improve Agriculture's ability to operationally deliver human biosecurity policies and regulations that are managed by the Health portfolio.

Agriculture should not be a passive partner in the MoU with Health. While each party has individual responsibilities under the MoU, there seems little doubt that the Australian Parliament and our nation expect that 2 departments of the same government to work together under the MoU to achieve human biosecurity outcomes for Australia.

Australia has long been a popular destination for tourists from across the globe. The number of cruise ship arrivals in Australia has continued to grow over the last decade. In 2018, 200,000 visitors entered Australia on cruise ships from 145 countries. The Australian cruise industry has generated a net economic output into Australia's economy of about \$5 billion annually.

Cruise ships can provide an ideal environment for transmission of communicable diseases. They bring diverse populations, of unknown health status, into proximity for many days. They move rapidly from one port to another, interfacing with local community members. Also, large numbers of passengers and crew members interact in the confined environment of cruise ships, so there is further potential for spread of communicable diseases.

SARS-CoV-2 – the virus that causes coronavirus disease (COVID-19) – was first reported in December 2019. Since then it has been detected in 216 countries and territories. COVID-19 has been demonstrated to spread through droplets (mucus or saliva) and aerosol, so people can become infected without direct contact with a carrier. In just over a year since the virus was first reported, the COVID-19 pandemic has severely impacted the world, killing over 3.1 million people.

As part of its response to the risks posed by the emerging COVID-19 pandemic overseas, the Australian Government banned the entry of foreign-flagged cruise ships into Australian waters (with limited exceptions) from 18 March 2020. The ban has since been extended a few times and will remain in place until 17 June 2021.

At the start of March 2020, Australia had recorded 25 confirmed cases of COVID-19. That number rose quickly, crossing the 1,000 mark by 21 March 2020. By 4 April 2021, Australia had recorded over 29,300 COVID-19 positive cases and 909 deaths.

On 26 August 2020, the Minister for Agriculture, the Hon. David Littleproud MP, formally requested that the Inspector-General undertake a review of relevant matters that arose through the arrival of the *Ruby Princess* cruise ship in Sydney, New South Wales, in March 2020. Almost 2,700 passengers, some with cold and influenza-like symptoms, were allowed to leave the ship. Weeks after the incident, more than 663 passengers and crew tested positive to COVID-19 and 28 passengers died.

The *Biosecurity Act 2015* is jointly administered by Health and Agriculture. The Act provides a range of powers to the Federal Minister for Health, the Director of Human Biosecurity (part of Health portfolio) and the Director of Biosecurity (Secretary, Agriculture), specifically for the protection of health of all Australians. These powers include entry and exit screening of international travellers, management of ill travellers, vector monitoring and control, and flexible emergency and preventative powers.

The working relationship between Health and Agriculture is formalised through a detailed MoU that sets out the representation, expectations, roles and responsibilities of each agency at strategic, policy and operational levels. Under the MoU, the 2 agencies have specific roles:

- Health undertakes human health risk assessments and develops pre-border and border management policies that prevent or reduce the impact on the Australian community and health systems of significant communicable disease (including a Listed Human Disease) threat entering, establishing or spreading in Australian territory.
- Agriculture operationalises Health's policies for managing human biosecurity risks at the first points of entry across Australia.

This review examines (or 'tests') the level of 'confidence' that can be had in Agriculture's management of the Vessels Pathway to deliver critical human biosecurity functions at the Australian border (first points of entry). Note that the Inspector-General only focused on Agriculture's roles and responsibilities, consistent with the regulatory requirements, as stipulated in the *Biosecurity Act 2015* and the Health–Agriculture MoU.

This review found weaknesses in the Agriculture's management of human biosecurity functions: the agreed, vital collaborative activities were not delivered the way that the 2017 Health–Agriculture MoU intended. Overall, in assessing the level of confidence that can be derived from Agriculture's management of human biosecurity aspect of the Vessels Pathway, the Inspector-General of Biosecurity made the following observations:

- Frontline staff (including managers) are committed to delivering good biosecurity outcomes. However, the organisational capability and support for the delivery of quality biosecurity functions is often not up to the same level as the commitment of officers to their roles. To improve this, the following should be considered, in consultation with Health where appropriate:
 - Specific training modules, including a new biosecurity awareness package for 'human health intervention' and administration of the Traveller with Illness Checklist, should be developed to give officers clarity on their responsibilities.

- ▶ Training (and relevant instructional material) should be updated to specify the legislative powers that officers can use.
- ▶ There should be a larger pool of competent biosecurity officers with expertise in specialised vessel inspection areas, with sufficient experience to cope with 'surge' demands.
- ▶ Biosecurity officers should have necessary information available to them through an effective digital communication tool that is easily accessed in a variety of work environments.
- ▶ Biosecurity officers should be able to contact subject-matter experts to discuss time-critical matters and seek advice for quick resolution of human biosecurity issues.
- The primary legislation (that is, the *Biosecurity Act 2015* and, in some instances, its regulatory instrument(s)) needs to be amended to address a number of diverse issues, including:
 - ▶ to provide greater flexibility in managing pratique based on human biosecurity risk – in particular, to allow vessels (and aircraft) to load and unload cargo and stores where this represents an acceptably low level of risk
 - ▶ to provide broader powers for managing large numbers of passengers and crew with potential Listed Human Diseases onboard foreign commercial vessels
 - ▶ to provide powers to enforce negative pratique and apply penalties to individuals who breach negative pratique
 - ▶ to apply civil sanctions to vessel masters who knowingly provide false or misleading information
 - ▶ to withhold (and revoke) pratique for vessels that have been assessed to pose higher risk for potential Listed Human Diseases based on the Pre-arrival Report and other intelligence, such as information on high-risk port(s) that vessels have visited within the past 14 days
 - ▶ to require ship masters, while in Australia, to report changes to human biosecurity information (health updates) since they submitted vessel's Pre-arrival Report.
- The 2017 Health–Agriculture MoU is due for renewal. Operations conducted under it were not adequately functional and accountable, as the human biosecurity activities were not delivered the way they were intended. The MoU is critical to Australia's human biosecurity status, so it should be reviewed biannually by an independent reviewer for effective human biosecurity management to ensure:
 - ▶ identified and agreed roles and responsibilities of each agency are efficiently delivered
 - ▶ the operation of the Human Biosecurity Forum (as stipulated in the MoU) or the continuation of formal high-level, technical interactions that have occurred between the 2 agencies since 2019
 - ▶ vital human biosecurity surveillance activities are undertaken as business as usual
 - ▶ human biosecurity noncompliance issues are efficiently resolved and managed, including for vessels in negative pratique.

- The Maritime Arrivals Reporting System (MARS) is the principal online web portal used for capturing data that allow all biosecurity risks associated with incoming commercial vessels to be managed. A periodical review of MARS should be undertaken to ensure that Health's suggested updates (especially those relevant to human health questionnaire) are considered so that decision-making on human biosecurity risks can be improved. This should include making improvements to:
 - ▶ make necessary changes to MARS to allow recording of technical and regulatory advice (and other correspondence) between biosecurity officers and stakeholders relating to issues such as revocation of pratique
 - ▶ update MARS' Biosecurity Status Document to include legislative basis for conditions placed on vessels or crew, including consequences of noncompliances
 - ▶ provide appropriate access to all registered parties/entities, as the information captured in MARS is often crucial for their decision-making.
- As a priority, Agriculture needs to overhaul maritime instructional material to implement all recommendations in the external agency's report. As the maritime instructional material is only used internally by biosecurity officers, Agriculture should remove the need for strict professional editing, which evidently delays the release/publication of vital documents.
- Targeted compliance operations and surveys are key tools to test the efficacy of biosecurity controls and intervention measures to assess their effectiveness. A half-day, desktop exercise (Exercise EmergenSea Detour) was undertaken in May 2019. The scenario used during the exercise was similar to the situation that arose when the *Ruby Princess* cruise ship arrived 10 months later (in March 2020), yet the exercise failed to contribute to preparedness for the incursion of COVID-19. This highlights the need for regular, fieldwork-based scenario exercises and deployment of an improved alert and preparedness system to prevent the entry of communicable diseases into Australia.
- This review appears to be the first comprehensive review, in a decade, of human biosecurity management in the Vessels Pathway. A full risk assessment of vessels and travellers pathways by an external agency (such as the Centre of Excellence for Biosecurity Risk Analysis (CEBRA)) could provide useful insight into areas of further improvement.
- National biosecurity operational policy needs to be simplified, and delivery roles must have stronger and clearer accountability. National leadership on vessels and the Maritime National Coordination Centre may need to be co-located in order to achieve this. The shipping industry experienced a large number of issues with Agriculture's indecisiveness about pratique when COVID-19 peaked in Australia – this situation could be avoided if a hotline to Maritime National Coordination Centre, operated by either a subject-matter expert or an expert in regulation, were set up.
- Too often, officers and managers use make-do and work-around approaches to deliver something like the desired result. However, those approaches may be inconsistent with the Act and Agriculture's policies and procedures.
- There is insufficient accountability for the integrity of biosecurity regulatory delivery – for example, there is no assurance that assigned staff have the capability and experience to confidently and competently carry out the required frontline responsibilities.

- Resourcing pressures appear to have led to an imbalance under Agriculture's Integrated Business Model. Multiskilling and operational flexibility now dominate over ensuring there are adequate staff with the necessary levels of competence and operational experience in the Vessels Pathway.
- Agriculture has not taken sufficient responsibility for its critical roles in human biosecurity as the pratique issuing authority. It is inclined to defer its responsibility to Health and jurisdictional health and emergency management agencies.
- Localised work practices had become prevalent, especially in Sydney region. Those practices omitted critical functions that Health believed were being delivered. The practices were not detected or addressed by verification activities designed to do just that.
- In October 2018, Agriculture's internal audit team completed a report on the Vessels Pathway that identified several important areas of improvement and made vital recommendations. Agriculture agreed to those recommendations. However, the recommendations were not implemented within the agreed time frames, leaving the Vessels Pathway exposed. This potentially contributed to the *Ruby Princess* cruise ship incident. After the *Ruby Princess* incident, Agriculture went to external providers for review of 2 of the main areas covered in this report – regulatory powers available to officers for granting and revocation of pratique to vessels; and the overhaul of instructional material library. Meticulous planning and prompt attention to action areas of improvement identified in reports prepared by internal audit team and independent authorities (such as the Australian National Audit Office and the Inspector-General of Biosecurity) should be a standard practice. This could save Agriculture duplication of efforts after the fact as well as wastage of scarce resources.

Human biosecurity regulation in the Vessels Pathway is detailed and sometimes complex; therefore, the Inspector-General has made numerous recommendations targeting specific areas for improvement. It is expected that Agriculture will implement an integrated response to recommendations that will markedly improve the delivery of human biosecurity function and accountability in key areas identified in this report.

Overall, recommendations in this report support process improvements and a move towards better practice in collaboration between Agriculture and Health for surveillance, verification of decision (and control) points, and management of human biosecurity at Australia's international border.

Generally, the observations and recommendations in this report are consistent with those made in recent Inspector-General reports. If implemented, the recommended actions should provide enough confidence in Australia's preventative biosecurity system to withstand serious 'pressure-testing'. Both specific areas and general improvements are essential.

Chapter 2

Recommendations

Recommendation 1

Agriculture should regularly engage with Health to review the Health–Agriculture Memorandum of Understanding (MoU) to implement identified roles and responsibilities of each agency for human biosecurity function delivery at first points of entry, including by operating either the Human Biosecurity Forum as stipulated in the MoU or alternative formal high-level, technical interactions already occurring between the 2 agencies.

Recommendation 2

Agriculture should work collaboratively with Health to ensure instructional material for human health management in the Travellers Pathway is consistent with Health’s policies. It should clearly identify any separation of issues unique to either the air or sea Travellers Pathways if these are known to exist. It should take a ‘ground-up’ approach rather than attempting to update or repurpose existing instructional material to include broader questioning techniques when there is a known concern regarding human biosecurity or possible outbreak scenarios, such as was seen with COVID-19.

Recommendation 3

As outlined in the Health–Agriculture Memorandum of Understanding, Agriculture should work with Health to ensure that, before deployment, all officers have received appropriate training in assessing human health. This training must be regularly refreshed to remain up to date. This should include:

- a thorough review of the training material and refresher schedule to determine their appropriateness, currency and robustness
- retraining of officers to ensure clarity of their responsibilities regarding the use of the Traveller with Illness Checklist (TIC), including when TIC must be administered.

Recommendation 4

Agriculture should regularly engage with Health to review roles and responsibilities as stipulated in the Health–Agriculture Memorandum of Understanding; and clarify expectations in managing vessels that are in negative pratique and in detecting and managing noncompliances related to human health matters. Clarity of responsibilities for the management of noncompliance must be achieved.

Recommendation 5

The Director of Biosecurity should ensure biannual, independent review of the operation of the Health–Agriculture Memorandum of Understanding to ensure effective human biosecurity management onboard all incoming vessels, with prescribed human biosecurity requirements for Listed Human Diseases. The review reports to the Director of Biosecurity should include verifiable evidence that agreed actions have been completed.

Recommendation 6

Agriculture should ensure that all biosecurity memoranda of understanding with all Commonwealth agencies are renewed before their expiry dates.

Recommendation 7

Agriculture should review the workload of biosecurity officers working in the Maritime National Coordination Centre to ensure that the centre:

- is adequately resourced with the required capacity and agility to reprioritise and allocate resources during significantly increased workload and pressure ('surge' periods)
- is able to look beyond its day-to-day workload to respond to industry changes and demands
- is following standards and operating directions to enable operational managers to tactically allocate resources within their jurisdictions for vessel inspections
- staff are adequately trained and competent in providing professional advice that is consistent with the legislation to biosecurity officers and industry agents/vessel masters when requested.

Recommendation 8

Agriculture should consider introducing a dedicated hotline to the Maritime National Coordination Centre operated by experienced staff (preferably, either a subject-matter expert or an expert in regulation) as an escalation point for urgent enquiries that meet agreed criteria.

Recommendation 9

Agriculture should consider adjusting the current line of reporting by making the Maritime National Coordination Centre part of the national Vessels Program (preferably, Conveyances and Ports Section). This should increase the efficiency in the way the Maritime National Coordination Centre manages its delivery of policy and operational advice to shipping industry and vessels inspectors.

Recommendation 10

Agriculture should streamline and improve internal transparency of processes for short- and long-term tracking of implementation of decisions and actions arising from other audit and review processes (such as internal audits and Australian National Audit Office and Inspector-General of Biosecurity reviews).

Risk owners should be responsible for planning, overseeing implementation, technical advice and issues resolution, when required. Progress should be visible to Agriculture's senior risk managers, the Inspector-General of Biosecurity and other audit bodies as appropriate.

Recommendation 11

Agriculture should engage the Centre of Excellence for Biosecurity Risk Analysis to undertake separate risk assessments for the:

- Vessels Pathway
- Travellers Pathway.

Recommendations from these reviews should be implemented as a priority.

Recommendation 12

Agriculture should update its current Memorandum of Understanding with Health to align with the 2007 Memorandum of Understanding, as the 2007 memorandum provided clarity of each agency's roles for:

- human biosecurity surveillance
- border measures specific to travellers
- border measures specific to seaports, including the management of vessels in negative pratique.

Recommendation 13

Agriculture should rigorously review its responsibilities under the Memorandum of Understanding (and other inter-agency memoranda as appropriate) to ensure that there is adequate inter-agency functional rigour and that Agriculture delivers on its responsibilities under those memoranda.

Recommendation 14

Agriculture should develop and implement a schedule of 'pathway verification surveys' to ensure Health's policies on the detection and management of Listed Human Diseases at first points of entry are being followed and that they remain operationally appropriate and effective.

Recommendation 15

Agriculture should develop and implement a standard alert and preparedness system for application whenever there is credible intelligence that a major incident is likely to occur so that all relevant managers (from the relevant frontline areas to the Director of Biosecurity) are aware of the emerging incident characteristics.

Recommendation 16

Agriculture should collaborate with Health to review human health related questions in the Maritime Arrivals Reporting System form for the pre-arrival reporting, to:

- require reporting of symptoms as opposed to illness
- consider making the Pre-arrival Report form available in both English and other languages.

Recommendation 17

Agriculture should ensure that, where pratique is granted orally, biosecurity officers make contemporaneous notes of the event – specifically, the time and to whom the advice was provided. Instructional material should be updated to reflect this requirement. The Maritime Arrivals Reporting System should also be updated to record details of the granting of pratique.

Recommendation 18

Agriculture should seek Health's support to amend the *Biosecurity Act 2015* to include provision for biosecurity officers to withhold pratique for vessels that have been assessed to pose higher risk for potential listed human diseases based on the Pre-arrival Report and other intelligence, such as whether vessels have visited high-risk port(s) within the previous 14 days before arrival at an Australian port.

Recommendation 19

The provisions within the *Biosecurity Act 2015* relating to pratique should be reviewed to provide greater flexibility in managing pratique based on human biosecurity risk – in particular, to allow for aircraft and vessels to load and unload cargo and stores where this represents an acceptably low level of risk. The loading of provisions for crew onboard commercial cargo vessels and cruise ships in negative pratique should be incorporated in relevant instructional material.

Recommendation 20

The provisions within the *Biosecurity Act 2015* should be reviewed with a view to providing biosecurity officers with broader powers that will assist them in managing large numbers of passengers and crew with potential Listed Human Diseases onboard foreign commercial vessels.

Recommendation 21

The *Biosecurity Act 2015* should be amended to provide biosecurity officers with greater powers to enforce negative pratique, to provide for penalties to be applied to individuals who breach negative pratique, and to make the 'person in charge' (and operator) of a conveyance, defined in section 22 of the Act, also responsible for any noncompliance with negative pratique. This includes provision for issuing Infringement Notices for pratique breaches.

Recommendation 22

The *Biosecurity Act 2015* should be amended to provide biosecurity officers with clear powers to revoke pratique, including where either incorrect or inaccurate information is supplied by the vessel operator or there are changes to the vessel's human biosecurity risk status over time.

Recommendation 23

Biosecurity officers who are responsible for administering pratique should be provided with the information they require to administer it correctly. Clarity on pratique must be included within instructional material used by biosecurity officers as a matter of urgency. Subject to the Memorandum of Understanding with Health being updated, a work instruction covering the management of vessels in negative pratique is required.

Recommendation 24

The *Biosecurity Act 2015* should be amended to require vessel operators to report updated biosecurity information, including human biosecurity information, if there are any changes to the information required under section 193 between the time that the Pre-arrival Report was submitted and the time of the vessel's departure from Australia.

Recommendation 25

Agriculture should make necessary improvements to Maritime Arrivals Reporting System (MARS) and relevant instructional material to ensure all correspondence between biosecurity officers and stakeholders relating to key decisions (such as the revocation of pratique) is recorded by notes in MARS. This would include any advice, discussions or directions from the Human Biosecurity Officer or the Maritime National Coordination Centre or specialist regulatory advice.

Recommendation 26

Agriculture should review maritime training, Job Cards and all instructional material to ensure that staff have a clear understanding of their powers under the *Biosecurity Act 2015*. When acting on advice provided by Human Biosecurity Officers using state or territory powers, it should be clear that this is the case. Any directions provided by biosecurity officers should be directly referenced to their powers under the Act.

Recommendation 27

Agriculture, as a priority and in consultation with Health, should develop a modern, on-tablet workflow and searchable documentation system for use in the field to enable biosecurity officers to make sound, lawful decisions. This workflow system should include phone/video links that allow frontline officers to access subject-matter experts directly to seek advice on complex matters when needed.

Recommendation 28

Information held by vessels and company agents relevant to the human biosecurity risk onboard international vessels should be examined by Agriculture and an improved process put in place that will allow assessment of the information for human health risk before vessels' arrival.

Recommendation 29

Under section 532 of the *Biosecurity Act 2015*, Agriculture should apply civil penalty provisions across the business, including to masters of arriving vessels who provide false or misleading information and people who breach negative pratique. Further, Agriculture should consider the application of demerit points against individuals who are noncompliant as well as against the conveyance that they arrived on.

Recommendation 30

Agriculture should consult with Health about the need to:

- update its training and instructional material to specify appropriate legislative powers available to be used
- consider options to ensure Chief Human Biosecurity Officers and Human Biosecurity Officers in each jurisdiction are adequately aware of the statutory regime used to manage human biosecurity at first points of entry, the responsibilities of each agency and the correct use of powers.

Recommendation 31

Agriculture should review the Maritime Arrivals Reporting System Biosecurity Status Document to include the legislative basis for any conditions placed on the vessel or crew and the consequences of noncompliance. This change must be reflected in relevant maritime instructional material.

Recommendation 32

Agriculture should, as a priority, ensure that work allocation systems have sufficient controls in place to ensure that duties are not allocated to staff unless they have completed the requisite training and are appropriately accredited.

Recommendation 33

Agriculture should apply a comprehensive training and rotation program to maintain a pool of competent biosecurity officers with expertise in specialised vessel inspection areas and the experience necessary to cope with peaks in inspection demand. This program should be regularly reviewed and adequately resourced.

Recommendation 34

Agriculture should, as a priority, update the *Biosecurity awareness package for first points of entry (FPoE) staff* by including:

- a specific topic on human health intervention, with a focus on preventing entry of Listed Human Diseases into Australia via the Vessels Pathway
- a provision to issue certification to industry stakeholders who complete the awareness package.

Recommendation 35

Using the *Ruby Princess* and other vessel incidents as case studies to demonstrate the lessons learnt, Agriculture should revise and update existing training packages to help biosecurity officers improve their capabilities in decision-making and compliance management. In particular, the following specific training modules should be developed and incorporated in the training module:

- Human Health Intervention
- Administering the Traveller with Illness Checklist.

Recommendation 36

Agriculture should remove the need for mandatory centralised editing of instructional material to meet its standards of publishing, as the material is only used internally by its staff. Relevant policy managers must be accountable for accuracy, utility and currency of instructional material.

Agriculture should have a standard system for handling of all instructional material that includes version control, accountability for content and updating, sign-off and so on. The Instructional Material Library must be routinely searchable, include officer authorisations and subject-matter experts and be available to all biosecurity officers via mobile devices (tablets).

Recommendation 37

Agriculture should review all maritime human biosecurity instructional material saved on its internal repository (Instructional Material Library), SharePoint® document sets for operational areas, and team and other information sharing sites for accuracy, currency, consistency, clarity, usefulness for verification at the border and ease of access.

Recommendation 38

Agriculture should, as a priority, implement all recommendations included in external agency's report, *Independent assurance review of maritime human biosecurity instructional material*.

Recommendation 39

To achieve nationally consistent delivery of regulatory activities at first points of entry, Agriculture should identify experts in relevant streams who biosecurity officers can contact to discuss time-critical matters and seek advice for quick resolution.

Recommendation 40

Frontline staff should be provided with consistent information through an effective digital communication tool that is easily accessed by operational staff in a variety of work environments.

Recommendation 41

Agriculture, in consultation with Health, should develop a schedule to periodically review human health questions included in the Maritime Arrivals Reporting System questionnaire to ensure there are no gaps in its efforts to detect and prevent the entry of Listed Human Diseases into Australia via the Vessels Pathway.

Recommendation 42

Agriculture should review its current systems and mechanisms of providing appropriate and uninterrupted access to Maritime Arrivals Reporting System to all registered agencies that have an interest in managing biosecurity (including human biosecurity) risks.



Rob Delane
Inspector-General Of Biosecurity
29 April 2021

For the department's response to the recommendations, please see [Appendix A](#).

Chapter 3

Background

3.1 Authority of the Inspector-General of Biosecurity

Australia's biosecurity system relies on various government programs that ensure the safe international movement of people and goods. These programs are mainly delivered by Agriculture in cooperation with industry. They minimise the risk of the entry, establishment and spread of exotic pests and diseases that could cause significant harm to people, animals, plants and Australia's unique environment.

The Inspector-General of Biosecurity's (Inspector-General's) mission is to enhance the integrity of Australia's biosecurity systems by independently evaluating and verifying the performance of these programs across the biosecurity continuum – pre-border, at the border and post-border. The Inspector-General makes recommendations for system improvements and provides an assurance framework for stakeholders.

The *Biosecurity Act 2015* defines the Inspector-General's role, authority and independent powers of review. The Inspector-General is responsible for reviewing the Director of Biosecurity's performance of functions and exercise of powers. The Secretary of Agriculture is the Director of Biosecurity.

The Inspector-General is independent of the Minister for Agriculture and the Director of Biosecurity and is not subject to direction by the Minister or the Director of Biosecurity in relation to the priority to be given to a particular review (Biosecurity Regulation 2016, paragraph 91(4)). However, the Inspector-General may:

- consider the Minister's request for a review
- seek immediate action from the Director of Biosecurity (or senior departmental executives) and the Minister to protect or enhance the integrity of Australia's biosecurity systems.

On behalf of Health, Agriculture undertakes certain biosecurity risk management measures and systems that relate to human health. The Inspector-General has the authority to review those measures and systems.

Under section 567(1) of the Act, the Inspector-General may review the performance of functions, or exercise of powers, by biosecurity officials under one or more provisions of the Act. However, section 567 of the Act does not provide for the Inspector-General to review the performance of functions, or exercise of powers, by Human Biosecurity Officers, Chief Human Biosecurity Officers or the Director of Human Biosecurity, as they are not biosecurity officials for the purposes of section 567 of the Act.

The Inspector-General's scope does not extend to Australia's national biosecurity policies, international trade issues and market access opportunities.

3.2 Origins of review

The *Ruby Princess* cruise ship arrived at the Port of Sydney on 19 March 2020. After it docked, almost 2,700 passengers, some with cold and influenza-like symptoms, were allowed to leave the ship and catch trains, buses and even overseas flights to get home. Weeks after the incident, more than 663 passengers and crew tested positive to COVID-19, and 28 passengers died.

On 26 August 2020 the Hon. David Littleproud MP, Minister for Agriculture, formally requested the Inspector-General to review relevant matters arose through the arrival of the *Ruby Princess* cruise ship in Sydney. In particular, the Minister asked the Inspector-General to review areas for improvement in the way Agriculture delivers its biosecurity functions, including:

- awareness of its responsibilities and that of other agencies it delivers biosecurity functions for
- communication and interaction with other agencies
- policies, protocols, systems and processes in place to support biosecurity officers in the discharge of their responsibilities at the border – with particular focus on critical areas identified in the New South Wales Special Commission of Inquiry into the *Ruby Princess* incident
- exercise of powers and functions of biosecurity officers under the Act
- consistency in application across all areas and regions in which Agriculture delivers its biosecurity functions.

On 5 September 2020 the Inspector-General advised the Minister for Agriculture of his intention to immediately commence this review.

3.3 New South Wales Special Commission of Inquiry

On 15 April 2020 the Governor of New South Wales, the Hon. Margaret Beazley, referred a Special Commission of Inquiry into the voyage of the *Ruby Princess* from 8 to 19 March 2020 and subsequent efforts to diagnose and treat *Ruby Princess* passengers and contain community transmission of COVID-19.

The New South Wales Government finalised terms of reference for 'Special Commission of Inquiry into the *Ruby Princess*' and appointed Barrister Bret Walker SC as Commissioner for the inquiry. The commission considered the vast amount of information on this topic and held a large number of public hearings.

On 14 August 2020 Commissioner Bret Walker SC submitted his 320-page report (Walker 2020) to the New South Wales Government. The report's recommendations included the following directly related to Agriculture:

- 2.19 That the NSW HBO Guideline should be reconsidered in light of the criticism made at [11.13], namely that it regards a grant of pratique as the default position, and indicates that pratique should only ever be withheld where there is a compelling reason to deny it, for example, where a HBO has a 'genuine belief' that other passengers 'were exposed' to a LHD. The current HBO Guideline does not appear to satisfactorily reflect an appropriately precautionary public health approach.
- 2.20 That Human Biosecurity Officers, DAWE [Agriculture], the Commonwealth Department of Health and NSW Health develop:
 - a) better awareness of their own and each other's roles and responsibilities for human biosecurity; and
 - b) more formal protocols for their interaction and communication. This includes, but is not limited to, the grant of pratique.
- 2.21 That human health reporting within MARS be reviewed with a view to:
 - a) improving its ability to be readily adapted to novel circumstances and suggested improvements (see, eg, [11.52]);
 - b) improving its clarity of expression and the coherence and intelligence of the format of its design and presentation (see, eg, [11.54] to [11.60]); and
 - c) improving access to other agencies (such as the Port Authority) with a legitimate interest in receiving the data for their own operations.
- 2.22 That any future review of the *Biosecurity Act* consider the utility and possible expansion of human biosecurity control orders so as to be applicable to persons or groups.
- 2.23 That the *Biosecurity Act* make explicit a requirement to update superseded human health information.

These recommendations raise concerns that issues identified through the arrival of the *Ruby Princess* cruise ship at the Port of Sydney on 19 March 2020 could apply in similar measure to other cruise ships, in other ports, or for entirely different biosecurity risk pathway(s). Of particular concern are risk circumstances where the probability of occurrence may be assessed to be low but the consequences of biosecurity failure are potentially large or extreme.

3.4 Review scope and focus areas

Biosecurity officers are at the forefront of Australia's biosecurity defence. They play a crucial role in preventing the entry of exotic pests and diseases into Australia, helping Australia to remain free of several exotic human, animal, plant and environmental pests and diseases.

Biosecurity officers assess and verify import requirements; screen and inspect travellers and imported cargo (goods) for the purpose of assessing biosecurity risk; and provide directions to manage those risks by making judgements and decisions about their release from biosecurity control in environments such as airports and ports, entities with approved arrangements, freight forwarders, warehouses, vessels and mail gateway facilities. Biosecurity officers also grant pratique to vessels. It is therefore vital that they possess appropriate knowledge and competence; and have access to tools and support that enable them to confidently execute their delegated authority in managing biosecurity risks at border.

The review examined:

- the adequacy of Agriculture's processes for managing current biosecurity risks and identifying and responding to emerging risks associated with the Vessels Pathway, with particular emphasis on commercial cruise ships and cargo and live animal export ships
- how Agriculture:
 - ▶ profiles, assesses, targets, screens and inspects international vessels at first points of entry when delivering their biosecurity function on behalf of Health
 - ▶ collaborates with other Commonwealth and state/territory agencies in delivering biosecurity activities for the Vessels Pathway
 - ▶ undertakes verification activities, if any, to ensure robustness of biosecurity controls for this pathway
- operational policies on:
 - ▶ the management of commercial vessels
 - ▶ technical and regulatory competence of biosecurity officers – skills, experience, training, job cards, supervision, refresher courses and verification records
- the availability, appropriateness and currency of standard operating procedures (instructional material)
- the assessment of data collection and management systems that are used for decision-making; and how those systems are integrated to allow data extraction to inform biosecurity risk management and policy formulation and development
- mechanisms for sharing information with other Commonwealth and state/territory government agencies and industry bodies (such as port authorities, cruise ship operators and so on)
- identifying improvements that are needed to manage biosecurity risks.

The review did not examine:

- biosecurity risks associated with arrival on military and non-commercial vessels, such as personal yachts
- any post-border biosecurity responsibilities or functions
- policies and activities of external stakeholders, including other Commonwealth agencies, state/territory governments and individuals
- commercial considerations.

3.5 Review framework

The review adopted a framework-based approach ([Table 1](#)) to examine Agriculture's performance against its relevant 'preventative biosecurity' policies, processes and capabilities that should be in place for the system to work optimally. The approach is similar to that used in previous reviews (IGB 2020a and IGB 2020b).

Further, the review applied the principles and broad approach of root cause analysis and other incident review methodology to examine whether an appropriate level of confidence could be had in Agriculture's operational capability to deliver human biosecurity functions. In particular, the review examined whether there could be confidence in biosecurity areas where the consequences of inappropriate regulatory decisions or actions could lead to elevated (or extreme) consequences.

The *Ruby Princess* cruise ship incident provided a stark case study for testing 'confidence' in Agriculture's regulatory processes, decisions and the timely and efficient delivery of actions at first points of entry.

TABLE 1 Review framework

Topic	Potential areas for examination
National framework and governance	<p>Agriculture's operational capability for the delivery of biosecurity functions, including:</p> <ul style="list-style-type: none"> • leadership – chain of command • adequacy and practicality of border biosecurity risk management measures
Threat and vulnerability assessment	<p>Agriculture's processes of assessing threats (and vulnerability) of known and likely sources of biosecurity risks associated with first points of entry (seaports), covering:</p> <ul style="list-style-type: none"> • ongoing surveillance and intelligence • threat and vulnerability assessments • assessment of major current and likely risks • verification activities
Coordinated, agile management arrangements with efficient cooperation for the delivery of biosecurity function	<p>Inter-departmental management arrangements:</p> <ul style="list-style-type: none"> • delivery of biosecurity function(s) – examples of agreed functions to be delivered, extent of intervention undertaken by Agriculture • information flow – channels of 2-way communication, frequency, information management and reporting • escalation and scale-back processes • contingency arrangements in the event(s) of critical failures, and processes for scale-back • agreements/memorandums of understanding for delivery of agreed at border biosecurity functions • roles and responsibilities <p>Intra-departmental management arrangements:</p> <ul style="list-style-type: none"> • risk owners, policy development and implementation, and internal arrangements for the delivery of biosecurity functions • decision-making during 'surge' demands to prevent 'business as usual' issues from becoming critical incidents • information flow – transparency, interaction levels across Agriculture • delivery of collaborative and/or complementary action for human biosecurity management functions at border, including granting pratique to cruise ships/vessels • early warning and reporting mechanisms, prevention, eradication measures and scale-back processes <p>Management arrangements (or collaboration) with industry stakeholders (as applicable):</p> <ul style="list-style-type: none"> • cruise ship operators • port operators
Regulatory powers and capability to apply regulation	<p>Provisions of biosecurity risk prevention, mitigation and management at and around first points of entry, in the:</p> <ul style="list-style-type: none"> • <i>Biosecurity Act 2015</i> • Biosecurity Regulation 2016 and other relevant legislative instruments <p>Appropriate processes to manage biosecurity risks at first points of entry – documentation, ease of delivery/implementation, efficacy</p> <p>Powers to frontline staff to apply regulation in instances of non-conformities and noncompliances</p>
Monitoring and adjustments to intervention measures	<ul style="list-style-type: none"> • Verification activities and outcomes for first points of entry • Staff ramp-up or redeployment capability during 'surges' • Impact assessment of areas

TABLE 1 Review framework

Topic	Potential areas for examination
Staffing and staff competence	<ul style="list-style-type: none"> • Staffing – recruitment, adequacy (personnel numbers), supervision, workload and work pressures • Technical and regulatory competence of biosecurity officers – skills, experience, training, job cards, supervision, refresher courses, verification records • Instructional material – availability, appropriateness, currency
Availability of technical support to frontline staff	<ul style="list-style-type: none"> • Chain of command • Access to experts • Communication mechanisms for expert advice • Reporting and resolution mechanisms for incidents of noncompliance and biosecurity incidents
Data and information management	<p>Data collection and information management systems:</p> <ul style="list-style-type: none"> • access to frontline staff to record incident details • access to management to generate timely, accurate reports for quick decision-making and potential improvements to existing controls <p>Improvements to existing data and information systems required</p>
Continuous improvements	<ul style="list-style-type: none"> • Lessons learnt from the <i>Ruby Princess</i> incident and changes made to current policies, processes and systems to stop similar incidents from occurring (system improvement) • Mechanism of receiving feedback from biosecurity officers at border to inform changes to policies for strengthening of biosecurity processes and controls • Verification activities for ensuring robustness of current systems and processes in managing ‘business as usual’ and ‘surge’ demands

3.6 Conduct of review

During this review, the Inspector-General consulted within and outside Agriculture. In particular, the Inspector-General:

- conducted a series of meetings with Agriculture's senior executives to:
 - ▶ establish background information about the circumstances leading to the *Ruby Princess* cruise ship incident
 - ▶ understand the work that Agriculture undertook to strengthen maritime/human biosecurity controls after the suspension of international commercial cruises to Australia in March 2020
 - ▶ discuss and identify information needed to progress the review
 - ▶ identify risks related to the review and any appropriate mitigation strategies
 - ▶ give all parties the opportunity to discuss/brainstorm and seek clarification about the proposed review process
- conducted a desktop audit of relevant policy guidelines, reports, procedural documents and work instructions on aspects of Agriculture's management of maritime biosecurity risks
- visited Agriculture's regional offices in Brisbane, Fremantle and Sydney to:
 - ▶ interview relevant staff
 - ▶ discuss Agriculture's procedures and operations in managing biosecurity risks with the frontline staff at first points of entry
- considered potential departmental risks, including whether:
 - ▶ sufficient appropriately skilled staff would be available to the Inspector-General to enable the review to be conducted in a timely, thorough manner
 - ▶ sufficient relevant Agriculture staff (including managers and frontline staff) would be available for the level of engagement needed to enable timely conduct of the review
 - ▶ digital communication (such as email, Skype, web-based survey tools and so on) will be adequate to effectively capture Agriculture and industry input
 - ▶ uncertainty within Agriculture due to major organisational change and COVID-19 impacts would impede critical staff input to the review
 - ▶ resource availability during and after the peak of COVID-19 impact would impede Agriculture's ability, as appropriate, to make necessary improvements.

Chapters 4–13 examine robustness of Agriculture's policies, systems and processes in managing human biosecurity risk associated with international commercial vessel arrivals. They also examine Agriculture's collaboration with other Commonwealth and state/territory agencies and industry in delivering human biosecurity functions at the first points of entry across Australia.

Chapter 14 provides a high-level assessment of Agriculture's overall performance in managing human health risks to Australia. In addition, the chapter also identifies areas for improvement to prevent the operational challenges that arose when the *Ruby Princess* cruise ship docked at the Port of Sydney on 19 March 2020.

Chapter 4

Passenger ships and human health risks

There has been a marked increase in the amount of and demand for international travel in the last 3–4 decades. Technology has advanced in all areas of shipping and the cruise industry has grown substantially, complementing a massive growth in the size, type and number of ships. There has also been an increase in incidence of discharge of ballast water and sediments from vessels. These advances in the maritime sector have enabled new infections to spread much more rapidly around the world and exacerbated the global transmission of infectious diseases that pose a severe threat to the health of the human population and national economies (Itaraera 2009).

Globally, every year an estimated 30 million passengers are transported on 272 cruise ships (Cruise Lines International Association 2019). Cruise itineraries typically cover all continents and areas, and many of those areas are not easily accessible by other means of travel.

Australia's peak cruise season is between October and March. In 2018, about 200,000 international cruise visitors from 145 different countries visited Australian shores ([Table 2](#)). A typical cruise itinerary 'down under' involves visits to all major Australian ports and destinations, with New South Wales and Queensland being the most popular destinations ([Table 2](#)).

Australia receives a significant economic gain from the cruise industry. In 2018, the industry generated a net economic output into the Australian economy of about \$4.8 billion ([Table 2](#)) – \$2.5 billion of this was indirect revenue and \$2.3 billion was direct spending. This economic uplift, in turn, created 17,369 jobs (both direct and indirect) for Australians.

TABLE 2 Popular Australian cruise destinations, 2018

Jurisdiction	Ships' visits to shores (days)	Passenger visit days (No.)	Economic gain (\$, million)
New South Wales	391	1,400,000	2,800
Northern Territory	84	135,000	172
Queensland	520	778,000	1,000
South Australia	67	115,000	118
Tasmania	142	213,000	106
Victoria	134	314,000	317
Western Australia	195	152,000	276

Source: cruiseagency.com.au

On cruise ships, diverse populations come into proximity for many days, facilitating potential transmission of respiratory illness (Millman et al. 2015). The diversity of passengers and crew members, coupled with the rapid movement of the cruise ships from one port to another and their confined environment, can potentially allow infectious diseases to spread amongst passengers and crew. It can also allow those diseases to be spread in the ports and countries visited by cruise ships, as well as the home communities of disembarking passengers and crew members (Iteraera 2009).

Infections and outbreaks commonly recorded to occur on cruise ships include Norovirus, *Legionella* spp., *Salmonella* spp., *Escherichia coli*, *Vibrio* spp., and influenza A and B virus.

4.1 Listed Human Diseases

A Listed Human Disease is a human disease that is communicable and may cause significant harm to human health. The World Health Organization lists 20 human diseases under '[Pandemic and endemic diseases](#)' on its website.

The *Biosecurity (Listed Human Diseases) Determination 2016*, made under section 42(1) of the Act, originally listed 7 Listed Human Diseases (the top 7 in [Table 3](#)).

TABLE 3 Listed Human Diseases

1	Human influenza with pandemic potential
2	Middle East Respiratory Syndrome (MERS)
3	Plague
4	Severe Acute Respiratory Syndrome (SARS)
5	Smallpox
6	Viral haemorrhagic fevers
7	Yellow fever
8	Human coronavirus with pandemic potential

By declaring a disease a Listed Human Disease in the *Biosecurity (Listed Human Diseases) Determination 2016*, a range of biosecurity powers and measures become available under the *Biosecurity Act 2015* to manage serious health risks at first points of entry. These biosecurity powers and measures include:

- information gathering
- screening activities
- entry and exit requirements determined by the Minister for Health
- pratique requirements
- preventive biosecurity measures specified by the Minister for Health to assist with managing the risk of a Listed Human Disease entering, emerging and establishing in Australia
- human health response zones
- Human Biosecurity Control Orders, which allow for management of noncompliant individuals with a suspected or confirmed Listed Human Disease through isolation of suspected cases and treatment of individuals where a Listed Human Disease is confirmed
- Human Biosecurity Emergency Power, which enables the Minister for Health to determine requirements or give directions that will assist in managing the spread of a Listed Human Disease.

On 21 January 2020, through the *Biosecurity (Listed Human Diseases) Amendment Determination 2020*, the Director of Human Biosecurity added 'Human coronavirus with pandemic potential' to the list ([Table 3](#)). Before making this determination, the Director of Human Biosecurity consulted with the chief health officers for each state and territory and the Director of Biosecurity.

4.2 SARS-CoV-2

COVID-19 is the name given (on 11 February 2020) to the disease caused by the novel coronavirus 'severe acute respiratory syndrome coronavirus 2' (SARS-CoV-2), which originated in China's Hubei province in December 2019. It stands for 'coronavirus disease 2019' (CO-corona; VI-virus; D-disease 2019) (Parliament of Australia 2020a).

COVID-19 causes respiratory illness. Typical symptoms are those associated with an acute respiratory illness – a cough, a sore throat and difficulty breathing. COVID-19 spreads from viral particles, and symptoms can appear as long as 14 days after exposure. Humans have no natural immunity to it, and when it originated there was no pre-existing vaccine or cure.

As of 29 April 2021, the COVID-19 pandemic had spread to 216 countries and territories (National Geographic 2021) causing more than 3.1 million deaths (WHO 2021). COVID-19 has significantly disrupted many aspects of everyday lives – travel, work, sporting events, concerts and festivals, education and schools, financial markets and economies. While worldwide public health emergencies have been declared and mitigated in the past – for example, the swine flu pandemic in 2009 – the scale of socio-economic disruption caused by the unfolding COVID-19 pandemic is unparalleled in recent history (Chang et al. 2020).

Australia began to experience most of these consequences in early 2020. The number of confirmed COVID-19 cases exceeded 1,000 by 21 March 2020 and doubled every 3 days, and there was a cumulative incidence growth rate averaging 0.20 per day during the first 3 weeks of March 2020. In response, Australian governments introduced strict intervention measures to reverse these trends and to curb growth in number of cases before it got to levels seen in other COVID-19-affected nations (Chang et al. 2020).

Since late February 2020, Australia has recorded numerous instances of COVID-19 positive personnel onboard commercial vessels that have entered Australian waters ([Table 4](#)).

TABLE 4 Confirmed cases of COVID-19 positive personnel onboard commercial maritime vessels, February–October 2020

Date of arrival	Vessel name	Vessel type	Arrival port	COVID-19 positive personnel (No.)
29 February	Artania	Cruise	Darwin Port (NT) ^a	81 crew and passengers
19 March	Ruby Princess	Cruise	Port of Sydney, Sydney (NSW)	663 passengers and 191 crew
20 May	Al Kuwait	Livestock	Fremantle Port (WA)	20 crew
23 July	Hokkaido	Bulk	Port of Brisbane (QLD)	1 crew
7 August	Globe Electra	Bulk	Port of Bowen (QLD)	3 crew
18 August	Dhun	Bulk	Port of Hay Point (QLD)	2 crew
18 September	North Fortune	Bulk	Port of Weipa (QLD)	2 crew
21 September	Patricia Oldendorff	Bulk	Port Hedland (WA)	17 crew
1 October	Seamax Stratford	Container	Port of Brisbane (QLD)	4 crew
8 October	Anacapa Light	Bulk	Port of Newcastle (NSW)	1 crew
11 October	Vega Dream	Bulk	Port Hedland (WA)	7 crew
14 October	Al Messilah	Livestock	Fremantle Port (WA)	26 crew
17 October	Key Integrity	Bulk	Geraldton Port (WA)	2 crew

^a Vessel first arrived at Darwin Port, but crew and passengers did not test positive to COVID-19 until after it docked at Fremantle Port.

Source: Department of Agriculture, Water and the Environment

4.3 The *Ruby Princess* cruise ship incident

On 8 March 2020, the *Ruby Princess* cruise ship departed from the Port of Sydney's Overseas Passenger Terminal for a 2-week round-trip voyage to New Zealand. The vessel had arrived in Sydney earlier the same day, having just undertaken a similar voyage.

On 15 March 2020, the Australian Government announced that all international passengers arriving in Australia would be required to undertake 14 days self-isolation upon arrival. Due to Australia's cruise vessel ban, the vessel's master made an announcement that the *Ruby Princess* would be returning to Sydney and the voyage would be cut short. Napier was the last New Zealand port visited on the voyage.

Between 16 and 18 March, during the *Ruby Princess'* return voyage to the Port of Sydney, the vessel master updated the vessel's human health status on 3 occasions ([Table 5](#)).

The first update on 16 March reported 53 persons had either become ill or showed signs of illness, with 10 additional passengers having recorded a body temperature of more than 38 degrees Celsius. By the morning of 18 March, the number of ill passengers had increased to 128, with 24 additional passengers recording body temperature of more than 38 degrees Celsius.

TABLE 5 Changes to human health status onboard the *Ruby Princess* cruise ship, 16–18 March 2020

Report date	Report time	Human health status (No. of persons)	
		Either ill or showed signs of illness in the previous 14 days	Body temperature over 38 degrees Celsius
16 March	3:01 pm	53	10
18 March	8:54 am	110	17
	7:21 pm	128	24

Source: Department of Agriculture, Water and the Environment

The vessel agent had booked the vessel's Routine Vessel Inspection for between 6:00 am and 7:00 am on 19 March 2020:

- A biosecurity officer boarded the ship around 6:00 am.
- At 7:37 am the biosecurity officer updated the Maritime Arrivals Reporting System (MARS) by entering Routine Vessel Inspection findings. An updated Biosecurity Status Document generated in MARS had an 'amber traffic light' change to 'green' after the vessel's favourable outcomes for pratique and ship sanitation inspections.
- At 7:39 am an updated Biosecurity Status Document was sent to the operator of the vessel communicating the granting of pratique.

The New South Wales Special Commission of Inquiry into the *Ruby Princess* (Walker 2020) noted that passengers were advised to self-isolate for 14 days from the date of their arrival in Sydney:

- 13.4 The Commonwealth stated that the ABF's [Australian Border Force] advice for cruise ship passengers was prepared in consultation with Department of Agriculture, Water and the Environment [Agriculture] and drafted on the basis of advice from the Commonwealth Department of Health [Health] as at 17 March 2020 [Exhibit 119]. If that is accepted, it is difficult to comprehend how any inconsistency arose between the directions given to passengers about the commencement of their mandatory self-isolation periods. This is particularly so in circumstances where the Commonwealth Department of Health [Health] fact sheet for international travellers had been published on 15 March 2020 and clearly directed that 'all travellers must isolate for a period of 14 days after they have entered Australia' [Exhibit 114].

This requirement was communicated in a factsheet for international travellers developed by Health, which Agriculture and Australian Border Force officers provided to passengers soon after they had disembarked the vessel. Further, Walker (2020) reported:

- pratique was formally (in writing) granted at 7:37 am when a routine vessel inspection form was submitted in Maritime Arrivals Reporting System (MARS). This was formally communicated to the operator of the *Ruby Princess* at 7:39 am by the issuance of a Biosecurity Status Document (No. 5)
- disembarkation commenced at 7:14 am and concluded at 10:44 am (it is unclear who granted permission for passengers to disembark before pratique was formally granted by a biosecurity officer – see Walker 2020, para 11.39)
- of the 120 passengers and crew listed on the vessel's final Acute Respiratory Diseases log, 21 (17.5%) contracted COVID-19
- of the 1,682 passengers from Australia, 663 (39.4%) contracted COVID-19
- of the 955 passengers from New South Wales, 367 (38.4%) contracted COVID-19
- of the 1,148 crew, 191 (16.6%) contracted COVID-19
- 20 deaths were reported in Australia and a further 8 (passengers who flew out of Sydney) were reported in the United States.

4.4 Measures to prevent incursion of COVID-19 into Australia

As noted above, on 21 January 2020, pursuant to section 42 of the Act, the Commonwealth Chief Medical Officer, in his capacity as Director of Human Biosecurity, made a written determination that 'human coronavirus with pandemic potential' (encompassing COVID-19) should be included as a 'Listed Human Disease' ([Table 3](#)). This determination authorised the Minister for Health to impose enhanced border screening measures for all travellers entering and departing Australia.

On 25 January 2020 the Minister for Health announced the first confirmed case of COVID-19 in Australia (Hunt 2020a).

On 30 January the World Health Organization declared the global outbreak to be a Public Health Emergency of International Concern (WHO 2020a).

In anticipation of the likelihood that the world would 'soon enter a pandemic phase', on [27 February 2020](#) the Australian Prime Minister activated the Australian Health Sector Emergency Response Plan for Novel Coronavirus (Department of Health 2020a).

On 11 March 2020 the World Health Organization declared COVID-19 a global pandemic (WHO 2020b).

On 13 March 2020 the Prime Minister announced that a new body called the National Cabinet had been established to ensure a 'coordinated response across the country to the many issues that relate to the management of the coronavirus' (Parliament of Australia 2020a). The National Cabinet, advised by the Australian Health Protection Principal Committee, comprises the Prime Minister and the leaders of the states/territories. It first met on 15 March 2020.

On 15 March 2020 the Prime Minister announced (Morrison 2020) several measures, including:

- introducing enhanced screening of all people (whether they be citizens, residents or visitors) to identify anyone arriving sick or with symptoms of COVID-19; and a requirement for all travellers to self-isolate for 14 days upon arrival in Australia (commenced on 28 March 2020)
- banning cruise ships from foreign ports (including round trip international cruises originating in Australia that had not already been designated for return) from arriving at Australian ports for an initial 30 days, effective as at 11:59 pm on 15 March 2020
- introducing physical distancing measures and limits for public gatherings
- activating the second stage of the Australian Health Sector Emergency Response Plan for Novel Coronavirus (Department of Health 2020a), which enabled governments to undertake targeted action to the COVID-19 outbreak.

On 18 March 2020, in response to the COVID-19 outbreak in Australia, the [Governor-General declared the existence of a human biosecurity emergency](#).

The declaration gave the Minister for Health expansive powers to issue directions and set requirements in order to combat the outbreak. This was the first time these powers under the Biosecurity Act had been used (Parliament of Australia 2020b).

On 23 March 2020, as part of the government's response to the outbreak of COVID-19, the parliament enacted the *Coronavirus Economic Response Package Omnibus Act 2020* (Omnibus Act) (Parliament of Australia 2020c). The Omnibus Act allowed the Director of Human Biosecurity to delegate some of his functions and powers to do with human biosecurity control orders. The relevant amendments commenced on 25 March 2020.

On 25 March 2020 the Minister for Health, exercising his human biosecurity emergency powers under the [Biosecurity \(Human Biosecurity Emergency\) \(Human Coronavirus with Pandemic Potential\) \(Overseas Travel Ban Emergency Requirements\) Determination 2020](#), prohibited Australian citizens and permanent residents from leaving Australian territory by air or sea. This travel ban has since been updated a few times.

Between May 2020 and March 2021, the Minister for Health extended the human biosecurity emergency period several times under the *Biosecurity Act 2015* based on the Australian Health Protection Principal Committee's specialist medical and epidemiological advice. The current biosecurity emergency period will remain in force until 17 June 2021 (Hunt 2020b).

Since the *Ruby Princess* cruise ship incident, Australia's federal and state and territory governments have implemented strong measures to prevent the spread of COVID-19 – for example, strict border measures have been enforced and physical distancing, good hygiene and mask wearing have been encouraged. Sixty-two cases of community transmission in Australia were linked to the *Ruby Princess* cruise ship incident (Smith & Ward 2020).

Chapter 5

Regulatory controls and governance of human biosecurity in Australia

5.1 International Health Regulations

The International Health Regulations (2005) (WHO 2016) are the key binding global legal instrument for preventing and responding to acute public health risks that have the potential to cross borders and threaten people worldwide. The regulations were adopted by the World Health Assembly in 2005 and they have been in force for 196 countries since June 2007.

The regulations establish a minimum standard for public health prevention, preparedness and response. They include activities and functions such as ship sanitation and points of entry (pratique). More information about the regulations is available on the WHO [website](#).

The World Health Organization has published 7 guidelines for preventing and controlling public health threats onboard ships. For example, the *WHO guide to ship sanitation* provides a framework for policy development and local decision-making (Mouchtouri et al. 2010).

Australia has incorporated key International Health Regulations standards into domestic law, including at the national level through the Act and the *National Health Security Act 2007*.

5.2 National regulatory framework

Biosecurity Act 2015 (Cth)

Activities to manage human health threats at Australia's international borders under the Act were previously performed under the *Quarantine Act 1908*, which was written well before international trade and travel became as common and rapid as it is today. The Quarantine Act was considered cumbersome and inflexible and did not effectively cover human health rights and matters relating to international travel.

The Biosecurity Act commenced on 16 June 2016. It is jointly administered by Agriculture and Health. The Act provides a range of powers specifically for the protection of human health, including entry and exit screening, management of ill travellers, vector monitoring and control, and flexible emergency and preventative powers. It also implements Australia's International Health Regulations (2005) obligations in relation to ship sanitation, points of entry, Public Health Emergencies of International Concern (PHEIC), and yellow fever vaccination (Department of Health 2017).

Director of Human Biosecurity (Commonwealth Chief Medical Officer)

Australia's Chief Medical Officer is automatically authorised as the Director of Human Biosecurity under the Act and oversees the Office of Health Protection. The Chief Medical Officer provides policy direction and guidance to Agriculture, and state and territory health department communicable disease representatives (Chief Human Biosecurity Officers) to support the implementation of human biosecurity powers.

Section 42(1) of the Act provides for the Director of Human Biosecurity to determine, in writing, a human disease to be a Listed Human Disease if the Director of Human Biosecurity considers that the disease may be communicable and may cause significant harm to human health. On 21 January 2020, the Director of Human Biosecurity, in consultation with Chief Human Biosecurity Officers for each state and territory and the Director of Biosecurity and through the *Biosecurity (Listed Human Diseases) Amendment Determination 2020*, added 'Human coronavirus with pandemic potential' as a Listed Human Disease ([Table 3](#)).

Australian Health Protection Principal Committee

The Australian Health Protection Principal Committee is the key decision-making committee for health emergencies. It comprises all state and territory Chief Health Officers as well as representatives from other key agencies, including the Department of Defence and Emergency Management Australia. It is chaired by the Australian Chief Medical Officer.

The Australian Health Protection Principal Committee's roles include:

- advising the Australian Health Ministers' Advisory Council on Australia's preparedness for health emergencies and approaches to address any deficits
- coordinating the national health response to significant incidents (Department of Health 2021a).

The Australian Health Protection Principal Committee works with states and territories to develop and adopt national health protection policies, guidelines and standards and ensure alignment of plans.

5.3 Governance of delivery of human biosecurity

At the preventative biosecurity level, responsibility for managing Australia's exposure to infectious diseases and the risk of epidemic or pandemic disease outbreaks is shared mainly amongst 3 agencies, in differing capacities:

1. Health
2. Agriculture
3. Australian Border Force.

Department of Health

Health develops policies for exercising human biosecurity powers pre-border, at the border and post-border, including risk prevention and mitigation activities addressing domestic community transmission of Listed Human Diseases. It also coordinates communicable disease control activities and health emergency responses across the country.

Under Chapter 2 (Division 2 of Part 2) of the *Biosecurity Act 2015*, the Minister for Health can prescribe requirements in relation to individuals and operators of certain vessels or aircraft that enter or leave Australian territory.

Under the Act, the Minister for Health has extensive powers to issue directions and make determinations to manage human biosecurity risk associated with a Listed Human Disease during a human biosecurity emergency. For example, the Minister can issue directions to any person regarding entry and departure from geographical locations as well as making determinations in relation to:

- persons, goods or conveyances when entering and leaving specified places
- movement of persons, goods or conveyances in or between specified places
- evacuation of specified places.

These powers cannot be delegated and must be exercised by the Minister personally. In the management of the biosecurity emergency these powers have been used to place:

- limitations on the movement of cruise vessels
- limitations on outbound international travel
- restrictions on the operation of retail stores at international airports.

These restrictions are reviewed regularly and can be amended or removed at any time based on the expert medical advice.

Health administers several legislative instruments made under the Act in order to minimise the risk that infectious diseases caused by viruses, bacteria or other microorganisms may enter, emerge, establish or spread in Australia, potentially harming the Australian population, our food security and our economy.

Chief Human Biosecurity Officer

States and territories must appoint a senior public health medical officer to perform the duties of the Chief Human Biosecurity Officer for their jurisdiction. Chief Human Biosecurity Officers are appointed under the Act to provide advice and national leadership for actions about human biosecurity activities at the border. They manage all human biosecurity matters in their jurisdiction and provide directions to Human Biosecurity Officers in undertaking human biosecurity activities across jurisdiction, including at first points of entry. Chief Human Biosecurity Officers' activities are subject to the direction of the Director of Human Biosecurity.

Human Biosecurity Officers

Human Biosecurity Officers are qualified medical practitioners who work closely with biosecurity officers in delivering human biosecurity services at first points of entry.

The Director of Human Biosecurity can authorise any of the following to be a Human Biosecurity Officer if they have the appropriate clinical expertise:

- an officer or employee of Health
- an officer or employee of the state or territory body responsible for the administration of health services in that jurisdiction
- a member of the Australian Defence Force if satisfied that they have appropriate clinical expertise (Parliament of Australia 2020b).

Schedule 5 to the Omnibus Act inserted section 544A into the Act to enable the Director of Human Biosecurity (who is also the Commonwealth Chief Medical Officer) to delegate their functions and powers in relation to Human Biosecurity Control Orders to a Senior Executive Service employee within Health, who is a human biosecurity officer.

Department of Agriculture, Water and the Environment

Agriculture is responsible for Australia's preventative biosecurity operations. This encompasses a variety of functions and involves the exercise of powers at the border and post-border. These powers, administered under the Act, authorise the Director of Biosecurity (also the Secretary of Agriculture) to exercise specified powers relating to biosecurity measures at the border. Agriculture also administers several legislative instruments made under the Act.

Agriculture has operational responsibility for managing human biosecurity risks under the Act through collaboration with Health. This is achieved through formal arrangements such as the MoU, which sets out the representation, working relationship, expectations, responsibilities and duties of each agency at strategic, policy and operational levels (see section 5.4).

Biosecurity officers

Biosecurity officers (also called 'vessel inspectors' in relation to specific activities undertaken with regard to commercial vessels) are part of Agriculture's Biosecurity Inspections Group. They are trained to undertake a range of inspections onboard vessels to assess and manage biosecurity risks associated with imported cargo and incoming foreign conveyances. Although they have limited powers to assist in the management of a Listed Human Disease, vessel inspectors play an important role in undertaking frontline assessment of human biosecurity risks, as they conduct basic screening activities.

Biosecurity officers are not medically trained and rely on the advice of Human Biosecurity Officers to inform the exercising of their powers relevant to human biosecurity under the Act.

Agriculture's Biosecurity Operations Division collaborates with Health's Office of Health Protection and Response in the management of preventative human biosecurity in Australia ([Figure 1](#)).

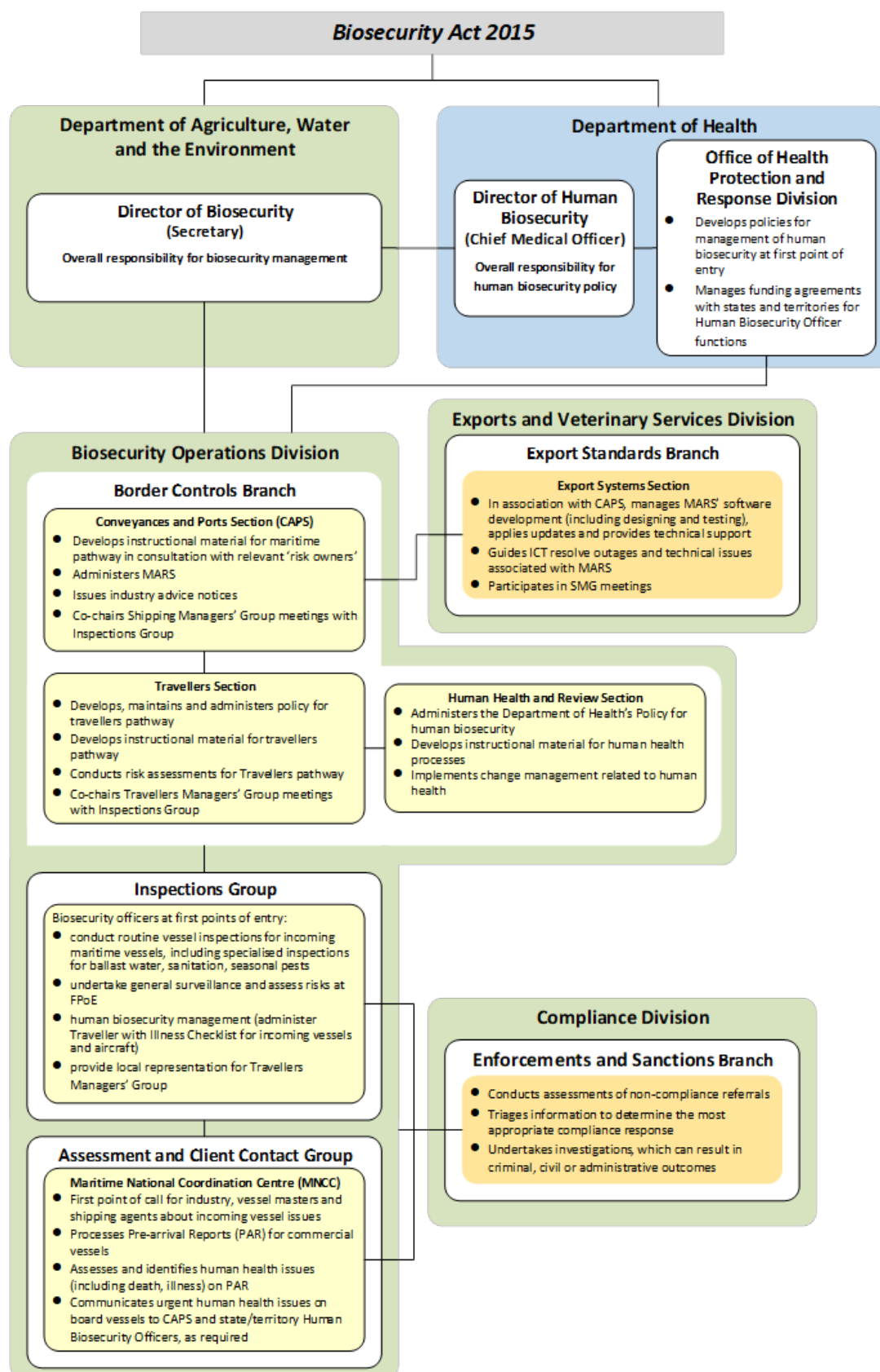
Governance of at-border delivery of human biosecurity functions

The 3 streams (branches) within the Biosecurity Operations Division collaboratively administer, operationalise and manage delivery of Health's human health policies at first points of entry across Australia ([Figure 1](#)):

1. *Border Controls Branch* – the branch's responsibilities and activities include:
 - ▶ administering Health's human health policy by developing human health processes and instructional material in consultation with 'risk owners' to address human biosecurity risks
 - ▶ administering the Maritime Arrivals Reporting System (MARS) (see Chapter 13)
 - ▶ applying improvements (designing, testing and software development) to MARS and resolving technical issues in collaboration with Export Systems Section within Agriculture's Exports and Veterinary Services Division
 - ▶ issuing industry advice notices
 - ▶ participating in border assessments and appraisals designed to maintain the ongoing integrity of maritime (vessels) and travellers pathways.
2. *Inspections Group* – biosecurity officers (who may also be referred informally as 'vessel inspectors') are part of Inspections Group. They undertake verification, inspection and clearance of commercial and non-commercial vessels in line with directions provided by the Maritime National Coordination Centre assessing officers.
3. *Assessments and Client Contact Group* – the group manages the Maritime National Coordination Centre (see section 6.5), which provides technical advice on human biosecurity aspects to relevant biosecurity officers, vessel masters and agents to ensure consistent inspection and clearance of commercial vessels and compliance with relevant biosecurity legislation.

The Biosecurity Operations Division also works closely with the Enforcement and Sanctions Branch within Agriculture's Compliance Division in managing noncompliance referrals and undertaking investigations across the whole of Agriculture's portfolio.

FIGURE 1 Agriculture – national and regional roles and responsibilities for managing human biosecurity



Australian Border Force

Australian Border Force protects Australia's border and enables legitimate travel and trade. In the process, it undertakes operations to protect Australia's national interests against the following maritime security threats:

- illegal exploitation of natural resources
- illegal activity in protected areas
- irregular maritime arrivals
- prohibited imports/exports
- maritime terrorism
- piracy, robbery and violence at sea
- compromise to biosecurity
- marine pollution.

When working with travellers who arrive in and depart from Australia, Australian Border Force officers:

- check the identities of all travellers to ensure they have relevant travel documentation in place
- examine people, baggage and conveyances (aircraft and ships) for drugs, tobacco, prohibited goods and images
- seize illegal goods and regulated items (for example, certain types of wildlife products)
- detect undeclared currency
- collect duty and tax on imported goods, such as alcohol and cigarettes
- process Goods and Services Tax refund claims for travellers.

Agriculture works closely with Australian Border Force at the border, with each agency referring goods or people of interest to each other (as appropriate). They take a collaborative approach to human biosecurity, such as referrals of sick passengers identified by Australian Border Force or travellers from high-risk countries, being referred for health screening.

Maritime Traveller Processing Committee

Cruise ships are subject to customs, immigration and biosecurity controls when entering and/or departing from Australia. They must have permission to enter an Australian Non-Appointed first port of entry and/or to enter subsequent ports of call.

Australian Border Force's Maritime Traveller Processing Committee coordinates the exercise of various statutory controls and responsibilities carried out at seaports (ABF 2019). One of the committee's functions is to review approval requests from the cruise ship industry to arrive or depart from minor, restricted and non-designated seaports where there is no permanent Australian Border Force or Agriculture presence. These include the ports of Sydney, Melbourne, Brisbane (excluding Tangalooma), Cairns (excluding Yorkeys Knob), Port Adelaide, Darwin, Fremantle and Hobart.

Cruise ship operators or their agents seeking approval to enter any of these ports must submit a written application to the Maritime Traveller Processing Committee at least 30 days before arrival and no more than 2 years in advance. The application form must contain the full itinerary, vessel details and port intentions (for example, passenger/crew exchange, shore excursions and sail by/anchor only).

The Maritime Traveller Processing Committee liaises with relevant border agencies in relation to resource implications and approval, as well as to ascertain the availability and adequacy of existing facilities for processing travellers.

5.4 Health–Agriculture Memorandum of Understanding (2017)

Health and Agriculture collaborate to manage human biosecurity risks by developing appropriate biosecurity governance arrangements, policies and procedures, and training materials for the delivery of regulatory activities at first points of entry. Agriculture provides operational support for biosecurity risk management programs agreed with cruise and shipping industry to ensure they understand and comply with Australia's human biosecurity requirements. Health ensures effective management of biosecurity risks associated with cruise vessel movements into Australian territory and between external territories and the mainland.

In addition, Agriculture also assists Health in the implementation of International Health Regulations and Chapter 2 of the Act as they relate to Listed Human Diseases at the border.

In 2005 Health and Agriculture addressed shortcomings in the *Quarantine Act 1908* by agreeing on quarantine obligations and requirements in a very prescriptive MoU, *An international disease outbreak (in one or more countries) requiring implementation of additional border measures to manage the potential human biosecurity risk*. The MoU, formalised in 2007, defined the 2 agencies' roles and responsibilities, had 2 annexures and was revised once before the Act superseded the *Quarantine Act 1908* in June 2016. The 2 annexures contained terms of reference for the 2 executive consultative committees:

1. Human Quarantine Executive Forum
2. Human Quarantine Program Managers Forum.

The MoU is reviewed every 3 years or as required. The current MoU was last updated in October 2017. It covers responsibilities such as development of policies by Health and operational responsibilities of Agriculture at first points of entry in Australia. Each party is responsible for regulating the entry of travellers and goods and each is required to consult the other on changes to human biosecurity policy and/or operations, resourcing and legislative authority.

Roles and responsibilities

The Health–Agriculture MoU specifies each agency’s representative and a single point of contact for each agency. The Assistant Secretary of the Border Controls Branch within Agriculture’s Biosecurity Operations Division is the main point of contact for Health for discussions about biosecurity policy, priorities, implementation and issues resolution.

Schedule 3 of the MoU (Human Biosecurity Services) describes the roles and responsibilities of Health and Agriculture in developing and strengthening practical and flexible responses to human biosecurity issues.

Health’s role is to:

- coordinate national surveillance and national response activities to outbreaks of listed human diseases
- undertake risk assessment; develop and maintain human biosecurity policies; and provide written policy advice to Agriculture to effectively manage human biosecurity risks in the Vessels Pathway
- provide technical medical advice by facilitating the availability of Human Biosecurity Officers to biosecurity officers at first points of entry
- provide emergency response by supporting delivery of human biosecurity emergency response services, as needed
- coordinate, with Agriculture and state and territory health departments, the management of suspected noncompliance with human biosecurity requirements at the first points of entry
- support human health aspects of emerging and zoonotic disease management.

Agriculture’s role is to:

- seek advice from Health on human biosecurity risks
- develop and maintain policies and instructional material consistent with Health policy and advice for the delivery of human biosecurity activities
- implement operational arrangements to deliver Health policy
- identify and report noncompliance with human biosecurity requirements at first points of entry, and jointly manage this with Health and state and territory health departments
- deliver human biosecurity emergency response services at the border (first points of entry) as needed.

Schedule 3 of Health–Agriculture Memorandum of Understanding

Schedule 3 of the MoU between Health and Agriculture has a number of ‘Articles’ that clearly delineate the roles and responsibilities of each agency with respect to their obligations at the border. The 3 ‘Articles’ directly relevant to the matters highlighted in 1 of 5 recommendations in Walker (2020) are:

1. Article III – Pre-arrival reporting, pratique and assessment of ill travellers
2. Article VI – Training
3. Article VII – Compliance and enforcement.

Article III – Pre-arrival reporting, pratique and assessment of ill travellers

Article III lists several objectives, 3 of which are pertinent to the delivery of agreed border activities that would have contributed to mitigating the risks associated with the *Ruby Princess* cruise ship incident. The objectives are:

1. Information on the state of health onboard incoming conveyances is available for risk assessment and response.
2. Disembarkation from incoming conveyances where health risks are identified is managed to minimise further risk.
3. Assessment of ill travellers identified through pre-arrival reporting, self-declaration at the primary line or referral from another government agency or a National Focal Point.

These objectives are to be jointly met by both Health and Agriculture:

- Health is to:
 - ▶ maintain and regularly review policies related to pratique
 - ▶ develop business policies for pre-arrival reporting of ill travellers, including signs and symptoms of Listed Human Diseases.
- Agriculture is to:
 - ▶ record human biosecurity compliance measures through pre-arrival reporting and provides information to Health, when needed
 - ▶ provide information to operators about pre-arrival reporting obligations
 - ▶ grant pratique to incoming conveyances in a timely manner, with the least disruption to passengers/services, once the human biosecurity risk is addressed
 - ▶ ensure biosecurity officer work instructions are consistent with Health's policies related to pratique.

Article VI: Training

The objective of Article VI is to ensure *an appropriately trained and skilled workforce is available to provide human biosecurity services at the border*.

Health is required to provide clear instructions to Human Biosecurity Officers regarding their responsibilities and powers under the Act, including:

- the operational processes for the involvement of Human Biosecurity Officers
- the prompt response times required to manage ill travellers at the border
- the issuing of human biosecurity control orders
- permission to bring into Australia deceased individuals and human remains.

Agriculture is required to ensure biosecurity officers deployed at first points of entry have completed all relevant training and have appropriate skills. For this, it develops and implements a training program on public health aspects, with input from Health as appropriate.

Article VII: Compliance and enforcement

The objective of Article VII is to ensure that *individuals are compliant with requirements under Chapter 2 of the Biosecurity Act 2015 (Managing biosecurity risks: human health)*.

Consistent with Article VII, Agriculture:

- reports to Health any suspected contraventions of the provisions dealing with human health in the Act
- undertakes compliance and enforcement activity consistent with policy and procedures, with guidance from Health
- ensures biosecurity officers have completed all relevant training and have appropriate skills.

Health consents to the most appropriate course of compliance action to be taken to manage all contraventions of human biosecurity requirements. Health also provides evidence to support Agriculture's enforcement activity as appropriate; and covers costs associated with compliance activities.

Inspector-General's review of Schedule 3

The Inspector-General's close examination Schedule 3 of the MoU between Health and Agriculture highlighted several weaknesses. A summary of the Inspector-General's assessment, in the context of the *Ruby Princess* cruise ship incident, is presented in [Table 6](#).

TABLE 6 Schedule 3 of Health–Agriculture Memorandum of Understanding – evidence of weaknesses in managing human biosecurity

Agreed tasks	Roles and responsibilities		Evidence illustrating relevant weaknesses
	Health	Agriculture	
Policy development	Develops policies for human biosecurity management in Australia, including: <ul style="list-style-type: none"> • pre-arrival reporting of international travellers showing signs and symptoms of Listed Human Diseases (LHDs) • Traveller with Illness Checklist • pratique 	Operationalises Health's human biosecurity policies to assist the Director of Human biosecurity in the management of human biosecurity risks from entering Australia	The Commonwealth's Voluntary Statement (Exhibit 119, AGS 2020) to the Special Commission of Inquiry into the <i>Ruby Princess</i> (Walker 2020) acknowledged that aspects of the human health inspection, including administration of the Traveller with Illness Checklist (TIC), were not undertaken
Human health risk assessment	Facilitates and coordinates availability of Chief Human Biosecurity Officers (CHBOs) and Human Biosecurity Officers (HBOs) for the provision of technical medical advice at first points of entry (FPoE)	Biosecurity officers administer the TIC onboard conveyances (vessels and aircraft) at FPoE to assess human health risks of travellers, who may be carriers of an LHD	4.47, 4.49 to 4.54, 11.22, 11.23, 11.29 in Report of the Special Commission of Inquiry into the <i>Ruby Princess</i> (Walker 2020)

TABLE 6 Schedule 3 of Health–Agriculture Memorandum of Understanding – evidence of weaknesses in managing human biosecurity

Agreed tasks	Roles and responsibilities		Evidence illustrating relevant weaknesses
	Health	Agriculture	
Staff training	Trains its officers to manage human biosecurity from entering Australia	Trains its officers to manage human biosecurity at FPoE	<p>11.45, 11.62, 11.63, 11.64 11.65 in Report of the Special Commission of Inquiry into the <i>Ruby Princess</i> (Walker 2020)</p> <p>Agriculture’s training records do not support that biosecurity officers who boarded the <i>Ruby Princess</i> on 19 March 2020 for the Routine Vessel Inspection (RVI) were trained in performing a human biosecurity inspection or the RVI.</p> <p>Exhibit 119 (AGS 2020) noted that the Commonwealth was reviewing its policies, training and supervision arrangements at the Port of Sydney. In this context, Agriculture has already commenced a process of seeking to address these matters as follows:</p> <ul style="list-style-type: none"> • considering changes to instructional material, which may include the creation of a specific work instruction for the Human Health Inspection, as a distinct aspect of the Routine Vessel Inspection process, which accounts for local arrangements • administering training to biosecurity officers, including at the Port of Sydney, in relation to the Human Health Inspection and pratique, some of which has already been delivered, with the remainder intended to be delivered prior to the recommencement of cruise operations – this training will also be offered to CHBOs and HBOs • considering what changes can be made to the Maritime Arrivals Reporting System (MARS) and inspection e-forms to advise biosecurity officers: <ul style="list-style-type: none"> – when pratique is required to be granted, and – when specific advice should be sought from a HBO. <p>Agriculture advised the Inspector-General that it had accredited 138 biosecurity officers for vessel inspections across Australian ports. However, the list of staff trained in conducting RVI shows 52 names, with 14 ‘deactivated’</p>

TABLE 6 Schedule 3 of Health–Agriculture Memorandum of Understanding – evidence of weaknesses in managing human biosecurity

Agreed tasks	Roles and responsibilities		Evidence illustrating relevant weaknesses
	Health	Agriculture	
Pratique	<p>Develops and maintains currency of policies related to pratique</p> <p>When sought, provides advice to biosecurity officers about human health issues identified onboard vessels at FPoE</p>	<p>Assesses Pre-arrival Reports and issues of pratique for vessels that meet all requirements</p>	<p>Failing to communicate intention to change operational procedure regarding the TIC may have had implications for pratique being granted:</p> <ul style="list-style-type: none"> 11.17, 11.20, 11.21 in Report of the Special Commission of Inquiry into the <i>Ruby Princess</i> (Walker 2020) <p>Pratique was not granted orally onboard the <i>Ruby Princess</i> by a biosecurity officer. Pratique was granted when it was input to MARS at 7:37 am on 19 March 2020 and communicated to the vessel via the updated BSD at 7:39 am</p> <p>Tables 9, 10 and 11 in Chapter 8 of this review report provide examples where pratique was withdrawn, issued ‘conditionally’, and also instances where vessels have been permitted to load or unload cargo or stores in potential contravention of the Act</p>
Compliance and enforcement	<p>In consultation with Agriculture, decides on the most appropriate form of compliance action to manage suspected contraventions of the Act</p> <p>Provides evidence to support Agriculture’s enforcement activity</p> <p>Covers costs of civil compliance activities</p>	<p>Reports any suspected contraventions to Health</p> <p>Undertakes compliance and enforcement activities consistent with policy and procedures, in consultation with Health</p> <p>Trains biosecurity officers to ensure that they have appropriate skills to identify and manage noncompliances</p>	<p>Biosecurity officers not trained in the identification and management of noncompliance with human biosecurity measures</p> <p>Instructional material does not provide biosecurity officers with the tools to manage noncompliance with human biosecurity measures (for example, the detection and management of noncompliance in relation to pratique)</p>

Roles and responsibilities

Under the terms of the MoU, each agency's obligations, including specific roles and responsibilities in the management of human biosecurity at the first points of entry, are outlined and agreed upon. However, in discussions with biosecurity officers in the regions, the Inspector-General was given several examples of the lack of clarity in those roles and responsibilities (discussed in Chapter 8).

Human health risk assessment

Health has the primary responsibility for human health policy development, including the risk assessment of incoming travellers – in particular, those suspected of being infected with a Listed Human Disease. The Director of Human Biosecurity has devolved this responsibility to jurisdictional health agencies via the Standard Funding Agreement Schedule, *Agreement with the states and territories for the provision of human quarantine services* (an example is provided in [Exhibit 31](#) – submitted to the Special Commission of Inquiry into the *Ruby Princess*).

Risk assessments (and analyses) inform action to be taken for the management of risks that exceed 'risk appetite'. In the case of the *Ruby Princess*, the health status of incoming passengers, available in the form of vessel's Pre-arrival Report, was used to complete a formal risk assessment (Exhibit 119, AGS 2020). The risk assessment form for the *Ruby Princess* (completed on 18 March 2020) noted that 104 passengers presented to the ship's clinic with acute respiratory illness and 36 others presented with influenza-like illness (see 'Appendix I Risk Assessment Form' in Walker 2020). The NSW Health expert panel rated the *Ruby Princess* as 'low risk':

- 11.42 The Commonwealth accepts that the Human Health Inspection carried out by DAWE's [Agriculture's] Biosecurity Officers plays an important role in the verification of information reported by a cruise ship to MARS and assessing any human health risk prior to granting pratique.

Interestingly, New Zealand refused to allow the vessel to dock at any of its ports. This raises questions about the level of intelligence that Australian authorities obtained from New Zealand counterparts when preparing to appropriately manage plausible human biosecurity risks for the *Ruby Princess*' arrival in Sydney.

Staff training

Under the MoU, both agencies have obligations to train their officers in human biosecurity. However, following the *Ruby Princess* incident it must be questioned whether the level of training provided to biosecurity officers who attended the vessel was adequate. The Special Commission of Inquiry into the *Ruby Princess* (Walker 2020) noted that Agriculture's capacity to respond had several weaknesses stemming from localised practices that prevailed in Sydney:

The Commonwealth has acknowledged that its treatment of the *Ruby Princess* has highlighted that Biosecurity Officers at the Port of Sydney were not following DAWE [Agriculture] policies and that practices had emerged in Sydney which were contrary to those policies.

Clearly, this raises several questions about training levels and support available to staff in taking appropriate decisions, which in turn may have impacted their competency:

- inadequate understanding of other agency's roles
- localised work practices
- inadequate communication within the organisation
- not adhering to (or departure from) instructional material
- insufficient focus on human health aspects
- inadequate experience/training in managing human biosecurity responsibility in the Vessels Pathway
- placing too much responsibility on a junior officer with very little or no support to assist them in appropriate decision-making
- officer(s) not seeking clarification when faced with uncertainty
- staff's inability to gauge repercussions of their decisions/actions.

Traveller with Illness Checklist

The disembarkation of passengers from the *Ruby Princess* was not managed in such a way as to identify, report and control human biosecurity risk. Article III of Schedule 3 places responsibilities on biosecurity officers to administer the Traveller with Illness Checklist. Biosecurity officers liaise with Human Biosecurity Officers for advice and direction when required. However, in the case of the *Ruby Princess*, this was not done (see 11.22, 11.23 and 11.29 in the Special Commission of Inquiry into the *Ruby Princess* report (Walker 2020)).

The Inspector-General noted that, if Agriculture had administered the Traveller with Illness Checklist in the way intended, passenger disembarkation could have been appropriately managed to minimise the human health risk associated with the persons onboard. This was a crucial error. There were also several other factors in play, including the following:

- Agriculture departed from the relevant work instructions as well as a 'localised protocol' that biosecurity officers had been using for administering the Traveller with Illness Checklist onboard incoming vessels to Port of Sydney. Custom and practice in New South Wales had been to obtain records of illness from the ship's medical staff rather than administering the Traveller with Illness Checklist. In any case, there were too many passengers presenting to the ship's clinic with illness and it was impractical to administer the checklist individually to all of them.
- There was miscommunication and poor understanding of respective roles of multiple agencies, including Health and NSW Health. In particular, biosecurity officers at the Port of Sydney assumed that the human health risk posed by that outbreak would be managed by NSW Health, as they would attend the vessel in cases where there had been a significant outbreak of illness onboard.
- Although the NSW Health Expert Panel rated the *Ruby Princess* as 'low risk', a proactive approach by Agriculture in managing the *Golden Princess* in Melbourne only a few hours later on the same day prevented a repeat of the *Ruby Princess* incident (see Chapter 13).

Pratique

A vessel automatically receives pratique (called ‘positive pratique’ – see Chapter 8.5) if at the time the vessel arrives at a port it is not in a class of vessels specified in the *Biosecurity (Negative Pratique) Instrument 2016*. A commercial vessel falls into a class specified for the purposes of negative pratique where a Pre-arrival Report has been given that includes details of an individual on board who has, or had, signs or symptoms of a Listed Human Disease during the voyage or who died during the voyage; or the Director of Human Biosecurity, a human biosecurity officer or biosecurity official becomes aware that the vessel has or had an individual on board who has entered, or will enter a port who has or had signs or symptoms of a Listed Human Disease, who has been exposed to a Listed Human Disease or who died during the voyage.

This was not the case for the *Ruby Princess*, as the Pre-arrival Report for the *Ruby Princess* noted 104 passengers presented to the ship’s clinic with acute respiratory illness and 36 others presented with influenza-like illness. As per the protocol agreed between Health and Agriculture, in deciding whether to grant pratique to a vessel that declares illness onboard that is consistent with sign or symptoms of a Listed Human Disease or that a passenger has died during the voyage, the biosecurity officer must liaise with a Human Biosecurity Officer to seek advice. This is because biosecurity officers are not medical professionals. In the case of the *Ruby Princess*, the Commonwealth, in its Voluntary Statement to the Special Commission of Inquiry into the *Ruby Princess*, acknowledged that the biosecurity officer did not administer the Traveller with Illness Checklist in the way it is described in the instructional material, as noted above (Exhibit 119, AGS 2020).

Pratique appears to have been granted based on the Human Biosecurity Officer’s advice, as NSW Health assessed the vessel as ‘low risk’.

The MoU requires Health to develop and manage policy in relation to pratique and Agriculture to issue pratique to vessels that meet requirements. The MoU is deficient in that it does not specify responsibilities of each agency for the management of vessels in negative pratique. If the master of a vessel is notified of negative pratique by a biosecurity officer, the vessel represents a public health risk which must be managed to ensure compliance. This must be incorporated in the MoU and clear responsibilities must be agreed.

Article VI of the MoU places a responsibility on Agriculture to ensure that biosecurity officers have completed all relevant training and have appropriate skills. Officers are required to undertake their duties in accordance with the procedures outlined in documented work instructions. The apparent deviation from the instructional material in not administering the Traveller with Illness Checklist onboard the *Ruby Princess* was an error – one that was made worse by failing to communicate the change to other stakeholders that may have acted differently with the benefit of that knowledge. An assessment of the adequacy of human health training and the training of the Agriculture staff who boarded the *Ruby Princess* is made in Chapter 10.

The review of Schedule 3 of the Health–Agriculture MoU is in line with Beale et al. (2008), who noted:

In relation to human health, the Panel notes that the current memorandum of understanding between the Department of Health and Ageing [Commonwealth Department of Health] and the Department of Agriculture, Fisheries and Forestry [Commonwealth Department of Agriculture, Water and the Environment] could more clearly set out the roles and responsibilities with respect to human health risks at the border. The Department of Health and Ageing should provide clear operational guidelines and requirements to the National Biosecurity Authority (p. 159).

It is perplexing that the issues identified in the 2008 Beale review were still relevant in March 2020, when the *Ruby Princess* incident occurred. Incidentally, in almost prophetic terms, the Beale review stated:

The memorandum of understanding should also set out procedures for validating health biosecurity measures, training and competency of inspection staff, resources, data collection, reporting and communication. The Authority's performance against these requirements should fall within the audit role of the Inspector General of Biosecurity ... (p. 159).

Beale et al. (2008) specifically recommended:

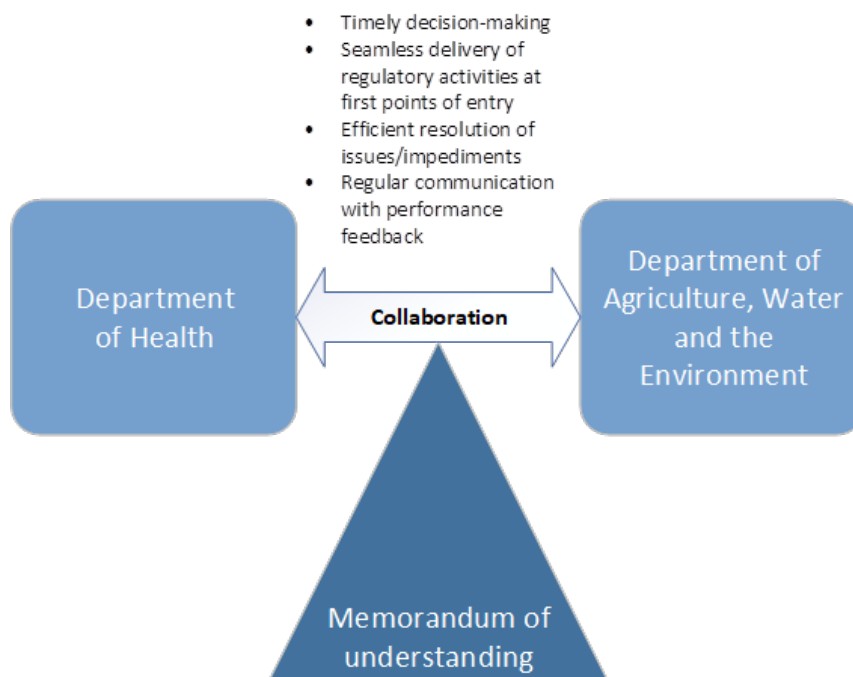
[Recommendation 46] A new memorandum of understanding should be developed between the Department of Health and Ageing and the National Biosecurity Authority on delivery of human biosecurity services at the border, including clear operational guidelines for the Authority and procedures for validating health biosecurity measures, training and competency of inspection staff, resources, data collection, reporting and communication.

The Special Commission of Inquiry into the *Ruby Princess* report (Walker 2020) identified several weaknesses in interaction and communication, and poor understanding of roles and responsibilities, between Agriculture, Health and NSW Health. It recommended:

- 2.20 That Human Biosecurity Officers, DAWE [Agriculture], the Commonwealth Department of Health and NSW Health develop:
- a) better awareness of their own and each other's roles and responsibilities for human biosecurity; and
 - b) more formal protocols for their interaction and communication. This includes, but is not limited to, the grant of pratique.

The Inspector-General concurs with both Beale et al. (2008) and Special Commission's recommendation emphasising that Health and Agriculture need to align their relationship to restore synergies and efficient delivery of human biosecurity functions and activities ([Figure 2](#)) as stipulated in the MoU/legislation. It is incumbent on both agencies to ensure that what is covered by the MoU is happening in practice and that management conducts checks to ensure this is the case.

FIGURE 2 Health–Agriculture Memorandum of Understanding for effective human biosecurity management



Source: Modified from ANAO 2010

Recommendation 1

Agriculture should regularly engage with Health to review the Health–Agriculture Memorandum of Understanding (MoU) to implement identified roles and responsibilities of each agency for human biosecurity function delivery at first points of entry, including by operating either the Human Biosecurity Forum as stipulated in the MoU or alternative formal high-level, technical interactions already occurring between the 2 agencies.

Recommendation 2

Agriculture should work collaboratively with Health to ensure instructional material for human health management in the Travellers Pathway is consistent with Health’s policies. It should clearly identify any separation of issues unique to either the air or sea Travellers Pathways if these are known to exist. It should take a ‘ground-up’ approach rather than attempting to update or repurpose existing instructional material to include broader questioning techniques when there is a known concern regarding human biosecurity or possible outbreak scenarios, such as was seen with COVID-19.

Recommendation 3

As outlined in the Health–Agriculture Memorandum of Understanding, Agriculture should work with Health to ensure that, before deployment, all officers have received appropriate training in assessing human health. This training must be regularly refreshed to remain up to date. This should include:

- a thorough review of the training material and refresher schedule to determine their appropriateness, currency and robustness
- retraining of officers to ensure clarity of their responsibilities regarding the use of the Traveller with Illness Checklist (TIC), including when TIC must be administered.

Recommendation 4

Agriculture should regularly engage with Health to review roles and responsibilities as stipulated in the Health–Agriculture Memorandum of Understanding; and clarify expectations in managing vessels that are in negative pratique and in detecting and managing noncompliances related to human health matters. Clarity of responsibilities for the management of noncompliance must be achieved.

Recommendation 5

The Director of Biosecurity should ensure biannual, independent review of the operation of the Health–Agriculture Memorandum of Understanding to ensure effective human biosecurity management onboard all incoming vessels, with prescribed human biosecurity requirements for Listed Human Diseases. The review reports to the Director of Biosecurity should include verifiable evidence that agreed actions have been completed.

5.5 Health–Agriculture Memorandum of Understanding (2007)

The Inspector-General noted that the 2007 MoU between Health and Agriculture comprehensively stipulated each agency's specific roles and responsibilities in undertaking surveillance ([Box 1](#)).

Box 1 Health–Agriculture 2007 Memorandum of Understanding – each agency’s role in human biosecurity surveillance at first points of entry

Surveillance

- Health to participate in international human disease surveillance activities and inform Agriculture of emerging threats or changes to the risk environment
- Health and Agriculture consult to cooperatively determine the most appropriate surveillance targets and methodologies and to consider outcomes
- Agriculture to undertake specified monitoring and surveillance activity around designated ports of entry (first point of entry) to identify vectors of human quarantinable disease
- Agriculture to report to Health on the outcomes of its surveillance activity
- Health to facilitate Agriculture’s participation in relevant technical committees associated with surveillance
- Agriculture to seek guidance and direction from Health on human biosecurity issues that could be appropriately accommodated within the scope and resources of the Northern Australia Quarantine Strategy’s surveillance activities
- Health to assess the risk to human health of suspected and/or identified incursions of agreed exotic vectors and, in consultation with the states and territories, support appropriate responses.

Border measures specific to travellers

- Health, in collaboration with Chief Human Biosecurity Officers and in consultation with Agriculture, to assess likely risks posed by travellers, including through assessment of information from international sources, and develop the appropriate risk management policies
- Agriculture to administer an initial assessment, through the application of the Traveller with Illness Checklist, of travellers arriving at designated ports of entry who are reported as ill
- Agriculture to refer any traveller who satisfies the requirements of the Traveller with Illness Checklist to the Human Biosecurity Officer
- Health, through the Chief Human Biosecurity Officer, to facilitate the provision of timely advice and direction to biosecurity officers on any such cases
- Health, through the Chief Human Biosecurity Officer, to manage travellers who the Chief Human Biosecurity Officer Human Biosecurity considers are possibly infected with a human quarantinable disease.

Border measures specific to seaports

- Health, in collaboration with Chief Human Biosecurity Officers and in consultation with Agriculture, to assess risks posed by international vessels and develop the appropriate risk management policies
- Agriculture to perform human biosecurity clearance of all international vessels arriving at designated ports of entry (through pratique)
- Agriculture to inspect vessels arriving at designated ports of entry for vectors of human quarantinable disease and order treatments if required
- Agriculture to undertake ship sanitation inspections and issue Ship Sanitation Certificates.

Note: Both agencies’ names and all terms have been updated to ones used in the Act

Human Biosecurity Forum

In signing the MoU, the relevant assistant secretaries and directors in Health and Agriculture committed to participate in a Human Biosecurity Forum every 3 months. The responsibility for chairing the forum was to be shared between the executives of each agency. These forums were intended to:

- provide a platform to discuss new and proposed human biosecurity risk policy
- provide opportunities to collaborate on the operational delivery of policies, including the strategic direction and the impact on implementation and resourcing
- allow each party to provide feedback and resolve disputes, if any.

Ongoing communication on routine issues occurs, as needed, between Agriculture's Conveyances and Ports Section and Travellers Section (Border Controls Branch), Inspection and Assessment Services Groups (Biosecurity Operations Division) and Health's Border Health Team (Office of Health Protection and Response) ([Figure 1](#)).

In reviewing the information received from Agriculture, the Inspector-General noted that there has been significant interaction between the 2 departments regarding COVID-19 cooperation. However, the governance agreed under the MoU does not appear to have been followed. Too often, goodwill appears to have replaced good governance.

5.6 Collaboration between Agriculture and other Commonwealth agencies

Australian Border Force

Agriculture and Australian Border Force (part of the Department of Home Affairs) work collaboratively across Australian borders – notably, at the first points of entry, such as airports and seaports. The collaborative arrangements between the 2 agencies support a common approach to border operations. They are formalised through an MoU.

The Agriculture–Australian Border Force MoU was last updated in March 2017. It has several annexures covering roles and responsibilities of each agency, reciprocal training arrangements, communication and information-sharing mechanisms, and targeted operations.

An annexure to the MoU, 'Sea traveller processing at cruise terminals and wharf side', outlines each agency's responsibilities for processing sea travellers and streamlines border operations, policies and procedures. It also stipulates that each agency is to train other agency's relevant staff to understand their respective functions and the controls used to manage risk and facilitate the referral of travellers to the other party. It also allows the 2 agencies to:

- focus on minimising disruption to legitimate travel while preventing the movement of prohibited goods across the border
- maximise opportunities to achieve cost and resource efficiency by considering joint procurements and/or usage of resources, including technology skills, training facilities and infrastructure
- develop and implement joint strategies for both internal and external communications relating to the processing and clearance of sea travellers
- seek opportunities to actively promote collaboration to achieve joint business outcomes and efficiencies

- recognise the obligations of each party in administering their respective legislation, risk and responsibilities
- act cooperatively and collaboratively to enhance the effectiveness of each party's performance.

The MoU between Agriculture and Australian Border Force is supposed to be updated every 2 years or whenever required; however, an update has been pending since March 2019.

Recommendation 6

Agriculture should ensure that all biosecurity memoranda of understanding with all Commonwealth agencies are renewed before their expiry dates.

Agriculture and Australian Maritime Safety Authority

Both Agriculture and Australian Maritime Safety Authority both have an interest in ballast water for their respective areas of management. All vessels use ballast water for stability. Ballast water is also a significant pathway for introduction of invasive marine animals. Therefore, Agriculture manages vessels' ballast from foreign ports under the International Maritime Organization's Convention for the Control and Management of Ships' Ballast Water and Sediments 2004.

The Australian Maritime Safety Authority manages all aspects of maritime safety for vessels operating within Australian waters.

In September 2017, Agriculture entered into an agreement with the Australian Maritime Safety Authority, formalised through an MoU. Under the MoU:

- Agriculture is to inspect vessels for compliance with ballast water requirements, advise vessel operators of ballast water compliance issues and, where appropriate, take regulatory action under the Act.
- The Australian Maritime Safety Authority is to inspect foreign vessel under the *Navigation Act 2012*; record details of Agriculture's inspection activities; and advise the vessel's 'flag state' (see section 6.2) and next port, if required, of deficiencies identified in the Agriculture's biosecurity inspection.

No regular meetings are planned between officials from Agriculture and Australian Maritime Safety Authority; officials only meet to discuss (and resolve) issues as and when they are identified.

The Agriculture–Australian Maritime Safety Authority MoU will remain in force for 5 years (that is, until September 2022).

5.7 Collaboration between Commonwealth agencies and jurisdictions

State and territory health authorities have responsibility for:

- all human health matters on cruise ships that remain in Australian territorial waters for the entire voyage
- responses to communicable disease notifications and outbreaks on all ships within Australia's coastal waters (including international voyages)
- provision of health services to ill travellers.

States and territories have legislative powers that enable them to implement biosecurity arrangements within their borders and that complement Australian Government biosecurity arrangements.

State and territory health authorities:

- manage responses under public health legislation within the relevant state or territory
- are responsible for ongoing management of ill travellers transported to hospital
 - provide practical support to cruise vessels during a public health response
 - facilitate laboratory testing, including typing
 - encourage preventative actions and risk communication by cruise vessel operators
 - communicate with vessel operators, border agencies and Health regarding the management of cruise vessels following identification of symptomatic travellers
 - collate and share important public health data with other jurisdictions
 - notify Health of confirmed cases of nationally notifiable diseases
 - share incidences of communicable disease outbreaks onboard cruise ships via Communicable Diseases Network Australia and OzFoodNet
 - provide representatives to be Chief Human Biosecurity Officers under the Act
 - provide 24/7 primary contacts to Agriculture and Health for notifications of ill travellers with suspected or confirmed Listed Human Diseases, deaths in transit and potential outbreaks (for example, gastroenteritis)
 - may have cruise vessel surveillance and inspection programs independent of biosecurity human health inspections and ship sanitation certification inspections conducted by Agriculture
 - may seek assistance bilaterally or through the Australian Health Protection Principal Committee (depending on the nature of the incident) when there may be difficulty in managing ill travellers who are disembarking from cruise ships (for example, due to severity or number of cases) (Department of Health 2019).

States and territories also have a broad range of public health and emergency response powers available under public and emergency legislation for responding to public health emergencies. Since early in Australia's response to the pandemic, states and territories have applied their emergency management powers to movement controls, including the management of infected passengers and/or crew on vessels within their jurisdiction.

Health and jurisdictional health departments

State and territory health departments are required to support Agriculture to undertake human biosecurity activities at first point of entry. Health has entered into agreements with the state and territory health departments for delivering human biosecurity services on behalf of the Australian Government under the Act and in accordance with the International Health Regulations (2005) (WHO 2016).

Health has entered into a funding agreement with each jurisdiction through the Standard Funding Agreement Schedule, *Agreement with the states and territories for the provision of human quarantine services*. Under this agreement each state's and territory's health department is responsible for:

- delivering routine human biosecurity services at the first point of entry, including screening travellers for Listed Human Diseases and managing travellers' treatment for Listed Human Diseases (when required)
- managing human biosecurity emergencies.

5.8 Collaboration with industry

Agriculture also regularly engages with 2 main industry peak bodies for policy development, new initiatives and cost recovery arrangements:

1. *Shipping Australia Limited* represents shipping owners, operators and agents. Their role is to inform their members of developments affecting the industry, facilitate trade, maintain maritime security, and support members who are operating in a regulatory environment.
2. *Maritime Industry Australia Limited* represents the maritime industry and employers. It liaises with government and other key stakeholders on their behalf, both in Australia and internationally. They provide members with advice on best practice, safety and continuous improvement.

Chapter 6

Vessel management at first points of entry

6.1 Australian first points of entry

A range of commercial vessels enter Australian territory. These include barges; chartered superyachts; container vessels; cruise vessels; fishing vessels; general and break bulk cargo vessels; government, Australian and international military vessels; heavy lift vessels; livestock vessels; roll on-roll off vessels (vehicle carriers); tankers and tugs.

There are 94 first points of entry in Australia ([Map 1](#)). Of these, 14 are also designated as 'points of entry' under the International Health Regulations because they meet the IHR Annex 1B core capacity requirements that must be maintained at all times (including emergency plans, which incorporate strategies to respond to health emergencies) and a number of capacities that must be provided during public health emergencies of international concern (Department of Health 2018).

MAP 1 Australian first points of entry for commercial vessels, 2020



Source: Department of Agriculture, Water and the Environment

Under section 245 of the Act, a vessel that is subject to biosecurity control must not be moored at a port in Australian territory that is not a first point of entry for the vessel unless permission has been given under section 247(2) of the Act for the vessel to be moored at that port or a direction has been given under paragraph 248(1)(a) or 250(1)(a) requiring the vessel to be moored at that port.

Section 229 of the Act allows the Director of Biosecurity or the Director of Human Biosecurity to determine a port as a first point of entry for vessels or a specified class of vessels subject to biosecurity control.

According to section 191, a vessel becomes subject to biosecurity control once the vessel enters Australian territory, up until it is released from biosecurity control (that is, when it leaves Australian territory – consistent with section 218 of the Act).

Vessel masters who plan to enter Australia must provide a Pre-arrival Report to Agriculture no more than 96 hours and not less than 12 hours before arrival. At first point of entry, biosecurity officers have responsibility to assess and inspect vessels to ensure that biosecurity risks (including human health risks) are identified and managed accordingly.

For cruise ships to enter at a non-first point of entry, an application must be made to Australian Border Force's Maritime Traveller Processing Committee at least 10 days in advance (section 5.3). First points of entry are either permanently staffed by the presence of a biosecurity officer or are serviced routinely. Unstaffed ports that request, through the Maritime Traveller Processing Committee, that Agriculture attend are considered on merit.

Under section 58(2) of the *Customs Act 1901*, the Australian Border Force Commissioner, through the Maritime Traveller Processing Committee, granted permission to allow the *Ruby Princess* to enter the Port of Sydney on 19 March 2020. To refuse to grant permission would have been contrary to the government's policy that the cruise ship ban did not apply to cruise ships that were already destined for an Australian port when the Prime Minister announced a ban on cruise ships on 15 March 2020.

It would have been impractical to refuse permission for the *Ruby Princess* to arrive on 19 March 2020 considering the following circumstances:

1. The vessel had departed Napier in New Zealand on 15 March 2020 bound for the Port of Sydney.
2. Long before the cruise commenced, Australian Border Force had given approval for the vessel to operate as a round-trip cruise starting and finishing in Sydney.
3. There were 2,647 passengers onboard, including 1,682 Australians.

6.2 Australia's obligations under the Maritime Labour Convention 2013

Worldwide, there are about 1.4 million seafarers. The rights of crew members of commercial vessels are set out in the Maritime Labour Convention. The Convention was developed under the International Labour Organization in 2006 and came into force in August 2013 (AMSA 2020). It sets the working and living standards for seafarers (crews) working on ships internationally. Under the Convention, seafarers who need immediate medical care are to be given access to medical facilities on shore.

Australia is bound by this obligation for all vessels (Australian and foreign-registered) located in its territorial waters and has implemented the Convention under the Maritime Order 11 of its own *Navigation Act 2012*.

The Navigation Act requires the owners of vessels 'put in place measures for the health protection, medical care and essential dental care for seafarers on board'. This obligation applies to Australian vessels and stipulates:

Seafarers have health protection and medical care as comparable as possible to that available to workers on shore, including prompt access to:

- (i) necessary medicines, medical equipment and facilities for diagnosis and treatment
- (ii) medical information and expertise.

A question arises as to whether the same rules apply to a foreign-registered vessel. For example, the *Ruby Princess* is registered in Bermuda (Higgins-Desbiolles 2020). Bermuda is signatory to the Convention and is bound by the similar requirements to those in Australia's Marine Order 11. The ship owners have the financial liability under the treaty to defray the expenses for required treatment. However, they do not have full responsibility for the wellbeing of vessel's crew when the vessel is outside Bermuda's territory. In this situation, the Convention stipulates that Australia must offer medical care to the crew when a vessel is in its territorial waters.

Under international law, a state (nation) may refuse access to its ports where the vessel poses a serious and unacceptable safety, environmental, health or security threat to it. A pandemic such as COVID-19 would no doubt count in this regard. Nevertheless, section 35 of the Act would appear to allow for disembarkation of crew or passengers who need urgent medical attention.

6.3 Human health reporting and assessment at first points of entry

[Figure 3](#) outlines the specific responsibilities associated with managing human biosecurity for arriving vessels, including the roles of:

1. the vessel master and shipping agent
2. the Maritime National Coordination Centre
3. the Human Biosecurity Officer
4. the seaports officer/vessel inspector/biosecurity officer.

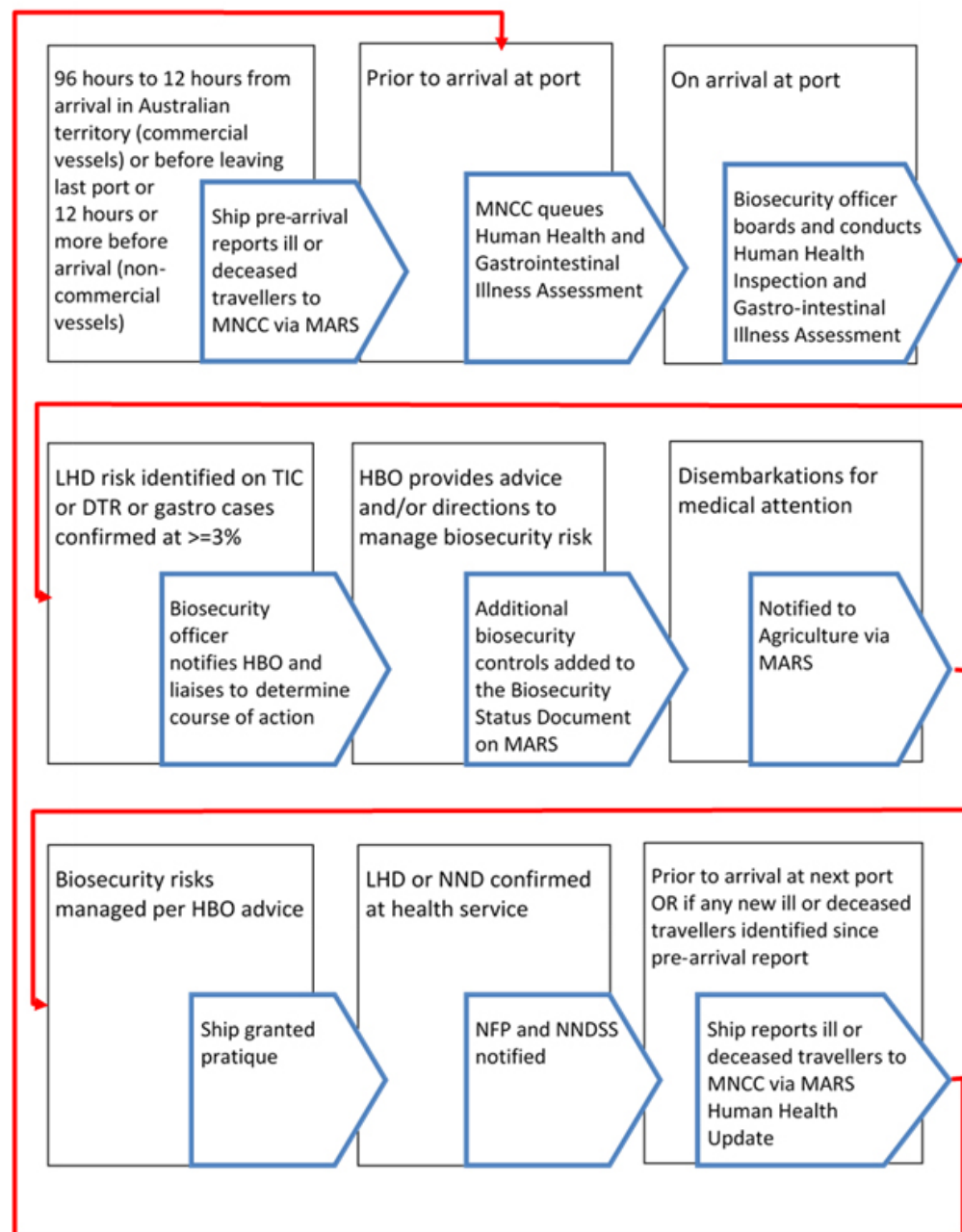
The management of human health risks on incoming international vessels commences when the Maritime National Coordination Centre receives the Pre-arrival Report that vessels submit through the Maritime Arrivals Reporting System (MARS). The Pre-arrival Report facilitates a preliminary biosecurity assessment of both the vessel and any people onboard, including passengers and crew. Information provided on the Pre-arrival Report is assessed onboard the vessel by biosecurity officers during Routine Vessel Inspection.

The Pre-arrival Report can be submitted up to 96 hours and not less than 12 hours before arrival so that there is time for the information to be assessed. Masters are required to notify Agriculture as soon as practicable if any aspect of biosecurity status changes, including human health.

When a human health concern (death or illness onboard) is notified through the Pre-arrival Report, a human health inspection is queued. As the vessel arrives at a port (or anchorage), a biosecurity officer conducts a human health assessment for Listed Human Diseases by administering the Traveller with Illness Checklist. If the checklist process determines there is a suspected Listed Human Disease onboard a vessel, the biosecurity officer notifies the Human Biosecurity Officer and seeks advice for further action. All actions undertaken are recorded on the vessel's biosecurity status document in MARS.

Only when the human health issues have been demonstrated to be effectively addressed should pratique be granted to the vessel.

FIGURE 3 Processes to manage human health risks



DTR, Deceased Traveller Report; **HBO**, Human Biosecurity Officer; **LHD**, Listed Human Disease; **MARS**, Maritime Arrivals Reporting System; **MNCC**, Maritime National Coordination Centre; **NFP**, National Focal Point; **NNDSS**, National Notifiable Diseases Surveillance System; **TIC**, Traveller with Illness Checklist.

Source: National policy for reporting and managing communicable disease events on cruise ships (Department of Health 2019)

6.4 Vessel arrivals at first points of entry

Between 1 November 2019 and 30 October 2020, 15,562 vessels arrived at Australian first points of entry ([Table 7](#)). Of these, 13,651 (87.7%) were commercial cargo vessels, 1,399 (9%) were cruise vessels and 512 (3.3%) were non-commercial vessels. The highest number of cruise vessels docked at New South Wales ports (611, 43.7%) followed by Queensland (366, 26.1%), Victoria (138, 9.9%) and Tasmania (115, 8.2%).

Overall, 5,655 (36.3%) of the total vessels arrived at Western Australian ports, followed by Queensland (27.4%) and New South Wales (20.3%).

TABLE 7 Vessel arrivals, by states and territories, 1 November 2019 to 30 October 2020

Vessel type	NSW	NT	QLD	SA	TAS	VIC	WA	Total	% of total
Commercial	2,487	571	3,598	276	185	959	5,575	13,651	87.7
Cruise vessel	611	61	366	60	115	138	48	1,399	9.0
Non-commercial	56	100	306	5	6	7	32	512	3.3
Total	3,154	732	4,270	341	306	1,104	5,655	15,562	–

Source: Department of Agriculture, Water and the Environment

Not all vessels require a physical inspection on arrival. Under Agriculture's reduced intervention scheme (called the 'Vessel Compliance Scheme' – see section 13.6), vessels that have a demonstrated biosecurity compliance history during their visits to Australia are eligible for reduced intervention. Based on vessels' Pre-arrival Reports, Agriculture undertakes risk assessment for individual vessels to determine the type of inspection each vessel must undergo. Biosecurity officers (also called 'vessel inspectors') undertake Routine Vessel Inspection (see section 6.6.) and they may carry out additional inspection type(s) based on the type of vessel, the level of risk presented, type of cargo carried and seasonality of specific pests.

Depending on the level of biosecurity risk, Agriculture may require a vessel to undergo a range of inspections (called 'inspection type'). Human health inspection of commercial vessels is one of 19 inspection types that biosecurity officers undertake across first points of entry ([Table 8](#)).

[Table 8](#) shows that between November 2019 and October 2020:

- of all types of inspections undertaken in individual jurisdictions, the highest number of vessels that received human health inspection were at Tasmanian ports (37 of 300; 12.3%) followed by South Australia (5.1%), New South Wales (2.5%), Queensland (2%) and Victoria (1.9%). Of 5,661 vessels that docked at Western Australian ports, only 18 (0.3%) received a human health inspection
- over 56% of the vessels inspected by biosecurity officers received a Routine Vessel Inspection, followed by inspections for ship sanitation (17%) and crew change (8%)
- of all inspections, Western Australia accounted for about 37%, followed by Queensland (27%), New South Wales (21%), Victoria (7%) and the Northern Territory (4%).

TABLE 8 Commercial vessel inspections, by types and by states and territories, 1 November 2019 to 30 October 2020

Inspection type	NSW	NT	QLD	SA	TAS	VIC	WA	Total
Asian gypsy moth (AGM) inspection (non-Russian port)	102	0	2	0	6	26	0	136
AGM inspection (Russian port)	61	0	0	0	1	15	0	77
Assistance dog	2	0	2	0	0	2	0	6
Ballast water inspection	56	4	26	2	4	22	30	144
Brown marmorated stink bug inspection	4	3	121	0	0	21	70	219
Burnt pine longicorn inspection	120	0	83	6	15	39	8	271
Coastal strip	16	23	71	3	9	7	52	181
Crew change	299	72	221	32	48	66	523	1,261
Domestic ballast water inspection	78	1	17	23	10	54	36	219
Follow-up	53	0	33	26	3	23	15	153
General surveillance	28	2	21	1	3	99	28	182
Human health	76	0	81	17	37	21	18	250
Landed goods	44	5	121	9	10	3	10	202
Livestock	0	124	84	0	0	30	103	341
Passenger	1	19	10	5	7	1	4	47
Routine Vessel Inspection	1,466	304	2,416	168	97	462	3,605	8,518
Ship sanitation	552	77	648	35	32	147	1,121	2,612
Verification	24	0	15	1	5	26	21	92
Waste surveillance	118	4	82	8	13	33	17	275
Total	3,100	638	4,054	336	300	1,097	5,661	15,186

Source: Department of Agriculture, Water and the Environment

Non-commercial vessels, such as yachts and superyachts, that intend to visit Australia must also report their pending arrival to Agriculture at a designated first point of entry (Map 1). When these vessels arrive, a biosecurity officer physically inspects the vessel. The vessel's master gives the biosecurity officer an update on the health status of people onboard by answering questions about illness or death onboard. Inspection includes a physical inspection of personal effects, timber components, kitchen facilities, storerooms, water containers and the hull. On inspection, if there are no biosecurity concerns, the vessel and passengers are released. If there are biosecurity concerns, the owner must undertake certain directions or treatments to address the concern(s).

Vessels are assessed for compliance with biosecurity requirements as part of the Pre-arrival Report process and subsequent vessel inspections where required. If there are issues that show a vessel has failed to comply with biosecurity requirements, the vessel will receive demerit points and it must remedy the issues. Biosecurity officers refer major noncompliances to Agriculture's Non-Compliance Assessment and Response team for triage. If deemed appropriate, a referral is then made to Agriculture's Enforcement team for follow-up action.

If a vessel accumulates demerit points, it can drop off the Vessel Compliance Scheme. This is a significant incentive for vessels to maintain a high level of compliance. It leads to a form of self-regulation by the industry – while there may be no direct fiscal penalty from Agriculture for noncompliance, there may be individual disincentives for masters or crew who miss out on performance bonuses if the vessel is taken off the Vessel Compliance Scheme due to repeated noncompliances.

6.5 Maritime National Coordination Centre

In 2010, Agriculture established the Maritime National Coordination Centre in the Adelaide regional office. Its role is to:

- assess the risk of impending arrivals
- provide documentary risk assessment of all pre-arrival information
- determine and coordinate appropriate inspection activities, while providing a single interface for shipping agencies, vessel masters, shipping agents and frontline staff across the country
- communicate assessment outcomes and raise associated charges.

On 16 March 2020, the vessel master or shipping agent of the *Ruby Princess* cruise ship lodged the Pre-arrival Report and a human health report with the Maritime National Coordination Centre. On 18 March 2020, 2 subsequent human health reports were also lodged with the Maritime National Coordination Centre before the vessel berthed at the Port of Sydney on the 19 March. Owing to the reported illness onboard (as noted in the human health reports to the Maritime National Coordination Centre), the vessel was not automatically granted pratique on arrival. The Maritime National Coordination Centre queued (scheduled) the vessel for a Routine Vessel Inspection by biosecurity officers on 19 March at the Port of Sydney.

The Maritime National Coordination Centre – a conduit between vessel masters/agents and biosecurity officers – facilitates smooth inspection activities (as required) before vessels are permitted to dock at any of the designated (and non-designated) first points of entry across Australia. Based on the numbers of inspections completed by biosecurity officers across all jurisdictions ([Table 8](#)), it can be inferred that the Maritime National Coordination Centre carries a significant workload. It is expected that all decisions are made based on evidence to ensure that they are consistent with legislative requirements. However, a rough calculation of the Maritime National Coordination Centre’s workload by the Inspector-General revealed the following:

1. Between November 2019 and October 2020, Maritime National Coordination Centre staff queued 15,186 vessels for one or more of 19 inspections ([Table 8](#)). On average, Maritime National Coordination Centre officers processed about 300 vessels per week. The Maritime National Coordination Centre has 5 staff (4 APS4 officers and 1 APS5 officer). On average, each officer processed at least 60 vessels per week. This is equivalent to about 12 vessels per day, or 35 minutes per vessel (based on a standard 7.5-hour workday) if an officer consistently processed documentation for incoming vessels in a year. This calculation does not include downtime due to staff absences (leave entitlements). It is likely that an officer would process up to 80 vessels in some weeks, as the demands fluctuate substantially throughout the year, noting that the Maritime National Coordination Centre processes all commercial and non-commercial vessels that seek permission to enter Australian first points of entry. Given all tasks required of Maritime National Coordination Centre (see above) and the issues with multiple Pre-arrival Reports submitted by vessel masters/shipping agents, planned (for software updates) and unplanned (technical glitches) MARS downtimes or outages, email blockages by firewall, staff turnover, administration (for example, team meetings, fielding queries from vessel masters/agents) and so on, it is very difficult for the Inspector-General to conclude that all vessels would receive the necessary level of attention by the Maritime National Coordination Centre.
2. MARS’ risk engine calculates risks onboard all incoming commercial vessels to prioritise inspection by biosecurity officers across regions. The Inspector-General would have expected that, given the higher number of cruise vessels entering first points of entry in Queensland, New South Wales, Victoria and Western Australia, these jurisdictions should have reported a higher number of inspections than they did ([Table 8](#)). To verify this, the Inspector-General recommends that Agriculture review the accuracy of information entered into MARS for accurate calculation of risks ([Appendix B](#)).

Recommendation 7

Agriculture should review the workload of biosecurity officers working in the Maritime National Coordination Centre to ensure that the centre:

- is adequately resourced with the required capacity and agility to reprioritise and allocate resources during significantly increased workload and pressure (‘surge’ periods)
- is able to look beyond its day-to-day workload to respond to industry changes and demands
- is following standards and operating directions to enable operational managers to tactically allocate resources within their jurisdictions for vessel inspections
- staff are adequately trained and competent in providing professional advice that is consistent with the legislation to biosecurity officers and industry agents/vessel masters when requested.

Recommendation 8

Agriculture should consider introducing a dedicated hotline to the Maritime National Coordination Centre operated by experienced staff (preferably, either a subject-matter expert or an expert in regulation) as an escalation point for urgent enquiries that meet agreed criteria.

The Inspector-General noted that the Maritime National Coordination Centre is a part of Agriculture's Assessment and Client Contact Group, which is one of the 7 branches within Biosecurity Operations Division ([Figure 1](#)). With the adoption of an Integrated Business Model (after the commencement of the Act), Agriculture placed Maritime National Coordination Centre in the Assessment and Client Contact Group as a 'structural solution'. However, the Inspector-General considers that the Maritime National Coordination Centre should be an integral part of the Vessels Program (which has policy and operational accountability for all incoming commercial vessels) and Assessment and Client Contact Group should provide professional oversight for consistency/integration with the way Agriculture works overall.

Recommendation 9

Agriculture should consider adjusting the current line of reporting by making the Maritime National Coordination Centre part of the national Vessels Program (preferably, Conveyances and Ports Section). This should increase the efficiency in the way the Maritime National Coordination Centre manages its delivery of policy and operational advice to shipping industry and vessels inspectors.

6.6 Vessel obligations

To assist industry in meeting Australia's biosecurity requirements, Agriculture has produced 2 checklists that provide quick reference points for vessels at first points of entry:

1. Australia's biosecurity checklist for commercial vessels, which assists vessel operators in preparing their vessels to minimise the entry and spread of pests and diseases in Australia (Department of Agriculture 2019)
2. biosecurity documentation for commercial vessels checklist, which assists vessel operators in preparing their vessels' documentation for biosecurity officers to review at the time of inspection.

Before and after a vessel's entry into Australian territory, a series of events takes place, including:

- ***Submission and assessment of the Pre-arrival Report*** – the vessel master or their shipping agent submits the Pre-arrival Report in MARS 96 to 12 hours before arrival at the first point of entry. The Pre-arrival Report must include all the information prescribed by section 193 of the Biosecurity Regulation 2016, including:
 - ▶ arrival and voyage details
 - ▶ on the Human Health Update form, the number of travellers and crew suspected of having any listed human disease(s)
 - ▶ whether the vessel is harbouring any disease-carrying pests (including rodents)
 - ▶ the presence of animals and/or plants
 - ▶ the vessel's intentions regarding ballast water
 - ▶ biosecurity risk material
 - ▶ previous cargoes
 - ▶ handling of biosecurity waste
 - ▶ the ability of vessels to transport exotic insects and/or seasonal pests.

Maritime National Coordination Centre officers evaluate the Pre-arrival Report through risk assessment. If no issues are reported in the Pre-arrival Report, MARS automatically issues the Biosecurity Status Document. The Biosecurity Status Document reflects any reported changes to directions or status occurring during a voyage

- ***Submission of Human Health Update form*** – the vessel master/agent submits a Human Health Update if the health status onboard the vessel changes after the Pre-arrival Report is submitted
- ***Submission of ballast water report*** – this is submitted no later than 12 hours before arrival but can be submitted earlier than the Pre-arrival Report
- ***Routine Vessel Inspection*** – this mandatory inspection activity is undertaken by biosecurity officers on vessel's arrival to confirm correct reporting on the Pre-arrival Report by the vessel master. It involves verifying human health issues, inspecting ballast water records and physically inspecting vessel spaces for any biosecurity risks
- ***Service request for specific inspection activities*** – the vessel master may request specific 'services', including:
 - ▶ sanitation certification inspection
 - ▶ waste removal inspections
 - ▶ crew change inspection
 - ▶ coastal strip inspection.

Chapter 7

Vessels Pathway integrity threats assessment

Biosecurity risks associated with international vessels include:

- crew and/or passengers suspected of having Listed Human Disease(s)
- presence of live animals and animal-based products harbouring pests and/or diseases
- presence of live plants and plant-based products harbouring pests and/or diseases
- biofouling
- goods harbouring pests and/or diseases (called biosecurity risk material)
- transportation of exotic insects and terrestrial/marine pests.

Agriculture manages biosecurity risks in the Vessels Pathway consistent with the Act (including relevant legislative instruments). It also manages human biosecurity risks consistent with the World Health Organization's International Health Regulations 2005 and a number of International Maritime Organization conventions.

7.1 Threat and vulnerability assessments

Management of biosecurity risks associated with the importation of plant- and animal-based goods into Australia is widely considered to be Agriculture's core business. Human biosecurity has traditionally had a lesser focus, with shared responsibility between Agriculture, Health and some other Commonwealth agencies.

Using various platforms, Agriculture undertakes activities to ascertain threats and vulnerabilities (including human health risks) within the vessels and travellers pathways, as follows.

The Shipping Managers' Group

The Shipping Managers' Group is a consortium of Agriculture's policy and operational managers responsible for the management of the Vessels Pathway. The group meets every 6 weeks and provides an avenue to raise issues for policy and border operations. In its March 2019 workshop, the shipping managers discussed ways to determine how different risks in the Vessels Pathway are 'valued'. Amongst other issues (that is, issues associated with seasonal pests such as the brown marmorated stink bug), the group discussed prioritising and updating risk flags set in the Maritime Arrivals Reporting System (MARS). The risk flag set by the health questions on the Pre-arrival Report and the Human Health Update form were not updated, as the group determined that no change to the current risk parameters was required.

Risk return resource allocation

Agriculture uses its risk return resource allocation (RRRA) methodology to balance the probability of finding risks against the effort required to adequately mitigate them, improving biosecurity system effectiveness and efficiency.

In December 2017, using the RRRA model, Agriculture examined biosecurity risks and benefits associated with the implementation of MARS. The review indicated that the implementation of MARS and the Vessel Compliance Scheme (see section 13.6) reduced exposure to biosecurity risks and the associated costs (DAWR 2016). The risk categories in the review included live animals, plants, insects, stores, waste, ballast water and biofouling. However, the RRRA model did not consider human health risks.

Internal audit of the Vessels Pathway

In September 2018, Agriculture's Internal Audit team examined the management of biosecurity risks associated with the Vessels Pathway. For commercial vessels, the report concluded:

The department's current activities to assess and monitor performance in the vessels pathway do not support the improvement of operations. This is demonstrated by the fact there are no KPIs, targets, benchmarks and definition of what is an acceptable level of performance and there is no information and analysis on trends. Furthermore, current reporting only includes operational information and there is no Senior Executive Officer reporting on performance in the vessels pathway.

The report included several important recommendations, such as:

- developing and implementing a process to confirm the MARS risk engine is effectively targeting the areas of highest risk
- communicating prioritised list of inspections (as displayed by MARS) and the rationale for prioritisation to Inspections Group staff
- documenting a plan for the migration of staff competency data to the National Competency Grid
- updating procedural documentation to reflect the requirement for a subject-matter expert to accompany the technical training officer on any final sign-offs, where the technical training officer does not have inspection subject-matter expertise
- reviewing and updating instructional material to include practical inspection considerations
- finalising instructional material on the Instructional Material Library
- developing and implementing assessment and monitoring of performance in the Vessels Pathway
- updating the quarterly operational report to reflect development of key performance indicators and targets
- developing and implementing performance reporting for senior executive officers and ensuring the reporting reflects the key performance indicators and targets.

The Inspector-General concurs with all these recommendations and notes that Agriculture has not made significant progress since the release of this report. This is very concerning. It is unclear why Agriculture did not prioritise the implementation of these recommendations as soon as the internal audit report was finalised. The Inspector-General considers that almost all the recommendations are still relevant post the *Ruby Princess* incident.

The Inspector-General reiterates the concerns expressed in previously published reviews (IIGB 2016 and IGB 2020a) about Agriculture's 'reactive behaviour' and poor management practices prevalent within its biosecurity streams. Agriculture cannot be complacent, especially when it comes to managing human biosecurity at Australia's borders. It must proactively plan and apply 'preventative biosecurity' measures by quickly acting on threats identified by Agriculture's own internal assessments (such as internal audit and other verification activities), independent audits (such as those by the Australian National Audit Office) and reviews by Inspectors-General. This would help ensure that risks are mitigated or avoided rather than being dealt with after the fact.

Recommendation 10

Agriculture should streamline and improve internal transparency of processes for short- and long-term tracking of implementation of decisions and actions arising from other audit and review processes (such as internal audits and Australian National Audit Office and Inspector-General of Biosecurity reviews).

Risk owners should be responsible for planning, overseeing implementation, technical advice and issues resolution, when required. Progress should be visible to Agriculture's senior risk managers, the Inspector-General of Biosecurity and other audit bodies as appropriate.

Australian Centre of Excellence for Risk Analysis reviews of seaport arrangements

In September 2009 and again in September 2010, the Australian Centre of Excellence for Risk Analysis (since renamed to the Centre of Excellence for Biosecurity Risk Analysis) released Parts 1 and 3 of the *AQIS import clearance risk return reports for seaports*. These reports, initiated in response to the Beale review findings (Beale et al. 2008) to determine biosecurity resourcing against risk return profiles, analysed quarantine (biosecurity) risks associated with vessels, pratique, the international shipping Vessels Pathway and leakage incurred by applying the 'risk-return' model.

Agriculture has undergone significant organisational changes since Australian Centre of Excellence for Risk Analysis completed these reviews. The Inspector-General therefore recommends that Agriculture engage with Centre of Excellence for Biosecurity Risk Analysis to undertake a fresh risk assessment of the vessels and travellers pathways. This will enable Agriculture to more effectively allocate appropriate resources.

Recommendation 11

Agriculture should engage the Centre of Excellence for Biosecurity Risk Analysis to undertake separate risk assessments for the:

- Vessels Pathway
- Travellers Pathway.

Recommendations from these reviews should be implemented as a priority.

National Border Surveillance Program

In November 2016 Agriculture implemented its National Border Surveillance Program, stationing surveillance officers at first points of entry (seaports and airports), military bases and approved arrangement sites. However, this program is focused entirely on detecting ‘Top 40’ plant pests and diseases at and around ports; it does not include surveillance for human biosecurity at first points of entry.

Commercial vessels policy framework

In October 2017, Agriculture released the Biosecurity Management of Commercial Vessels Policy Framework. The framework describes the policy intent that underpins work instructions and operational material for the management of biosecurity risks associated with commercial maritime vessels. This is the key document for maritime-related training of biosecurity officers and when policy clarification/rationale is required.

In reviewing the framework, the Inspector-General noted that it states that staff involved in managing biosecurity risks associated with the arrival of commercial vessels at the first point of entry should only undertake ship sanitation and surveillance inspections if resources are available:

Vessels that request a Ship Sanitation Certificate [SSC] at a subsequent port of arrival does not result in a mandatory inspection. Inspectors should complete the inspection if resources are available, however the preference is that all SSC inspections are completed as part of the first point of entry.

All vessels are eligible for a surveillance inspection at all subsequent ports and a surveillance inspection should be completed if resources are available.

The Inspector-General notes that Agriculture has not undertaken any human biosecurity surveillance operations at first points of entry, perhaps because, as noted in the framework, it is not a priority for the organisation. Likely reasons for this include:

1. ***Pre-occupation with the management of risks associated with other high-risk pathways and imported goods:*** Traditionally, Agriculture has focused on managing high-risk imported goods and pathways – for example, it undertakes comprehensive Biosecurity Import Risk Analyses, which are also very cost-intensive. It appears Agriculture has relied strongly on Health for human biosecurity management, especially policy advice and surveillance. It has taken its operational role to be subservient to Health rather than as a vital equal partner in delivering national human biosecurity outcomes under the inter-agency MoU. Further, the Inspector-General noted that the Vessels Pathway has received much less attention than Travellers (airport) Pathway in the past decade. It is unclear as to why Agriculture treats the Vessels Pathway differently from the Travellers Pathway – it has not undertaken comparative risk analysis involving the 2 pathways in the past decade.
2. ***Lack of collaboration with Health:*** It is understood that the primary responsibility for undertaking regular human biosecurity surveillance in the travellers and vessels pathways lies with Agriculture. Under the Act, Health develops human health policies and Agriculture operationalises those policies. Both agencies have specific roles, formalised through the MoU, to manage biosecurity. However, unlike the 2007 Health–Agriculture MoU ([Box 1](#)), the current MoU does not list human biosecurity surveillance as one of Agriculture’s responsibilities.

3. **Poor or no planning:** Several audit/review reports by the Inspector-General since 2009 (notably, IGB 2020b) have highlighted Agriculture's systemic weakness in planning surveillance activities for a range of imported high-risk goods and pathways. These reports also highlighted how Agriculture's resources got stretched during 'surge' demands (IGB 2019), which adversely impacted business as usual activities, such as Cargo Compliance Verification operations across the country.
4. **Lack of resources:** Funding has been an ongoing issue for Agriculture. This is outside the scope of the Inspector-General's review. However, funding has been consistently identified as one of the reasons for lack of 'action' across pathways in several Inspector-General review reports, notably IGB 2021. Recommendations in these reports directly targeted inadequate resourcing, which has led to a perception that Agriculture does the minimum required to biosecure Australia. Agriculture must plan better and dedicate ongoing long-term resources to human biosecurity surveillance activities at first points of entry. The current MoU between Health and Agriculture stipulates bearing the respective costs of operations.

The Inspector-General noted that the 2007 MoU (see [Box 1](#) in section 5.5) covered surveillance and border measures in sufficient detail and suggests that the 2 agencies collaborate to update the current MoU for clarity of each agency's roles and responsibilities. This is consistent with Beale et al. (2008), who recommended:

[Recommendation 46] A new memorandum of understanding should be developed between the Department of Health and Ageing and the National Biosecurity Authority on delivery of human biosecurity services at the border, including clear operational guidelines for the Authority and procedures for validating health biosecurity measures, training and competency of inspection staff, resources, data collection, reporting and communication.

It is unclear as to why the Health–Agriculture MoU does not stipulate each agency's roles and responsibilities for surveillance at the first points of entry. The Inspector-General recommends that Agriculture work with Health to revise the current MoU by reinstating the surveillance responsibilities covered in the 2007 MoU.

Recommendation 12

Agriculture should update its current Memorandum of Understanding with Health to align with the 2007 Memorandum of Understanding, as the 2007 memorandum provided clarity of each agency's roles for:

- human biosecurity surveillance
- border measures specific to travellers
- border measures specific to seaports, including the management of vessels in negative pratique.

Recommendation 13

Agriculture should rigorously review its responsibilities under the Memorandum of Understanding (and other inter-agency memoranda as appropriate) to ensure that there is adequate inter-agency functional rigour and that Agriculture delivers on its responsibilities under those memoranda.

7.2 Verification activities

Targeted operations and surveys are key tools that allow Agriculture to test the efficacy of its own biosecurity controls and intervention measures. By screening baggage, mail and cargo for goods that may not otherwise be subject to intervention for various reasons, Agriculture is able to verify that the control measures in place are achieving desired outcomes.

During the past decade, Agriculture has undertaken numerous targeted operations (also called surveillance surveys, end-point surveys or leakage surveys) to verify the effectiveness of biosecurity controls applied to high-risk goods and/or pathways. These activities have proven very useful in verifying compliance across various biosecurity pathways, as they enabled Agriculture to detect deliberate noncompliances. Some recent examples of these surveys include:

- Operation Cattai (importation of uncooked prawns and prawn products (IGB 2017))
- Operation Fraser (detection of pig meat in self-assessed clearance pathway (IGB 2020b))
- Operation Yanchep (onshore fumigation treatment providers (2018))
- Operation Coorong (broker lodgement of biosecurity and imported food entries (2020)).

The success of these operations demonstrates their value in verifying adequacy of biosecurity measures across the continuum and supporting ongoing maintenance of Australia's biosecurity integrity. However, the Inspector-General noted that, since the commencement of the Act, Agriculture has undertaken a very limited number of activities to verify the effectiveness of human biosecurity controls in the Vessels Pathway.

Given the level of threat posed by COVID-19, there is a strong argument that Agriculture needs to increase the level of intervention to a level that is commensurate with the risk presented by crew onboard commercial cargo vessels. Further, Agriculture should continue to monitor reporting of human health issues on the Pre-arrival Report, as several vessels failed to report illness onboard on time or did not report it until after berthing ([Table 9](#)).

Agriculture's Profiling and Targeting section undertakes targeted operations to identify, test, validate or refute potential threats and vulnerabilities to its regulatory model. The targets are either identified through noncompliance reports or intelligence or selected by the policy areas as a potential vulnerability. The Profiling and Targeting section works closely with the Enforcement, Non-Compliance Assessment and Response and Compliance Analysis and Testing sections; policy and operational areas; and exports division to develop and execute these operations.

Exercise EmergenSea Detour, 2019

On 1 May 2019 Health and Agriculture jointly conducted a half-a-day tabletop discussion exercise – Exercise EmergenSea Detour. Its objectives were to:

1. increase Health's understanding of Agriculture priorities, needs and procedures
2. increase Agriculture's understanding of Health priorities, needs and procedures
3. clarify how Agriculture and Health would interact in managing an outbreak of a communicable disease onboard a cruise ship
4. clarify how Agriculture and Health would interact with state and territory governments in this context
5. provide input into the development of the National Cruise Ship Policy for Communicable Disease Outbreaks on Cruise Ships.

From Agriculture's perspective, the exercise's scope explored border processes; and roles and processes associated with the Maritime National Coordination Centre, biosecurity officers and Human Biosecurity Officers.

The exercise included 2 specific scenarios:

1. **Scenario 1** – an outbreak of a listed human disease (pandemic influenza) on a cruise ship coming into Sydney
2. **Scenario 2** – an outbreak of an unknown, but clinically severe, disease on a cruise ship coming into Hobart.

The exercise served to inform policy development specifically regarding the cruise Vessels Pathway and its potential implications for a pandemic or another serious health incident onboard commercial vessels entering Australia. This is of considerable importance to both Health and Agriculture given the exponential growth of this sector and the corresponding risk. However, the Inspector-General does not consider that this matter could be adequately addressed in a short, Canberra-based tabletop discussion exercise.

The 3 state health agencies that participated in the exercise to assist with providing information about the range of those interactions were NSW Health, the Tasmanian Department of Health and Human Services and the Victorian Department of Health and Human Services.

The Exercise EmergenSea Detour report raised a number of issues that are relevant to this review in the context of the *Ruby Princess* incident:

- The Human Biosecurity Officer will be the communication link with the health department of their jurisdiction. They will pass on relevant information to the jurisdictional health agency as appropriate.
- When a health issue on a cruise ship may have national implications, Agriculture and/or the Human Biosecurity Officer will notify the Commonwealth when they become aware of this.
- When a traveller is ill on arrival, the biosecurity officer will complete the Traveller with Illness Checklist. If the checklist indicates the risk of a Listed Human Disease, the biosecurity officer will contact the Human Biosecurity Officer.

It seems that the types of events involving the *Ruby Princess* in March 2020 were key items of discussion during the exercise. However, when a real event occurred only 10 months later, critical errors occurred in the same key areas. This is very concerning, as it draws into question the value of the exercise or the commitment of relevant agencies to respond to the exercise outcomes.

It appears that objectives 3 and 4, set out above, were not delivered. When tested with an actual event, there was found to be an overwhelming lack of 'clarity' regarding roles, responsibilities and communication protocols between Agriculture, Health and state/territory government agencies. Had these protocols been adhered to in practice, the consequences of the *Ruby Princess* incident could have been mitigated or avoided.

Another objective of Exercise EmergenSea Detour was to inform the development of a National Cruise Ship Policy for Communicable Disease Outbreaks on Cruise Ships. The draft policy was circulated to key contributors, including Agriculture, Health, the Chief Human Biosecurity Officer forum, state and territory health authorities and industry, through the National Sea Passengers Facilitation Committee for final consultation in December 2019. This policy has not yet been released, despite the exercise occurring in May 2019 and the report being finalised in August 2019. It is perplexing that this updated policy was not made available to Agriculture before the COVID-19 pandemic impacted Australia. With cruise ships now halted, it has apparently been put on hold due to the pressures of response activities required for the COVID-19 pandemic.

Although the primary objective of this exercise was to build a better understanding of each agency's priorities, needs and processes in managing human biosecurity in Australia, it did not include other key stakeholders that play an important role in the clearance of cruise vessels – namely, all state and territory health agencies, Australian Border Force, port authorities and representatives from the cruise/shipping industry. These stakeholders could have provided valuable input and supported a broader understanding of roles and responsibilities across the pathway.

The Inspector-General concurs with the following media assessment (Zhou 2020):

'The report reveals that many of the areas of concern traversed in the special commission seem to have been practised in the Exercise EmergenSea Detour, but there was still an operational shambles 10 months later'.

Participants in the drill were asked to look at a scenario in which a large cruise ship was coming into Sydney during an 'influenza pandemic spreading globally', with 'a large number of people on board with influenza-like illness'.

Recommendation 14

Agriculture should develop and implement a schedule of 'pathway verification surveys' to ensure Health's policies on the detection and management of Listed Human Diseases at first points of entry are being followed and that they remain operationally appropriate and effective.

Nevertheless, the Inspector-General is concerned that, despite the fact that globally, since 2003, there have been outbreaks of several Listed Human Diseases (such as Severe Acute Respiratory Syndrome, Middle East Respiratory Syndrome, swine flu and Ebola), Agriculture was not sufficiently alert to the rapidly emerging COVID-19 threat that would directly impact biosecurity operations. Possible reasons for Agriculture's lack of preparedness in the case of COVID-19 pandemic appear to include:

- poor communication with Health, which is the lead agency for human biosecurity policy development
- preoccupation with preventative biosecurity measures for high-risk goods and pathways (such as cargo vessels for seasonal pests)
- prioritised management of biosecurity risks associated with the Travellers Pathway (that is, international passengers entering Australia through airports)
- poor emergency alertness and management response preparedness.

It is imperative that Agriculture act swiftly on new threats, incursion risks, potential large resource demands and resource inadequacy in any critical pathway, across all regions. This activity should be supported by standard emergency management methodology, including situation reports, risk assessment, escalation/stand-down and so on.

Recommendation 15

Agriculture should develop and implement a standard alert and preparedness system for application whenever there is credible intelligence that a major incident is likely to occur so that all relevant managers (from the relevant frontline areas to the Director of Biosecurity) are aware of the emerging incident characteristics.

Chapter 8

Human biosecurity risk management

Vessels that commence a voyage outside of Australia must moor at a first point of entry when they enter Australian territory. A voyage may comprise one or more visits to other Australian ports and continues until the vessel's departure from Australian territory.

Regulatory powers of the Commonwealth Minister for Health, the Director of Human Biosecurity and the Director of Biosecurity to manage human biosecurity risks under the Act are summarised in section 5.2. In practice, specific roles and responsibilities are assigned to individual officers in these agencies to enable them to manage human biosecurity at Australian first points of entry.

Soon after the *Ruby Princess* incident, pratique became the focus of discussion – notably, in the Special Commission of Inquiry into the *Ruby Princess* report (Walker 2020). Health and Agriculture have responsibilities to review vessels' human health status before granting pratique. In addition, Chief Human Biosecurity Officers and Human Biosecurity Officers provide expert medical advice to biosecurity officers about human health assessment onboard vessels. Biosecurity officers rely on this expert advice to make decisions about grant or denial of pratique to vessels.

However, Human Biosecurity Officers, who are state and territory officials of health agencies in those jurisdictions, may choose to assess and manage suspected Listed Human Diseases using state or territory powers under local emergency management and/or human health legislation. If the vessel master updates the human health status (indicating signs or symptoms of a Listed Human Disease onboard) before the vessel enters the precincts of the first point of entry, the vessel will become subject to negative pratique and no passengers can embark or disembark and no goods can be loaded or unloaded until a biosecurity officer grants pratique. If after the vessel's berth, the biosecurity officer records an illness related to a Listed Human Disease onboard a vessel during the Routine Vessel Inspection, the officer relies on the Human Biosecurity Officer's guidance to determine when to grant pratique so that passengers and crew can disembark the vessel.

Initially, as COVID-19 started to peak worldwide, there appears to have been a lot of confusion amongst biosecurity officers and their supervisors across regions. The main points of confusion were:

- **Roles:** There is multi-agency involvement in preventing entry of COVID-19 into jurisdictions. State and territory health agencies routinely obtained relevant advice from Health. On occasions, lead agencies within states and territories ordered vessels seeking pratique to remain at sea (anchorage) until a decision about pratique was made. Lack of clarity around roles and responsibilities added to the complexity of Agriculture's role.
- **Traveller with Illness Checklist / pratique:** Biosecurity officers were confused about granting of pratique, as they relied entirely on Human Biosecurity Officers in jurisdictions for advice on the Traveller with Illness Checklist. Human Biosecurity Officers often interchangeably used powers under state emergency and human health legislation to manage passengers and crew onboard international commercial vessels arriving at Australian first points of entry.

For example, during fieldwork in Queensland, the Inspector-General noted that Maritime Safety Queensland (MSQ) coordinated and managed the Queensland response to COVID-19. MSQ administers *Maritime Safety Queensland Act 2002* and *Transport Operations (Marine Safety) Act 1994*. Pre-COVID, MSQ was not involved in managing cruise ships. However, as COVID-19 spread worldwide, Queensland Health, just like other jurisdictions, had limited awareness or visibility in managing the risk of entry of COVID-19 into Australia via international passengers onboard cruise vessels. Given MSQ's ongoing involvement in managing maritime pilotage and safety, the Queensland Government assigned MSQ to manage commercial vessels to prevent entry of passengers and crew (who might be carrying COVID-19 virus) from entering the state.

During the COVID-19 pandemic, MSQ denied berthing permission to vessels subject to negative pratique and ordered them to stay anchored at sea. The Inspector-General noted that, when state and territory officials use powers under state or territory human health or emergency legislation, they are not acting as Human Biosecurity Officers under the Act.

8.1 Pre-arrival reporting

Each inbound voyage is initially considered high-risk until a risk assessment of the vessel has been completed. The assessment is based on its last port of call, its master's past biosecurity compliance history and the information in the Pre-arrival Report from the vessel's master or agent.

Pre-arrival Reports and Human Health Updates for the current and previous voyages (2016 onwards) are stored on the Maritime Arrivals Reporting System (MARS) and are available to the Australian Government and state and territory health agencies on request. Planned voyages and future ports for current voyages can also be viewed on MARS.

The Act and the Regulation specify which types of vessels are required to provide the Pre-arrival Report. Therefore, there are certain situations in which data will not be submitted or recorded on MARS. A Pre-arrival Report is not required if the vessel:

- transits through Australian coastal waters but does not dock at any Australian first point of entry at any time
- has not commenced its journey outside of Australian territory (domestic voyages)
- has not been exposed to another conveyance while outside Australian territory – this applies to cruise ships whose journeys originate and terminate in Australian territory but may include a leg that goes outside Australian territory.

8.2 Mandatory inspections

Based on the vessel's risk assessment (see 8.1 Pre-arrival Reporting), the ship is directed for various types of inspection, treatment and certification services as needed. These inspections include the following:

- ***Routine Vessel Inspections:*** As part of these inspections, the biosecurity officer examines all galleys, pantries, provision stores and some cabins, management of the vessel's waste facilities, ballast water verification, and any other areas deemed appropriate by the biosecurity officer.
- ***Ship sanitation certification:*** This is a certification that, at the time of inspection, there are no signs of rodent or mosquito vectors or reservoirs and no further measures are required.
- ***Seasonal pest inspections:*** A biosecurity officer assesses seasonal pest risk based on the vessel's previous ports or pre-arrival information and undertakes inspections for the presence of a seasonal pest onboard a vessel.
- ***Other inspections:*** These may include inspections concerning human health, international crew changes, waste surveillance, landed goods not considered cargo, livestock carrier vessels, ballast water, coastal strip of all biosecurity risk materials, cruise ship passenger day-trippers, general surveillance, and follow-up and verification of compliance with former directions.

The biosecurity officer inspecting the vessel may issue treatment directions to manage specific biosecurity risks. For example, food storage areas may be cleaned thoroughly after rodent droppings have been found; or specific cargo may be fumigated while the vessel remains offshore (for example, at anchorage) after brown marmorated stink bugs (a seasonal pest) have been detected. If needed, biosecurity officers undertake further inspections to confirm the efficacy of the treatment(s).

Most inspection activities are completed at the first point of entry. However, the vessel master may request services or require a follow-up (or verification) inspection at a subsequent port of entry. Most inspection types will remain in the inspection queue if they are not actioned at the first point of entry.

Vessels that are due for a documentary inspection under the Vessel Compliance Scheme (VCS) will have their pre-arrival documentation assessed by MARS and queue an inspection by a biosecurity officer to address any risks identified in addition to any services requested.

8.3 Traveller with Illness Checklist

The Traveller with Illness Checklist is a questionnaire developed by Health to assist biosecurity officers in identifying travellers who may be carriers of a Listed Human Disease. The checklist is used for both sea and air travellers and includes a series of questions to determine key signs or symptoms of recently acquired illness, such as coughing, chills or sweating related to fever. The checklist also serves to review the recent travel history of patient(s) to determine if they have visited any high-risk countries or regions or acquired illness as they got exposed to ill people and/or animals onboard the vessel.

Throughout the COVID-19 pandemic, Health updated the Traveller with Illness Checklist by adding additional questions to determine potential exposure to COVID-19 infection. Health provided the latest version (version 20.3) of the updated checklist to Agriculture in October 2020.

Ship crews cannot be relied upon to diagnose COVID-19 cases or accurately self-report illnesses. However, when a vessel submits its Pre-arrival Report they must declare if any passengers (and crew) are ill or have signs of a Listed Human Disease. When this occurs, biosecurity officers board the vessel to administer the Traveller with Illness Checklist to all ill passengers. The work instruction requires biosecurity officers to administer the checklist face-to-face (individually) to all ill passengers; however, this can be done by phone if circumstances require.

During the protracted period of the pandemic and during the Inspector-General's review, Agriculture made a number of changes to human biosecurity management of commercial vessels. This included drafting a new work instruction, *COVID-19 human health management process for commercial vessels*. The draft work instruction does not appear on Agriculture's Instructional Material Library (IML) ([Table 17](#) and [Table 18](#)); however, it is on Agriculture's internal SharePoint® (Vessels teamsite). The Inspector-General has been advised that the document is still in draft because it is anticipated that there will be a number changes to be incorporated, including changes to MARS. Although the document is marked as a draft, Agriculture has advised the Inspector-General that it has progressed the document through the Shipping Manager's Group and biosecurity officers are using it as a working document.

8.4 Recording inspection outcomes

After completing an inspection, the biosecurity officer discusses inspection outcomes with the vessel master. They will inform the master of any demerits applied to the vessel and how to avoid any noncompliance on the vessel's future visit(s) to the port. The biosecurity officer must finalise and upload the inspection while still onboard the vessel wherever feasible. It seems that all vessels have mobile phone network connectivity issues – some more than others. However, MARS is designed to run both online and offline. Officers can use offline eForms when connectivity is poor onboard the vessel. Inspection records are automatically updated when completed offline eForms get uploaded into MARS once the officer leaves the vessel and as the internet connectivity returns to normal.

MARS collates data from the eForm and presents the treatments applied, VCS demerit actions and proposed charges for the inspection. Before finalising the inspection, biosecurity officers can preview a copy of the Biosecurity Status Document to discuss with the vessel master.

8.5 Pratique

Pratique is the permission for goods to be loaded or unloaded from, and persons to embark or disembark from, vessels (or aircraft). The Act has 2 types of pratique, positive and negative. Positive pratique is granted automatically (by operation of the Act) when a vessel arrives in the precincts of the port of the first point of entry. Negative pratique must be granted by a biosecurity officer. By requiring negative pratique to be granted, any possible human health issues can be identified and managed.

Until pratique is granted, no person and/or thing can move on or off the vessel, except as allowed by law.

Positive and negative pratique

Under section 48 of the Act, positive pratique is automatically granted to incoming vessels arriving at one of the first points of entry, unless the vessel falls within a class of vessels specified in the *Biosecurity (Negative Pratique) Instrument 2016* – in which case, it is subject to negative pratique.

A vessel falls into a class of negative pratique when:

- it fails to provide a Pre-arrival Report
- the Pre-arrival Report shows an ill traveller who has or had signs or symptoms of a Listed Human Disease or a traveller who died during the voyage
- the Director of Human Biosecurity (Australia's Chief Medical Officer), a Chief Human Biosecurity Officer / Human Biosecurity Officer or a biosecurity officer becomes aware that a traveller onboard, or a traveller that has disembarked, has or had:
 - ▶ signs or symptoms of a Listed Human Disease
 - ▶ been exposed to a Listed Human Disease
 - ▶ died during the voyage.
- it is a non-commercial vessel (for example, a yacht or canoe that has crossed the Torres Strait) (Department of Health 2019).

Positive pratique status allows a vessel to embark and disembark passengers and load and unload cargo and stores without biosecurity officials' intervention. Negative pratique status prohibits a vessel from embarking or disembarking passengers or crew and loading or unloading cargo and stores until a biosecurity officer completes the Routine Vessel Inspection and, if no human biosecurity risks are found, grants pratique under section 49(4) of the Act.

Reporting illness onboard vessels

On reporting signs or symptoms of a Listed Human Disease ([Table 3](#)), the vessel is subject to negative pratique and therefore is not permitted to disembark travellers (commercial cruise ship) or to load or unload cargo (commercial cargo vessel). During his fieldwork, the Inspector-General noted biosecurity officers' concerns that a vessel may avoid reporting illness onboard in the vessel's Pre-arrival Report. Information the Inspector-General later received from Agriculture confirmed several instances where vessel masters either did not report any illnesses or reported illness just before berthing the vessel ([Table 9](#)).

TABLE 9 Inconsistencies in reporting of illnesses onboard international commercial vessels, Western Australia, May to November 2020

Vessel name and type	Date of arrival	Arrival port	Details
Al Kuwait (livestock carrier)	20 May 2020	Fremantle Port	<ul style="list-style-type: none"> No illness reported in the Pre-arrival Report (PAR) and vessel received pratique Medical log and master's interview did not identify any crew with a possible Listed Human Disease (LHD) onboard The day after vessel's berthing a local International Transport Workers Federation (ITWF) staff was approached by vessel's crew reporting illness 21 of the 48 crew were confirmed positive to COVID-19 (Australian Associated Press 2020)
Patricia Oldendorff (cargo vessel)	21 September 2020	Port Hedland	<ul style="list-style-type: none"> No illness reported in the PAR and vessel received pratique Before berthing, the vessel reported illness, and pratique was revoked The vessel held at anchorage and Health and Australian Border Force officials accessed the vessel and tested the crew for COVID-19, which returned positive Vessel was not permitted to berth at port. After 3 weeks at anchorage, the ship departed without loading any cargo
Kota Legit (cargo vessel)	3 October 2020	Fremantle Port	<ul style="list-style-type: none"> No illness reported in the PAR and vessel received pratique As vessel berthed and began loading and discharging containers, the Routine Vessel Inspection check of the medical log revealed an entry for a respiratory illness made 4 days before arrival, which was not declared in the PAR 1 crew member was tested for COVID-19 and returned a negative result Vessel received demerit points for not reporting illness onboard
Vega Dream (cargo vessel)	11 October 2020	Port Hedland	<ul style="list-style-type: none"> No illnesses reported in the PAR and therefore granted pratique Berthed and commenced loading before 7 crew members were found positive to COVID-19 Left port with a full cargo of iron ore
Al Messilah (livestock carrier)	14 October 2020	Fremantle Port	<ul style="list-style-type: none"> Reported 2 crew members with illness on the PAR – 1 with an upset stomach and another with an eye problem. As no LHD was reported in the PAR, pratique was granted 2 crew members attended the doctor were given a precautionary test for COVID-19, with both returning a positive result. Subsequently, 24 more crew members tested positive to COVID-19

Some biosecurity officers attributed the incorrect reporting of illness to language difficulties on the part of vessel masters because the form is only available in English. Others said that often there can be different views on what constitutes illness – for example, some vessel masters do not view crew as ill unless they are unable to work. Commercial drivers may also influence reporting in some situations.

There are several reports illustrating that COVID-19 can present as a mild illness in some individuals and in others it can be completely asymptomatic (Nogrady 2020). The Inspector-General noted that, before the COVID-19 outbreak in Australia, the body temperature threshold, as one of the symptoms of Listed Human Diseases, was set to 38 degrees Celsius. In July 2020, on Health's advice, as part of the revised screening process (see section 9.2), Agriculture updated MARS with a set of new questions. The Inspector-General has been advised that MARS will soon be updated with an additional question about COVID-19 symptoms experienced over the last 14 days, with the threshold body temperature lowered to 37.5 degrees Celsius.

Historically, many shipping companies have chosen Australian ports for 'crew change' – that is, the crew end their trip at one of Australian first points of entry and fly out to their home country. Most vessel masters comply with Australia's requirements by correctly declaring illness onboard vessels. However, as the COVID-19 situation got worse around the world, many countries refused to allow docking of foreign vessels within their territory. In some instances, foreign vessels wanted to dock to seek urgent medical help for crew who had developed symptoms of COVID-19. Australia, through state and territory health agencies, fulfilled its obligations under the Maritime Labour Convention 2013 (see section 6.2) by providing medical assistance to ill passengers and crew when required; and Agriculture dealt with noncompliant vessels by applying demerit points as appropriate.

Further, the Inspector-General noted that, unless the vessel master or an agent answers the initial question, 'Has any person become ill or shown signs of illness in the last 14 days?', subsequent questions seeking further details (such as symptoms) do not appear on the MARS online form. This is regardless of whether the symptoms suggest the onset of a Listed Human Disease. The Inspector-General therefore recommends that Agriculture apply improvements to MARS to allow presentation of the full series of questions to enable it to collect exact details of human health issues onboard all vessels entering Australian territory. This would remove the subjectivity around 'illness' and prevent bypassing of questions related to illness – enabling officers to collect sufficient information to make decisions on appropriate border biosecurity intervention measures. Agriculture should seek advice from Health before implementing this important measure.

Recommendation 16

Agriculture should collaborate with Health to review human health related questions in the Maritime Arrivals Reporting System form for the pre-arrival reporting, to:

- require reporting of symptoms as opposed to illness
- consider making the Pre-arrival Report form available in both English and other languages.

Record of pratique

Section 49(4) of the Act provides for pratique to be granted orally or in writing. Biosecurity officers must record in MARS, as soon as practically possible, the time pratique is granted.

Biosecurity officers grant pratique orally when there is poor internet connectivity onboard vessels (see section 13.10). Officers use mobile devices for recording observations (inspection outcomes) and they complete eForms in MARS to issue Biosecurity Status Documents. Due to poor internet connectivity, officers use offline eForms to save their inspection outcomes. On completion of the job, offline eForms saved on the officer's device are automatically updated in MARS as the officer returns to their office and internet connectivity returns to normal away from the vessel.

A biosecurity officer can be onboard a vessel for an hour or more. If the officer finds no human health issues onboard, the Act permits them to orally advise the vessel operator (master) about the inspection outcome. This enables the master to start disembarking passengers.

In the case of the *Ruby Princess*, Agriculture has not been able to determine the precise time the biosecurity officer 'orally' granted the pratique. In its Voluntary Statement to the Special Commission of the Inquiry into the *Ruby Princess* (Exhibit 119, AGS 2020), the Commonwealth noted:

The Commonwealth's view is that pratique was granted by [the officer], a biosecurity officer, by [their] submission of a routine vessel inspection form in MARS at 7.37 am in the circumstances outlined in the Commonwealth's statement at [167]. That decision was then, by the issuance of a Biosecurity Status Document (No 5), formally communicated to the operator of the *Ruby Princess* at 7.39 am (p. 13).

The Act and Agriculture's instructional material support the verbal granting of pratique; however, biosecurity officers are not directed to make contemporaneous notes that would include recording of the time and content of directions issued to the vessel's operator. Several biosecurity officers raised the issue of notetaking with the Inspector-General during his fieldwork.

As far as the granting of pratique to the *Ruby Princess* is concerned, if there was no 'verbal' granting of pratique, the earliest that pratique could have been granted was when the decision was recorded in MARS, which was at 7:37 am. That decision was then formally communicated, by the issuance of a Biosecurity Status Document (version 5), to the operator of the *Ruby Princess* at 7.39 am. However, as Commonwealth noted in its Voluntary Statement (Exhibit 119, AGS 2020) to the Special Commission of the Inquiry into the *Ruby Princess* (Walker 2020), the passengers began to disembark the vessel more than an hour before that time:

passengers commenced disembarking from the *Ruby Princess* between 6:30 am and 7:00 am on 19 March 2020. Documentation from the Port Authority indicates that disembarkation commenced at 7:14 am and concluded at 10.44 am (Walker 2020, p. 146).

As pratique can only be granted verbally or in writing, allowing passengers to disembark from the vessel before 7:39 am (or 7:37 am) appears to be contrary to section 48(1) (b) of the Act. The lack of clarity around events on the day (Walker 2020), including that no steps were taken to prevent disembarkation, warrants further investigation. If in the future a similar situation arose at one of Australia's first points of entry, it is unclear whether biosecurity officers would be able to prevent passengers and crew from disembarking commercial vessels. As Agriculture is in the midst of overhauling its protocols for the delivery of human biosecurity activities at first points of entry, it would be appropriate for it to seek legal advice on whether it is lawful for its officers to attempt to prevent passengers from disembarking the vessel until a decision about grant of pratique to incoming vessels is made.

In contrast, biosecurity officers who attended the *Golden Princess* cruise ship that docked at the Port of Melbourne on 19 March 2020 (the same day the *Ruby Princess* docked at the Port of Sydney) did prevent passengers from disembarking the *Golden Princess*. The Inspector-General commends the officers who attended the *Golden Princess* for their proactive approach and insistence from the Human Biosecurity Officer delay their decision to allow passengers to disembark until COVID-19 testing results of swabs taken from visibly ill passengers were received. The Inspector-General suggests that Agriculture should encourage frontline staff to adopt a proactive approach in taking similar decisions when they suspect that a Listed Human Disease may be onboard an incoming vessel. This comparison highlights the risk of localised work practices (as were prevalent in Sydney region), which appear to have contributed to the *Ruby Princess* incident.

On the previous voyage of the *Golden Princess* to an Australian first point of entry, the vessel agent had alerted local Agriculture staff that there had been a crew transfer onto the vessel from the *Diamond Princess* while the 2 vessels were berthed alongside each other in Singapore. It should be noted that the agent was under no obligation to report this, and this is not part of any pre-arrival risk assessment process performed by either Health or Agriculture. Although this intelligence concerned the vessel's previous voyage, there was a heightened sense of alert on the arrival of the *Golden Princess* at the Port of Melbourne. Similar intelligence was not available for the *Ruby Princess* before it docked at the Port of Sydney.

The Maritime National Coordination Centre had granted the *Golden Princess* pratique based on the Pre-arrival Report; which, in light of the intelligence, was purportedly revoked immediately before the vessel's arrival. Officials from Victorian Department of Health and Human Services attended to conduct COVID-19 testing of sick passengers onboard.

The Inspector-General is aware that, across jurisdictions, there are some variations in how biosecurity officers ('vessel inspectors') and Human Biosecurity Officers interact in managing the human health risks posed by incoming commercial vessels. It is to be noted that biosecurity officers rely on jurisdictions' assessment of incoming vessels' human health risk status and act on Human Biosecurity Officers' expert advice in making decisions. However, it is crucial that 'actions' in granting pratique to vessels are documented for trace-back and future improvements to work practices. Officers delivering the delegated regulatory responsibilities at the first points of entry carry a big responsibility, and Agriculture must support them by making available any expert advice that they require.

Some important points emerged from the handling of the *Ruby Princess* in Sydney and the *Golden Princess* in Melbourne:

1. The availability and use of intelligence, and the different human health risk assessments and advice by the respective state health agencies, resulted in contrasting outcomes for the 2 vessels.
2. Two senior and experienced officers managed to prevent passengers and crew from disembarking the vessel at the Port of Melbourne until the test results for COVID-19, from swabs taken from ill passengers, were obtained.
3. It appears that officers in Melbourne were able to avoid a repeat of the *Ruby Princess* incident because Melbourne did not have 'localised practices' and swabs returned a negative result for COVID-19.
4. Across the 2 regions:
 - a. there were inconsistencies in the delivery of regulatory activities at the first points of entry
 - b. staff who attended cruise vessels had different levels of seniority and experience
 - c. there was variability in the processes of granting pratique immediately after the announcement of ban on the entry of cruise vessels into Australia, even though there was a very clear change in human health risk levels presented by incoming cruise vessels.

Where pratique is granted verbally, a biosecurity officer should make contemporaneous notes and record the exact time the pratique is granted and the person to whom pratique was notified. This requirement should be incorporated in the instructional material. In addition, Agriculture has advised the Inspector-General that in July 2020 it amended MARS eForms to prompt biosecurity officers to record details of any oral granting of pratique for vessels arriving in negative pratique. It is to be noted that, before July 2020, MARS only required biosecurity officers to tick a 'box'.

Recommendation 17

Agriculture should ensure that, where pratique is granted orally, biosecurity officers make contemporaneous notes of the event – specifically, the time and to whom the advice was provided. Instructional material should be updated to reflect this requirement. The Maritime Arrivals Reporting System should also be updated to record details of the granting of pratique.

8.6 Regulatory powers available to frontline staff

Ability to grant or refuse pratique

Between 18 May and 22 July 2020, 3,022 commercial vessels entered Australian territory. Of these, 175 (5.8%) incorrectly reported answers to human health questions 1 and 2 on the Pre-arrival Report. This was confirmed during onsite verification of vessels' human health status by biosecurity officers during Routine Vessel Inspection.

Agriculture relies on vessel masters to accurately report human health issues onboard vessels – it uses these reports to assess biosecurity risks. If the answers to human health questions 1 and 2 are not answered correctly, Agriculture must examine the drivers for this error and reassess its controls and enforcement options to ensure ongoing compliance by vessel operators.

The proportion of vessels receiving positive pratique after incorrectly reporting the vessel's biosecurity status (175, or 5.8%, of Pre-arrival Reports received between 18 May and 22 July 2020) raises questions about the causes of the incorrect reporting. As the reported period falls during the COVID-19 pandemic's peak across the world, it is possible that vessel masters or shipping companies may have been prepared to risk demerit points for incorrect reporting to facilitate positive pratique. Further, as Australia is a popular destination for a 'crew change' for several shipping companies, incorrect reporting may have allowed crew to end their current assignment, as they would end their round trip at one of the Australian ports.

The fact that Agriculture tolerates the existence of a significant proportion of Pre-arrival Reports with incorrect information demonstrates its apparent naivety about the potential for vessel masters to circumvent Australia's requirements. It is unclear why answers to questions in relation to vessels' movement (that is, previous visits to ports that reported either elevated risk or outbreak of a Listed Human Disease) supplied on the Pre-arrival Report cannot be used in decision-making about pratique. For example, a vessel could have departed a high-risk port (that had reported prevalence or outbreak of COVID-19) within the previous 14 days. Regardless of the accuracy of the information provided on the Pre-arrival Report, pratique would remain positive, as the vessel's pratique status could only be changed to 'negative' based on one or more of the reasons set out in the Human Biosecurity (Negative Pratique) Instrument 2016 (see section 8.5).

The Act does not allow pratique to be granted subject to conditions or for pratique to be withdrawn. The Maritime National Coordination Centre officers cannot place a vessel into negative pratique based on whether the vessel master reports heightened human health risk onboard after the vessel's berthing. Currently, where a Pre-arrival Report declaring no illness onboard is received, a vessel is granted pratique regardless of where it has sailed from or the compliance history of the vessel master or the vessel from previous voyages to Australia. For these reasons, it is appropriate for Agriculture to seek Health's support to amend the *Biosecurity Act 2015* to give Agriculture the necessary powers to place a vessel into negative pratique based on heightened human health risk as it arrives at an Australian port precinct.

Recommendation 18

Agriculture should seek Health's support to amend the *Biosecurity Act 2015* to include provision for biosecurity officers to withhold pratique for vessels that have been assessed to pose higher risk for potential listed human diseases based on the Pre-arrival Report and other intelligence, such as whether vessels have visited high-risk port(s) within the previous 14 days before arrival at an Australian port.

Loading of cargo and stores for vessels in negative pratique

Under the Act, there is far less flexibility than there was in the *Quarantine Act 1908* to adjust Agriculture's response as human biosecurity risks change, as it does not provide conditions similar to 'Quarantine surveillance'. This is because, under the Act, a vessel in negative pratique is unable to embark and disembark passengers and load and unload cargo and stores.

The human biosecurity risk managed by pratique rests primarily in people disembarking a vessel. In doing so, they potentially spreading disease through the Australian community. Flexibility in allowing vessels with negative pratique to load cargo and stores and even unload cargo would allow Australia's import and export trade to continue while minimising the disease risk posed by crews onboard commercial (cargo) vessels.

Agriculture should consult Health and key industry stakeholders to assess risk levels and develop protocols specific to goods to be loaded and/or unloaded on such vessels. For example, a vessel discharging a bulk cargo (such as petroleum or liquid natural gas) or loading goods (such as wheat, iron ore or coal) would be able to minimise transmission of a Listed Human Disease if protocols are applied effectively. Nevertheless, provisions that allow sick crew to access essential medical attention would still apply.

In some instances, there could be both legal and humanitarian considerations where Agriculture had not yet granted pratique to vessels. Vessels in negative pratique may need to load stores and provisions before proceeding on an extended voyage on departure from Australia. Provided the human biosecurity risk can be mitigated, foreign vessels must be allowed to load stores and provisions.

Section 48(3) of the Act permits the unloading or loading of a thing, or the disembarkation or embarkation of a person, who is authorised under the Act or another Australian law. The *Navigation Act 2012* specifies that vessels must carry sufficient provisions for the seafarers onboard a vessel, having regard to the nature and duration of the voyage. As such, vessels in negative pratique are permitted to load stores. In other words, the section only applies to commercial cargo vessels or crew on cruise vessels (see more details in 'The *Globe Electra* (bulk carrier)' in section 8.6).

Agriculture should incorporate this information in relevant instructional material for biosecurity officers.

Recommendation 19

The provisions within the *Biosecurity Act 2015* relating to pratique should be reviewed to provide greater flexibility in managing pratique based on human biosecurity risk – in particular, to allow for aircraft and vessels to load and unload cargo and stores where this represents an acceptably low level of risk. The loading of provisions for crew onboard commercial cargo vessels and cruise ships in negative pratique should be incorporated in relevant instructional material.

Enforcing compliance with negative pratique

Before pratique is granted, the operator of a vessel must not allow anything to be loaded or unloaded or any person to embark or disembark the vessel. It is important to note that:

1. under section 21 of the Act, the meaning of the ‘operator’ of a conveyance is:
 - a. if there is a body corporate or an unincorporated body responsible for the operation of the conveyance – that body
 - b. in any other case – the ‘person in charge’ of the conveyance.
2. section 22(2) defines the ‘person in charge’ as the person in charge or command of the conveyance – this does not include a ship’s pilot.

In practice, the responsibility for compliance with pratique lies with the operator of the vessel. This means that the vessel master (the ‘person in charge’ of the conveyance) who breaches negative pratique cannot be held to account for any breach or noncompliance unless they are an ‘operator’ responsible for the conveyance’s operations. As almost all cruise ships are commercially operated by crews, it is the operator’s responsibility (that is, the body corporate or unincorporated body) to ensure the vessel’s compliance. Therefore, in these cases, only the operator can be held responsible for a potential civil sanction if a biosecurity officer detects noncompliance with the legislative requirements and the relevant civil penalty provision has been contravened.

Therefore, it appears that any passenger or crew member, who knowingly disembarks a vessel that is in negative pratique, may not be in breach of the Act. It appears that, in case of the *Ruby Princess*, if the biosecurity officer had notified the vessel master about the vessel’s negative pratique status and passengers and crew disembarked the vessel, apparently the body corporate of the vessel would have been responsible for any breach of the legislative requirements (see section 8.6). Only where Agriculture is unable to determine that a body corporate is not responsible does the responsibility fall to the ‘person in charge’ (who is usually the captain of the vessel).

Theoretically, on advising a vessel that is subject to negative pratique, passengers could refuse to comply by disembarking the vessel to take flights to return to their home country. In that situation, Agriculture would be powerless to prevent this from occurring unless Human Biosecurity Control Orders were issued. Similarly, if passengers (believed to be the carriers of COVID-19 virus), on disembarking the vessel, entered the Australian community, they will not be committing an offence under the Act. It would then be up to the jurisdiction to prevent COVID-19 positive passengers from disembarking the vessel (and entering the Australian community) under local emergency management or human health legislation, as appropriate. It is therefore important for Agriculture to:

1. work closely with Chief Human Biosecurity Officers / Human Biosecurity Officers within the relevant jurisdiction(s) to manage human health risks from Listed Human Diseases, as the decision to apply the jurisdiction's emergency management powers rests with those officers
2. update biosecurity policies / IML to reflect this, including Health's expectations of Agriculture staff as potential witnesses to noncompliance with state or territory legislation.

Further, if a Chief Human Biosecurity Officer, a Human Biosecurity Officer or a biosecurity officer considers that an individual may have a Listed Human Disease, they may require that person to comply with certain biosecurity measures by issuing a Human Biosecurity Control Order. It is only on issuance of the Human Biosecurity Control Order that a person who departs a vessel when it is in negative pratique will commit an offence by breaching the order, although they are not breaching negative pratique.

As noted in section 5.4, Article VII in Schedule 3 of the Health–Agriculture MoU places responsibility on Agriculture to undertake compliance and enforcement activities consistent with policy and procedures, with guidance from Health. Both agencies must clarify individual roles, responsibilities and expectations in managing human biosecurity incidents and noncompliance at the border (Recommendation 12).

Currently, there is no instructional material to guide biosecurity officers on the management of vessels subject to negative pratique. The MoU further states that Agriculture is required to ensure that biosecurity officers have completed all relevant training and have appropriate skills to use the compliance and enforcement mechanisms available under the Act.

Nevertheless, it is questionable whether Agriculture currently has the resources and capability to detect and manage breaches when a vessel is in negative pratique. The impracticalities of issuing large numbers of Human Biosecurity Control Orders to arriving passengers and crew are discussed in section 8.9. Under the Act, other than the Human Biosecurity Control Order, there does not appear to be any specific power available to biosecurity officers to prevent passengers or crew from disembarking a vessel that is in negative pratique. The Inspector-General considers that, to prevent repeats of the *Ruby Princess* incident in future, biosecurity officers must be given the powers to enforce negative pratique and tools to detect and manage noncompliance with pratique. Legislative change is required to make it an offence for an individual (passenger) to breach negative pratique. There should be an ability to apply sanctions, ideally including the ability to issue an Infringement Notice to the vessel's master and to any person breaching pratique.

The Special Commission of Enquiry into the *Ruby Princess* (Walker 2020) recommended:

- 2.22 That any future review of the Biosecurity Act consider the utility and possible expansion of human biosecurity control orders so as to be applicable to persons or groups.

When the ban on international cruise vessels was announced in Australia, it would have been desirable for Agriculture to have the power to place into negative pratique all cruise vessels in Australian waters that had not yet been granted pratique at the time.

Recommendation 20

The provisions within the *Biosecurity Act 2015* should be reviewed with a view to providing biosecurity officers with broader powers that will assist them in managing large numbers of passengers and crew with potential Listed Human Diseases onboard foreign commercial vessels.

Recommendation 21

The *Biosecurity Act 2015* should be amended to provide biosecurity officers with greater powers to enforce negative pratique, to provide for penalties to be applied to individuals who breach negative pratique, and to make the 'person in charge' (and operator) of a conveyance, defined in section 22 of the Act, also responsible for any noncompliance with negative pratique. This includes provision for issuing Infringement Notices for pratique breaches.

Agriculture's inadequate regulatory maturity and culture is evident from its biosecurity regulatory framework (IGB 2021). Management is in the process of revising the framework. In a recent review, the Inspector-General examined the adequacy of Agriculture's operational model to effectively mitigate pre-border and at-border biosecurity risks in evolving risk and business environments (IGB 2021). On the issue of Agriculture's 'regulatory immaturity', the Inspector-General noted:

Despite a lot of hard work by many dedicated individuals, the department's [Agriculture's] management of the system has failed to achieve the regulatory maturity required for implementation of key elements of the *Biosecurity Act 2015*. The department [Agriculture] did not complete the planned rollout of the Biosecurity Act implementation program, leaving managers, technical staff and frontline officers inadequately trained and supported in the delivery of the new regulatory regime. The department [Agriculture] must now address, fully and as a matter of urgency, major deficiencies in the way instructional and supporting policy documentation is developed, approved, stored, updated and made accessible to operational officers, especially those on the frontline (IGB 2021, p. 4).

The Inspector-General noted that, to exercise powers in accordance with the Act, Agriculture can also apply several important learnings from the Australian National Audit Office's performance audit, *Australian Border Force's use of statutory powers* (ANAO 2017), which highlighted several key components required to ensure the lawful exercise of powers in accordance with the applicable legislation.

Withdrawal of pratique

The Act does not include an express power to revoke pratique once granted. When dealing with goods or conveyances 'subject to biosecurity control', the Act includes provisions for bringing the goods or conveyance back under biosecurity control if a biosecurity risk is subsequently identified. This does not appear to be the case when managing human biosecurity.

In the instructional material provided to the Inspector-General there is no information about provisions to withdraw pratique. The MARS user guide (version 0.13) stipulates:

Can an inspector revoke the pratique status if the health status changes on board a vessel? Pratique cannot be revoked for a vessel, however if the master submits a subsequent health form during the voyage the BSD will be regenerated. The pratique section will have a yellow (traffic) light and state that pratique is granted however an issue has been declared and will be assessed at time of inspection.

As the MARS user guide is not a policy document, and biosecurity officers rely on instructional material for their decision-making, clear advice should be available to the officers on these types of key issues within work instructions and policy guidelines:

The lack of a pratique revoking power may be problematic where a vessel is automatically granted pratique on the basis that the pre-arrival report does not include a report of illness or death. This may leave the system open to gaming by vessel operators in order to minimise the likelihood of delays (DAWE 2020a).

Currently, state emergency powers, rather than pratique or Human Biosecurity Control Orders, are being utilised to prevent crew or passengers from disembarking arriving overseas vessels. In assessing the effectiveness of the management of arriving vessels using pratique, we must consider an environment without reliance on state and territory emergency powers.

A potential scenario may be where a biosecurity officer attends an international vessel arriving at a first point of entry to conduct a Routine Vessel Inspection, which may be 72 hours after the vessel arrives, noting that in some cases arriving vessels are not attended at all.

Where a biosecurity officer finds that the information on the Pre-arrival Report is inaccurate or out of date, and a potential human biosecurity issue is possibly present on a vessel, pratique granted by the Maritime National Coordination Centre / MARS based on the report cannot be revoked. Within that 72-hour period, cargo and stores may have been loaded or unloaded and, critically, crew and passengers may have been given permission to enter the community given the vessel's positive pratique status.

This scenario cannot happen today only because state and territory emergency powers can be used to restrict crew movement. The Commonwealth legislation should stand on its own terms so that human biosecurity risk can be managed at times when the state emergency powers are not in operation.

Where pratique has been granted based on the Pre-arrival Report, and an illness suggestive of a Listed Human Disease is reported during the vessel's Routine Vessel Inspection, biosecurity officers should have the power to revoke pratique to manage the risk.

Recommendation 22

The *Biosecurity Act 2015* should be amended to provide biosecurity officers with clear powers to revoke pratique, including where either incorrect or inaccurate information is supplied by the vessel operator or there are changes to the vessel's human biosecurity risk status over time.

This recommendation should be considered alongside Recommendation 20 to prevent large number of passengers ('groups of people') from disembarking the vessel. The power to manage groups could be used, for example, to contain passengers and crew onboard a vessel that has been granted pratique. This would negate the need for pratique withdrawal.

It should be noted that Recommendation 20 only relates to the management of people, not to goods such as cargo or stores. Negative pratique, as the legislation currently stands, also means that no cargo or stores can be loaded or unloaded (see section 8.5).

Confusion amongst frontline staff in relation to the application and withdrawal of pratique, or what they should do when pratique is breached, was evident to the Inspector-General during site visits.

On 16 September 2020, Agriculture's experts in regulation presented to the Inspections Group Executive the legislative requirements for granting pratique. The presentation clarified many of the questions biosecurity officers and their supervisors had about grant of pratique, including:

- classes of negative pratique covered by the relevant legislative instrument(s)
- activities prohibited until pratique is granted (that is, preventing passengers from disembarking and embarking the vessel; and not permitting the unloading and loading of goods)
- powers vested in biosecurity officers to undertake human health assessment onboard vessels, and make decisions about grant or revocation of pratique in consultation with Chief Human Biosecurity Officers or Human Biosecurity Officers
- granting pratique subject to conditions.

The Inspector-General noted that, until 9 November 2020, the above advice had not been formally relayed to biosecurity officers and had not been incorporated in any of the maritime instructional material. In addition, the information did not appear to have been shared with Maritime National Coordination Centre staff, who appear to have withdrawn pratique and/or placed conditions on vessels through the Biosecurity Status Document ([Table 10](#)).

TABLE 10 Grant and withdrawal of pratique to commercial vessels and COVID-19 status, 19 March to 17 November 2020

Vessel name and type	Date of arrival	Arrival port	Pratique		COVID-19 status
			Date granted	Date withdrawn	
Golden Princess (cruise vessel)	19 March	Port of Melbourne	16 March	19 March	Negative
Hokkaido Bulker (cargo vessel)	23 July	Port of Brisbane	13 July	20 July	Positive
			23 July	n.a.	
Globe Electra (cargo vessel)	7 August	Port of Bowen	4 August	10 August	Positive
			4 September	n.a.	
AAL Newcastle (cargo vessel)	22 August	Port of Townsville	20 August (10:07 am)	20 August (03:17 pm)	Negative
			21 August (11:44 am)	21 August (1:33 pm)	
			21 August (02:35 pm)	n.a.	
Occitan Barsac (cargo vessel)	12 September	Fremantle Port	3 September (1:48 pm AEDST)	12 September (6:31 pm WADT)	Negative
Silvermine (cargo vessel)	14 September	Port of Bunbury	6 September (12:49 pm AEDST)	6 September (11:49 am WADT)	Negative
Globulus (cargo vessel)	14 September	Port of Brisbane	Pratique not granted	12 September (09:40 am AEDST)	Negative
North Fortune (cargo vessel)	18 September	Port of Weipa	13 September	18 September	Positive
			19 September	25 September	
			14 October	n.a.	
True Endurance (cargo vessel)	5 October	Port of Port Hedland	21 September (2:22 pm)	21 September (4:33 pm WADT)	Negative
Patricia Oldendorff (cargo vessel)	21 September	Port of Port Hedland	13 September	20 September	Positive
			20 September	21 September	
			22 September	n.a.	
Seamax Stratford (cargo vessel)	1 October	Port of Brisbane	17 September	2 October	Positive
			2 October	n.a.	
LNG Jupiter (LNG tanker)	19 October	Port of Barrow Island	Pratique not granted	10 October (2:32 pm ACDST)	Negative
Ancapa Light (cargo vessel)	8 October	Port of Newcastle	23 September	n.a.	Positive
Asiatic (cargo vessel)	28 October	Port of Newcastle	Pratique not granted	25 October	Negative
Vega Dream (cargo vessel)	11 October	Port of Port Hedland	29 September	10 October	Positive
			10 October	10 October	
Divinus (cargo vessel)	14 October	Port of Newcastle	12 October (6:36 pm)	14 October (5:08 pm)	Negative

TABLE 10 Grant and withdrawal of pratique to commercial vessels and COVID-19 status, 19 March to 17 November 2020

Vessel name and type	Date of arrival	Arrival port	Pratique		COVID-19 status
			Date granted	Date withdrawn	
Al Messilah (livestock carrier)	14 October	Fremantle Port	13 October	n.a.	Positive
LNG Sakura (LNG tanker)	19 October	Port of Dampier	15 October (7:47 pm)	19 October (5:13 pm)	Negative
Key Integrity (cargo vessel)	17 October	Port of Geraldton	12 October	14 October	Positive
Sofrana Surville (cargo vessel)	11 November	Port of Brisbane	19 October (7:31 am)	19 October (9:53 am)	Negative
Asphalt Carrier (cargo vessel)	21 October	Port of Townsville	20 October (10:11 am)	20 October (2:19 pm <section 198 applied>)	Negative
Sunlight Express (cargo vessel)	31 October	Port of Melbourne	27 October (3:40 pm)	28 October (9:48 am)	Negative
Shinyro Maru (cargo vessel)	12 November	Port of Newcastle	Pratique granted by MARS	06 November (8:53 am)	Negative
Portland Bay (cargo vessel)	18 November	Port of Brisbane	16 November (11:19 am)	17 November (5:16 pm)	Negative

Agriculture granted pratique to a large number of vessels (Table 10) based largely on the Pre-arrival Report. However, pratique was withdrawn for each vessel, with the exceptions of the *Ancapa Light* and the *Al Messilah*. Agriculture did not withdraw pratique for these 2 vessels despite crew having tested positive to COVID-19. This demonstrates inconsistency in decision-making about grant and revocation of pratique.

It is therefore essential that relevant instructional material is updated with clear directions about the withdrawal of pratique and stressing that negative pratique means that people cannot disembark and goods cannot be loaded or unloaded. In the absence of this information, staff have continued to withdraw pratique in inconsistent and potentially unjustified circumstances.

Recommendation 23

Biosecurity officers who are responsible for administering pratique should be provided with the information they require to administer it correctly. Clarity on pratique must be included within instructional material used by biosecurity officers as a matter of urgency. Subject to the Memorandum of Understanding with Health being updated, a work instruction covering the management of vessels in negative pratique is required.

Updating a vessel's human health risk status

Many vessels that arrive in Australia dock at multiple Australian ports. They load and/or discharge cargo; and crew and passengers join and leave the vessel. Illness onboard can manifest at any stage. Certainly, as crew and passenger profiles change onboard vessels, the level of risk changes along with it. This is particularly evident for cruise vessels.

Section 193 of the Act requires the operator of a vessel to submit a Pre-arrival Report in relation to a vessel. Under section 194, the vessel operator is required to give additional or corrected information once they become aware that the information included in the Pre-arrival Report was incomplete or incorrect.

Agriculture does not monitor changes to the crew or passenger demographic to inform them of potential changes to the human biosecurity risk profile.

Currently many biosecurity staff consider that a vessel is under obligation to update its human health status and advise Agriculture of any illness onboard under section 194. However, that provision appears to be limited in its application, as it requires this updated information only where the information on the Pre-arrival Report could be considered 'incomplete or incorrect' at the time it was submitted. It can be argued that illness onboard a vessel that becomes evident at any stage after lodgement of the Pre-arrival Report does not render the report 'incomplete or incorrect' at the time it was submitted.

This differs from a (potential) requirement for vessel operators to update human biosecurity status or advise the Maritime National Coordination Centre of any potential new Listed Human Disease onboard a vessel after grant of pratique and departure from first port.

There may also be an issue of enforceability of section 194 of the Act if death or illness is not reported at any stage after the lodgement of the Pre-arrival Report, including the period between lodgement and arrival at first point of entry. If there is no specific requirement to provide updated information as circumstances change, any unreported illness onboard a vessel detected as a consequence of a human health inspection at first port can be explained as having become evident after the Pre-arrival Report was submitted – this could be 96 hours beforehand.

This appears to be a significant gap in the current human biosecurity reporting requirements. As a result, the Special Commission of Inquiry into the *Ruby Princess* (Walker 2020) recommended:

2.23 That the Biosecurity Act make explicit a requirement to update superseded human health information.

The Inspector-General concurs with Walker (2020) and recommends that the Act be amended to require vessel operators to provide updated biosecurity information onboard vessels as soon as they become aware of a change, including a change in human health status.

Recommendation 24

The *Biosecurity Act 2015* should be amended to require vessel operators to report updated biosecurity information, including human biosecurity information, if there are any changes to the information required under section 193 between the time that the Pre-arrival Report was submitted and the time of the vessel's departure from Australia.

Inconsistent decision-making about pratique

Patricia Oldendorff and Vega Dream (cargo vessels)

Early in 2020, international cruise vessels that entered Australia did not have the capacity to perform COVID-19 tests and did not have an approved protocol for submitting samples for testing as they voyaged to Australia. In that situation, vessel operators were required to report illness or symptoms of illness to enable Australian authorities (Agriculture or Health) to identify (and manage) a potential Listed Human Disease onboard. This would have direct bearing on the grant of pratique before vessel's arrival at an Australian first point of entry.

Up to 17 October 2020, Agriculture had granted pratique to 13 vessels where COVID-19 was confirmed onboard ([Table 4](#)). Subsequently, on docking of these vessels at an Australian first point of entry, a total of 166 persons (passengers and crew members) were confirmed to be suffering from the illness. This total of 166 does not include the numbers presented for the *Ruby Princess* cruise ship in [Table 4](#) (that is, 663 passengers and 191 crew members). This is because the number of people testing positive to COVID-19 kept rising as the passengers were tracked down and tested for COVID-19.

In examining pratique for the other 12 vessels, including the *Artania*, pratique was granted, based on the Pre-arrival Report, for 11 vessels before they arrived at an Australian port. Only one vessel – the *Dhun*, which docked at Hay Point (Queensland) on 18 August 2020 – arrived in negative pratique.

Of those 11 vessels, 7 had pratique subsequently withdrawn – in some cases, multiple times. For example, in case of *Patricia Oldendorff*, Agriculture granted pratique 3 times and withdrew it twice within 24 hours ([Table 11](#)). The records examined by the Inspector-General demonstrated that, for both the vessels, Agriculture issued at least 8 versions of the Biosecurity Status Documents over several day ([Table 11](#)).

Similarly, in the case of *Vega Dream*, Agriculture granted and withdrew pratique a few times. In its final advice (Biosecurity Status Document) to the operator, Agriculture noted that, because COVID-positive cases (ill crewmen) were confirmed to be onboard, the vessel was to remain in negative pratique (see the Maritime National Coordination Centre assessment in [Table 11](#)). However, the decision to permit the vessel to load cargo while in negative pratique is perplexing. This is because the Act is quite explicit in stating that nothing can be loaded onto or unloaded from a vessel unless pratique has been granted.

TABLE 11 Grant and withdrawal of pratique – *Patricia Oldendorff* and *Vega Dream*

Date and time	Biosecurity status document version	Pratique status and Maritime Arrivals Reporting System records
<i>Patricia Oldendorff</i>		
20 September 2020 7:11 pm	4	Pratique granted Under section 195(1) of the <i>Biosecurity Act 2015</i> this vessel must complete the additional health questions and return it to the Maritime National Coordination Centre (MNCC) for assessment within 3 hours
21 September 2020 2:40 pm	5	Pratique not granted The HBO has directed [that] the vessel can come alongside for the ill crewman to disembark and he must wear a mask. The pilot must wear personal protective equipment. No other disembarking, embarking, loading or unloading can occur until the COVID-19 result is known as negative
22 September 2020 2:19 pm	6	Pratique not granted MNCC advice 22 September 2020 (13:47 ACDT): Section 198 of the <i>Biosecurity Act 2015</i> , secure conveyance. The Human Biosecurity Officer (HBO) has directed not to berth until pratique granted after test results are received for both crew members. The vessel has approval to berth but does not have approval to load or unload cargo. Except to allow government officials and other authorised personnel access, the vessel does not have approval to embark or disembark crew or passengers
24 September 2020 1:46 pm	8	No change to Pratique MNCC advice 24 September 2020 (13:06 ACDT): The vessel is to remain at anchorage until further direction/s have been issued by a biosecurity officer
<i>Vega Dream</i>		
10 October 2020 12:27 pm	5	Pratique granted MNCC advice 10 October 2020 (11:50 ACDST): Section 195 (1) of the <i>Biosecurity Act 2015</i> . The additional health information recently requested, must be completed and returned to the MNCC via email within 3 hours
10 October 2020 6:43 pm	7	Pratique not granted MNCC advice 10 October 2020 (18:00 ACDST): The HBO has directed 'I believe that the ship can continue to load, but should not be granted pratique to leave port until COVID-19 testing has been completed on the ill crewman and an informed decision can be made, including assessment of whether the crewman is well enough to re-join the vessel for its planned departure tomorrow afternoon'
11 October 2020 4:38 pm	8	Final BSD issued. No change to Pratique MNCC advice 11 October 2020 (16:00 ACDST): The HBO has directed 2. Positive COVID-19 case confirmed in crew member. 3. Outbreak currently under investigation by Public Health, including contact tracing and plan for further testing of remaining crew

Source: Department of Agriculture, Water and the Environment

The Inspector-General noted several similarities between *Patricia Oldendorff* and *Vega Dream*, as both:

- are cargo vessels
- arrived at the same port (Port Hedland) within a span of 3 weeks
- were handled by the same team of biosecurity officers and Human Biosecurity Officers within the same region
- had crewmen who tested positive for COVID-19
- were denied pratique to berth at Port Hedland.

In both cases, COVID-19 (a Listed Human Disease) was confirmed onboard. However, the major discrepancy in Agriculture's decision-making was that it only allowed *Vega Dream* to load cargo, even though both vessels were in negative pratique.

Generally, Agriculture's assessment to grant or deny pratique to vessels that report illness onboard is based on human health assessment by Human Biosecurity Officers that a Listed Human Disease may be present after a biosecurity officer has administered the Traveller with Illness Checklist (section 8.3). If a Human Biosecurity Officer assesses human health risk to be unacceptably high, the biosecurity officer is advised accordingly. The biosecurity officer then records the Human Biosecurity Officer's advice in MARS. All actions undertaken are recorded on the vessel's Biosecurity Status Document in MARS.

As highlighted in [Table 11](#), advice was provided to Agriculture staff relating to the berthing of the vessel, the positioning of the vessel at anchorage and loading/unloading of cargo. For example, not allowing *Patricia Oldendorff* to load or unload cargo on 22 September 2020 may be appropriate given the vessel's negative pratique status at the time. However, pratique had been granted twice before that time, and it remains unclear to the Inspector-General on what basis that decision was taken, given the uncertainty about whether the Act provides for withdrawal of pratique.

Clearly, the Health–Agriculture MoU does not stipulate that Human Biosecurity Officers have powers to advise biosecurity officers about pratique beyond their legislated role (that is, when consulted, advising on human health matters onboard vessels). They may have a limited exposure to or knowledge of the Act, including the specific provisions related to pratique. However, even if a Human Biosecurity Officer advises about specific activities such as loading/unloading of cargo (in particular, when a vessel is in negative pratique), it is up to Agriculture to decide what to do.

It is of particular concern that, for several vessels, directions to grant and withdraw (revoke) pratique were provided multiple times. This illustrates a great deal of confusion within the biosecurity officer cohort about situations under which pratique was granted and then withdrawn. This needs to be clarified as a matter of urgency.

The Globe Electra (bulk carrier)

The Inspector-General also examined communication records between the Maritime National Coordination Centre and Agriculture's operational area (Biosecurity Operations Division) in relation to other vessels where pratique had been withdrawn. The Inspector-General found that the *Globe Electra* was granted pratique on 4 August 2020 and arrived at the Port of Bowen (Abbot Point) on 7 August.

On 8 August 2020, Agriculture and the Australian Maritime Safety Authority received an anonymous tip-off that, during a crew change in Manila (Philippines), one crew member, who was found positive to COVID-19, boarded the vessel. Based on the tip-off, on 10 August, Agriculture withdrew the *Globe Electra*'s pratique. The vessel remained anchored off the Port of Bowen. On 21 August 2020 Agriculture referred the matter to the Human Biosecurity Officer and Australian Border Force, granting permission for provisions to be loaded while the vessel was in negative pratique. It remains unclear to the Inspector-General why Agriculture depended on other agencies to make decisions about pratique when this is clearly within Agriculture's remit.

The loading of anything onboard a vessel in negative pratique is prohibited by the Act except where the loading or unloading of a thing, or the disembarkation or embarkation of a person, is authorised by or under the Act or another Australian law. Section 63 of the *Navigation Act 2012* states:

- (1) The master of a vessel must not take the vessel to sea, or cause or permit the vessel to be taken to sea, unless the vessel is carrying:
 - (a) drinking water of suitable quality and quantity; and
 - (b) food of suitable quality, quantity, nutritive value and variety; having regard to the nature and duration of the voyage and the number, and cultural and religious backgrounds, of the vessel's seafarers.
- (2) A person commits an offence if the person contravenes subsection (1).

It can therefore be argued that, under section 48(3) of the Act, the loading of provisions for the crew while a vessel is in negative pratique could be permitted under other Commonwealth legislation. 'Seafarer', as defined in the *Navigation Act 2012*, covers crew and not passengers (that would be the case onboard a cruise vessel).

To help biosecurity officers manage vessels in negative pratique, the Inspector-General suggests that Agriculture use this case as an example to train officers and incorporate it in the relevant maritime instructional material.

In contrast, 2 months after revoking pratique granted to the *Globe Electra*, Agriculture's decision to allow the *Vega Dream* to load cargo appears to have been based on section 63 of the Navigation Act. However, the basis for the decision to allow stores to be loaded is not evidenced by notes in MARS or in any supporting documents provided to the Inspector-General.

Under state or territory legislation, Agriculture cannot issue directions based on the advice of the Human Biosecurity Officer. However, if the direction was issued under that legislation by Health as a state or territory official (not as a Human Biosecurity Officer), that direction should be clearly recorded so to ensure lawfulness of the decisions.

Generally, when a biosecurity officer issues a direction – for example, for an ill crew member to be isolated to their cabin – the vessel master and the ill crew member will comply. If the person being directed has little or no knowledge of Australian legislation, they could believe they would have to face legal action if they did not comply with the direction.

Any direction given by a biosecurity officer must be lawful. If the direction is not lawful then any noncompliance cannot be enforced. There is also the possibility that in some cases, where a direction creates an impediment to commercial operations, Agriculture exposes itself to a legal action.

The examples of the *Patricia Oldendorff*, the *Vega Dream* and the *Globe Electra* illustrate inconsistencies and discrepancies in Agriculture's decision-making about pratique. These examples were selected because the Biosecurity Status Document in each case, along with the notes in MARS, provided sufficient information to gain reasonable understanding of the management of COVID-19 onboard these vessels. For several other vessels on which COVID-positive cases were recorded, Agriculture granted and revoked pratique, sometimes on several occasions. However, there are no notes in MARS to support the decision-making. Without the notes, it is difficult for the Inspector-General to determine how many times granting and revocation of pratique to vessels occurred. However, the available evidence suggests that it certainly extends beyond these vessels.

It is unclear what measures Agriculture put in place to help operational staff in making consistent decisions on the issue of pratique when COVID-19 positive cases become evident onboard incoming commercial vessels.

The Inspector-General does note that, on 29 July 2020, Agriculture issued an Operational Staff Notice 2020-57, *New interim COVID-19 work instruction for commercial vessel inspections* (DAWE 2020b). The notice advised staff of updated work, health and safety procedures for biosecurity officers at first point of entry and also included requirements about recording inspection notes, the time pratique was granted, to whom pratique was advised and any noncompliances. The notice included instructions to:

- review any email alert or advice from the Maritime National Coordination Centre or the Human Biosecurity Officer regarding the vessel
- record when pratique is granted (date, time and the name of the person who was advised)
- record any further inspection notes or communication regarding the vessel in MARS under the voyage number
- report noncompliance.

After the Operational Staff Notice was issued (in particular, between August and October 2020), very little appeared to have changed, as some staff continued to record either very few notes or incomplete details of their communication with Human Biosecurity Officers in MARS. This is demonstrated through MARS records of several vessels that were found to have COVID-positive cases onboard and therefore had their pratique revoked, as noted in vessels' Biosecurity Status Documents.

As a standard practice, when pratique status is amended, MARS is updated and an updated Biosecurity Status Document is issued to the vessel. The Inspector-General noted that, in several instances, biosecurity officers did not record enough information of the type that the Maritime National Coordination Centre normally uses in its decision-making about pratique. Further, scrutiny of information received from Agriculture illustrated that many of the decisions on pratique were based on email traffic between Agriculture's lead streams, the Maritime National Coordination Centre and Human Biosecurity Officers rather than on recorded notes in MARS. This is contrary to Agriculture's operational policies and instructional material, which require biosecurity officers to record in MARS observations and intra- and inter-agency advice about decision-making for the grant or denial of pratique to foreign vessels.

This demonstrates poor management of the Vessels Pathway and apparent disregard for the reforms the pathway was subjected to in 2015. Agriculture undertook extensive reforms (see Chapter 9) to the Maritime Pathway for efficient and effective biosecurity clearance of international vessels. The 2015 reforms were applied because previous outdated policies and procedures caused inconsistencies and inefficiencies that impacted Agriculture's ability to manage emerging and unexpected risks, including infectious human diseases.

Where a decision is made to revoke a vessel's pratique or conditions are placed on a vessel to address identified biosecurity risks, the basis for the decision-making must be recorded in MARS. This is particularly important for commercial vessels, as pratique has a direct bearing on their operational schedule, with potentially significant financial implications – particularly if delays happen due to unclear regulation or inconsistent decision-making.

Recommendation 25

Agriculture should make necessary improvements to Maritime Arrivals Reporting System (MARS) and relevant instructional material to ensure all correspondence between biosecurity officers and stakeholders relating to key decisions (such as the revocation of pratique) is recorded by notes in MARS. This would include any advice, discussions or directions from the Human Biosecurity Officer or the Maritime National Coordination Centre or specialist regulatory advice.

Both frontline biosecurity staff and Maritime National Coordination Centre staff appear heavily reliant on advice from Human Biosecurity Officers in managing the human biosecurity risk, and they appear to be providing directions to vessel operators based on that advice. When a Human Biosecurity Officer advises a biosecurity officer to take an action, the biosecurity officer must only perform that action or provide any such direction which is within the scope of their delegated authority.

Recommendation 26

Agriculture should review maritime training, Job Cards and all instructional material to ensure that staff have a clear understanding of their powers under the *Biosecurity Act 2015*. When acting on advice provided by Human Biosecurity Officers using state or territory powers, it should be clear that this is the case. Any directions provided by biosecurity officers should be directly referenced to their powers under the Act.

During the Inspector-General's interaction with biosecurity officers and their supervisors, it was confirmed that staff were unclear about their powers and the directions that they can lawfully apply. The Inspector-General recommends that, as a priority and in consultation with Health, Agriculture develop a practical documentation system (accessible on devices) for use in the field to enable biosecurity officers to make sound, lawful decisions. This workflow system should include phone/video links that allow frontline officers to access subject-matter experts directly to seek advice on complex matters when needed.

Recommendation 27

Agriculture, as a priority and in consultation with Health, should develop a modern, on-tablet workflow and searchable documentation system for use in the field to enable biosecurity officers to make sound, lawful decisions. This workflow system should include phone/video links that allow frontline officers to access subject-matter experts directly to seek advice on complex matters when needed.

Access to human health status of arriving vessels

In addition to the specific human health issues onboard cruise vessels (discussed in Chapter 1), community risks are also significant because at each port passengers may leave the vessel on 'day trips' to visit tourist attractions, where they have contact with tour operators and the public, and then reboard the vessel. Day trippers do not depart the vessel permanently, and Agriculture generally assesses them as low-risk from a plant and animal biosecurity perspective.

Another category of cruise traveller is the 'overlander', who may leave the vessel at one port only to rejoin the vessel at another port later in the voyage, making their own way back to the vessel.

Agriculture has advised that it does not have any specific policy covering day trippers or overlanders, and passengers leaving and rejoining the vessel at any stage are also not monitored.

In terms of human biosecurity risk, an onboard virus does not restrict itself to departing passengers. There is a significant risk that a community outbreak of the virus could be spread by day trippers. This was documented in New Zealand with the *Ruby Princess*, where 19 cases in Hawke's Bay were linked back to a tour guide who had come into contact with passengers from the ship as it docked in Napier on 14 March (Thomas & Reddie 2020).

During site visits, staff advised the Inspector-General that they would like more information on the crew and passengers onboard arriving vessels to assist either Agriculture or state or territory health agencies to perform a more rigorous human health risk assessment. Currently, the global COVID-19 pandemic means that all vessels may be reasonably assumed to be high-risk for COVID-19 and should be treated as if the disease is present onboard.

Without the reliable pre-arrival health information for the crew and passengers onboard a vessel, accurate risk assessment is not possible. Agriculture needs to be proactive in its approach and work collaboratively with Health to ensure appropriate policies and processes are in place rather than placing too much trust on vessel masters or their agents to report human health status accurately.

Recommendation 28

Information held by vessels and company agents relevant to the human biosecurity risk onboard international vessels should be examined by Agriculture and an improved process put in place that will allow assessment of the information for human health risk before vessels' arrival.

8.7 Case study – pratique granted to *Artania*

The cruise vessel *Artania* is another case study for pratique and the adequacy of biosecurity legislation. Biosecurity intervention on cruise vessels largely focuses on the arrival at first point of entry. However, illness can manifest at any stage of a voyage – for example:

- before submission of the Pre-arrival Report
- after completion of the Pre-arrival Report but before the vessel's arrival
- after the vessel's arrival at first point of entry
- at any stage as the vessel sails to another Australian port or ports before departure from Australian waters.

It is important to understand that the decision to grant pratique is based on the assessment of human biosecurity risk at a moment in time.

The *Artania* cruise ship received pratique on 27 February 2020 and docked at the Darwin Port on 29 February. Pratique was automatically granted in MARS, as the Pre-arrival Report did not report any potential Listed Human Diseases onboard. However, the vessel's risk status changed between when it first docked at the Darwin Port and departure from the Fremantle Port on 18 April 2020 ([Appendix C](#)).

By the time the vessel departed Fremantle Port on 18 April 2020, cruise vessels had been banned from Australian waters and the vessel had experienced a COVID-19 disease outbreak onboard.

The vessel was granted pratique at Darwin (the first point of entry) based on the assessed level of risk immediately before the vessel's arrival. However, the embarkation of passengers and crew at a subsequent port changed the human health risk level onboard. Overall, the vessel lodged 16 human health updates during the voyage. MARS also shows that human health inspections onboard the *Artania* were conducted in Cairns, Brisbane and Sydney.

On requesting details of these inspections, Agriculture advised the Inspector-General that there were no reported human health concerns at any port prior to arrival into Fremantle. As a result, no human health inspections were undertaken prior to arrival in Fremantle.

However, we now know that on the leg of the voyage between Sydney and Fremantle several passengers developed influenza-like illnesses and some of these passengers tested positive for COVID-19. Pratique was unable to be withdrawn, despite the vessel having confirmed cases of a Listed Human Disease onboard (even though pratique was withdrawn for other vessels on much later dates – see [Table 10](#) and [Table 11](#)).

The *Artania* case provides different perspectives on issues that generally exist for all cruise ships. Agriculture did not have systems in place to monitor human biosecurity risk changes other than an expectation that the vessel will report any signs or symptoms of a Listed Human Disease if and when it manifests. This does not appear to be covered by Health policy either. Also, there does not appear to be a requirement to notify Human Biosecurity Officers in each jurisdiction that an international cruise vessel has crossed into their jurisdiction.

The regulatory response and intervention levels appear different from one port to another; however, it is difficult to link this with the escalating changes in human biosecurity risk presented by COVID-19. The question remains: why do biosecurity officers attend at some ports and not others?

8.8 Enforcement

If a biosecurity officer detects a noncompliance with the legislative requirements, enforcement actions can be taken. Biosecurity officers must follow the relevant instructional material to commence enforcement proceedings. In an enforcement proceeding, a completed eForm with appropriate comments is essential.

Application of sanctions

Under the Act, noncompliance with human health requirements includes a mixture of criminal offence and civil penalty provisions. Civil sanctions – for example, infringement notices, civil penalty orders, injunctions and enforceable undertakings – form part of the suite of compliance response tools available to Agriculture as a regulatory agency.

To assess human biosecurity risk in the Vessels Pathway, access to accurate information is critical. Agriculture places heavy reliance on vessel masters and shipping companies to provide accurate and up-to-date information about vessels' human health status. It is recognised that some vessel masters and agents may provide incorrect or inaccurate information ([Table 9](#)). Where this occurs, sanctions should be applied to reduce noncompliance and discourage potential noncompliant behaviour.

During the Inspector-General's fieldwork, biosecurity officers expressed their frustration with the tools available to them to manage noncompliance – in particular:

- Many expressed a belief that some vessel operators were not reporting human health status onboard their vessel accurately.
- Unlike their colleagues in the Travellers Pathway, they were unable to issue infringement notices where noncompliance was evident. They also recognised that, from a financial perspective, an infringement penalty of between 2 and 12 penalty units (\$222 per penalty unit) is insignificant compared with costs involved in operating a commercial vessel.

Currently, there are no consequences for an individual for a noncompliance.

The biosecurity officers suggested that they should be allowed to issue an infringement notice to individuals as:

- it would serve as a deterrent
- it is relatively simple and expedient compared with prosecution.

The Inspector-General notes that Agriculture is aware that incorrect information may be provided on vessels' Pre-arrival Report, particularly in relation to the question about visiting a specific overseas port within the last 14 days. It is unclear what is being done to address this issue.

Where noncompliance in the form of providing false or misleading information on a Pre-arrival Report is attributed to an individual – for example, the master of a vessel – demerit points should be applied to the individual (that is, the person in charge or the operator). This could be in addition to the application of demerit points to the vessel.

Currently, Agriculture applies demerit points to vessels under its Vessel Compliance Scheme for a range of biosecurity issues identified during Routine Vessel Inspection. These demerit points then determine the risk level and frequency of inspection activity for the vessel in its future voyages (see section 13.6). It is to be noted that demerit actions under the Vessel Compliance Scheme do not replace enforcement actions under the Act; however, they can be an important tool in supporting enforcement actions.

Infringement notices

Infringement notices provide an effective method for dealing with certain breaches of the law without the need to go to court. They are typically used for low-level or high-volume offences. An infringement notice provides an alternative to prosecution for an offence and to court proceedings for a civil penalty order.

The Act includes an Infringement Notice Scheme, which modifies Part 5 of the *Regulatory Powers (Standard Provisions) Act 2014*.

There are 52 provisions in the Biosecurity Act that are subject to infringement notices under Part 5 of the *Regulatory Powers (Standard Provisions) Act 2014*. Some can be issued at first points of entry, such as seaports. These provisions apply across numerous environments, including seaports. Some relate to cargo and ballast water. Others can be used across the biosecurity continuum.

Civil Sanctions Taskforce

Since the enactment of the Act, Agriculture has had limited experience in using civil sanction tools, as it has not had an overarching compliance and sanctions or litigation policy to support their use.

Between 2016 and 2019, Agriculture focused on establishing an infringement notice capability to manage noncompliance in the air Travellers Pathway.

In 2019, Agriculture established a Civil Sanctions Taskforce to develop an end-to-end civil sanction capability for use across all portfolio areas that require regulatory compliance, such as biosecurity, exports, imported food, illegal logging, water efficiency and levies. In September 2020, the taskforce recommended that Agriculture:

1. implement a framework supporting the use of civil sanctions
2. develop new policies, governance structures, processes and guidance material.

As of late 2020 Agriculture has not extended infringement notices beyond Travellers Pathway (air passenger) to other parts of Agriculture's biosecurity business, including cruise vessel passenger arrivals, which falls under the area of responsibility for the Travellers Program.

The Inspector-General noted that section 532 of the Act provides for civil penalty provisions for false or misleading information or documents. Since the commencement of the Act, it is unclear when Agriculture used powers available under section 532 and under what circumstances. Agriculture risks criticism if it is unable to demonstrate that it has established an end-to-end capability for the effective use of civil sanction tools across each of Agriculture's regulatory systems. There is also a risk that Agriculture will not be an effective regulator, as Agriculture is not using all available tools to respond to and manage noncompliances.

Recommendation 29

Under section 532 of the *Biosecurity Act 2015*, Agriculture should apply civil penalty provisions across the business, including to masters of arriving vessels who provide false or misleading information and people who breach negative pratique. Further, Agriculture should consider the application of demerit points against individuals who are noncompliant as well as against the conveyance that they arrived on.

8.9 Human Biosecurity Control Orders

Both Chief Human Biosecurity Officers and Human Biosecurity Officers are authorised as Commonwealth officers for purposes of the Act where their function sits outside state and territory legislative jurisdiction. If a traveller is suspected of having a Listed Human Disease (based on the completed Traveller with Illness Checklist) then, consistent with the principles outlined below, a biosecurity officer is authorised to issue a Human Biosecurity Control Order to prevent the spread of the Listed Human Disease in Australian community. However, due to lack of clear guidelines, biosecurity officers lack confidence and have inadequate support in relation to the potential actions they can take. It is to be noted that to date no such orders have been issued.

A Human Biosecurity Control Order can only be issued where an officer is satisfied that an individual has signs or symptoms of a Listed Human Disease or has been exposed to a Listed Human Disease. Biosecurity officers may hold an ill traveller for a maximum of 6 hours at the port of entry until further advice is received from Chief Human Biosecurity Officer or Human Biosecurity Officer if there is an intention to impose a Human Biosecurity Control Order. A Human Biosecurity Officer or Chief Human Biosecurity Officer who authorises imposition of the Human Biosecurity Control Order is responsible for the management of the individual, including revision or revocation, during the time that the order is in force.

Part 3 of Chapter 2 of the Act sets out a range of measures, including vaccination, restricting the individual's behaviour and ordering the individual to remain isolated ([Appendix D](#)). The maximum penalty when an individual commits an offence against section 107 (Offence for failing to comply with a human biosecurity control order) is imprisonment for 5 years or 300 penalty units (A\$66,600) or both.

During fieldwork, the Inspector-General noted that the guideline *Death or illness of a traveller on board an international vessel* provides instructions to biosecurity officers how to impose a Human Biosecurity Control Order and what to do if a person issued with an order does not consent to the order. However, as none of these orders have been issued to date, officers were unclear about:

- their role in imposing or issuing a Human Biosecurity Control Order
- powers available to them to issue a Human Biosecurity Control Order
- processes to be followed in issuing a Human Biosecurity Control Order (as no instructional material is available)
- options available to them if a passenger or crew member either refuses to accept or breaches a Human Biosecurity Control Order.

It is therefore important for biosecurity officers to know what to do if the person does not consent to the issuance of the order and there is inadequate clarity on what to do if the conditions within the order are breached.

The guideline *Death or illness of a traveller on board an international vessel* covers all these aspects, but clearly biosecurity officers have not received adequate training in issuing Human Biosecurity Control Orders. Similarly, it is not clear to the Inspector-General as to who manages breaches to Human Biosecurity Control Orders both at the border and post-border. In practice, the responsibility for managing any non-compliance may fall to the Australian Border Force with the assistance of Agriculture (at the border) or relevant state/territory authorities (post border).

This is similar to managing vessels under negative pratique (see section 8.5).

A biosecurity officer may advise the vessel master that the vessel is in negative pratique and then move on to another job, knowing that there are people with a potential Listed Human Disease onboard. It is likely that the biosecurity officer may assume that the vessel master will comply with the directions. However, what if the vessel master does not? And who is responsible for ensuring that passengers and crew do remain onboard?

Both of these matters need to be clarified in the Health–Agriculture MoU by:

- identifying each agency's roles and responsibilities in managing breaches to Human Biosecurity Control Orders
- developing relevant policies and instructional material.

Recommendation 30

Agriculture should consult with Health about the need to:

- update its training and instructional material to specify appropriate legislative powers available to be used
- consider options to ensure Chief Human Biosecurity Officers and Human Biosecurity Officers in each jurisdiction are adequately aware of the statutory regime used to manage human biosecurity at first points of entry, the responsibilities of each agency and the correct use of powers.

The Inspector-General noted that Agriculture has commenced work on specific instructional material to guide officers to issue Human Biosecurity Control Orders when required. Agriculture has advised the Inspector-General that Health will review this instructional material before finalising it to ensure that it complies with the Human Biosecurity Control Order policy. It is essential that this occurs as soon as possible.

The Inspector-General considers that, in situations such as the COVID-19 outbreak in Australia, clarity about the use of legislative power to issue Human Biosecurity Control Orders is crucial. The Act allows for Human Biosecurity Control Orders be issued to individuals. It is to be noted that issuing a Human Biosecurity Control Order is feasible for a small number of arriving passengers and crew. However, the *Ruby Princess* cruise ship, which docked at the Port of Sydney on 19 March 2020, carried about 2,700 passengers and 1,000 crew onboard. It would have been impractical, if not impossible, to issue a Human Biosecurity Control Order to every passenger and crew member onboard the *Ruby Princess*. Realising the impracticalities of issuing these orders to every passenger and crew member, Walker (2020) recommended:

- 2.22 That any future review of the Biosecurity Act consider the utility and possible expansion of human biosecurity control orders so as to be applicable to persons or groups.

The Inspector-General concurs with Walker (2020) and recommends that Agriculture consult Health in amending the relevant legislative provisions to enable biosecurity officers to issue Human Biosecurity Control Orders to a group of people rather than individual passengers or crew members (see Recommendation 20).

During review fieldwork across 3 regions, the Inspector-General heard from biosecurity officers and their supervisors that there appears to be some confusion amongst Chief Human Biosecurity Officers and Human Biosecurity Officers about how they choose between legislative powers under the Act and those under state/territory health/emergency legislation (as applicable) for preventing entry of Listed Human Diseases carried into Australia by infected passengers.

As these officers also manage human biosecurity under their state/territory health and emergency management legislation, it is expected that they are more familiar with their jurisdiction's legislation. As the state and territory public health and emergency management legislation is also geared toward containing the spread of human diseases, these officers' use of powers available under their jurisdiction's legislation may be appropriate in some (but not all) situations. However, as medical officers undertaking dual role (for the relevant state or territory and the Commonwealth), more clarity in delineating Chief Human Biosecurity Officers' and Human Biosecurity Officers' use of power under appropriate legislation is needed. Although the Inspector-General's scope does not extend to reviewing actions of officers from other agencies, he deems it necessary to flag this matter for Agriculture so that Agriculture can review its arrangements with Health for efficient delivery of human biosecurity activities at first point of entry and update those arrangements as necessary. For example, if Chief Human Biosecurity Officers' and Human Biosecurity Officers' use of state/territory legislation over the Act stems from their lack of understanding of the Act, the Director of Human Biosecurity must ensure that the officers have received proper training in delivering delegated legislative powers.

The report of the Special Commission of Inquiry into the *Ruby Princess* (Walker 2020) also advised that there is lack of clarity amongst Chief Human Biosecurity Officers and Human Biosecurity Officers concerning the use of powers for Listed Human Diseases such as COVID-19. For clarity in the use of legislative powers by these officers, the Director of Biosecurity should share this feedback with the Director of Human Biosecurity to seek amendments to Health's policies and training material as relevant.

8.10 Ability to apply regulation

Chapter 5 illustrates roles and responsibilities of the various parties. Under the Health–Agriculture MoU, Agriculture has operational responsibilities to deploy biosecurity officers at first points of entry in Australia, deliver human biosecurity services at the border, and deliver human biosecurity emergency response services at the border as needed.

Currently it is difficult to assess the potential impacts of inadequacy of application of Agriculture’s regulatory powers given the involvement of state and territory governments in the management of the pandemic response at the border, airports and seaports. No Human Biosecurity Control Orders have been issued, and the restrictions on movement of passengers and crew within Australian territory have been managed by state and territory authorities. While states and territories are managing the borders (including seaports), Agriculture has a vital role in managing pratique for arriving vessels through administering the Traveller with Illness Checklist and consulting/notifying the Human Biosecurity Officers about suspected cases of a Listed Human Disease onboard vessels. The Inspector-General believes that, without states’ and territories’ support in preventing the entry of Listed Human Diseases at first point of entry, it would be difficult to know if a crew member had breached pratique and entered the Australian community.

As noted in section 10.6, frontline officers are generally not adequately familiar with the legislation. As a consequence, directions are being provided on the advice of Human Biosecurity Officers, which may not be appropriate. This includes directions provided to vessels communicated by the Biosecurity Status Document, which was amended in March 2020 to place restrictions on crew in relation to their movement, shore leave, interaction with non-crew personnel while at port and wearing of personal protective equipment. These changes were communicated to industry through Industry Advice Notice 41-2020 (DAWE 2020c) and to Agriculture staff by Operational Staff Notices 2020-15 and 2020-19 (DAWE 2020d, DAWE 2020e). However, Agriculture removed these changes from the Biosecurity Status Document on or around 28 December 2020 along with the links to the Industry Advice Notice and Operational Staff Notices, which were also removed from the external website and IML respectively. It is not clear how or why this occurred.

Under the current legislation, pratique is limited in its effectiveness in managing human biosecurity risk. Most commercial vessels where COVID-19 has been evident have arrived after having been granted pratique based on the Pre-arrival Report, with pratique then unable to be appropriately revoked.

An external regulatory design review draft report recommended:

Agriculture in consultation with state and territory agencies, need to determine legal and operational responsibilities for human health on a conveyance that is under biosecurity control and has a potential LHD incident that requires notification, assessment and management (DAWE 2020f).

As staff are unclear about the application of pratique, pratique is being granted and revoked (often multiple times); and some (not all) vessels have been permitted to load and unload cargo while in negative pratique. In the absence of clarity about their own role and responsibilities, staff have apparently deferred to state and territory health agencies to use state emergency management provisions to manage human health incidents onboard vessels.

Frontline staff rely on instructional material in the performance of their duties rather than working directly from the legislation. The instructional material is difficult for frontline staff to access, it is not adequately linked with the legislation, and it is not focused sufficiently on biosecurity or noncompliance outcomes. Examples are evident where instructional material is not adequately linked to legislation.

Verification activities that are designed to test biosecurity officers' competency, promote nationally consistent practice and detect gaps in instructional material clearly failed to detect localised work practices being applied in Sydney. The local protocol which differed from the national protocol was in place despite a verification system designed to detect and correct this if it was occurring. Similarly, verification has not identified the gaps in vessels instructional material where work instructions do not align with legislation. It is clear to the Inspector-General that Agriculture's verification activities are focused on the 'process', whereas they should verify staff competence to detect noncompliance in order to achieve intended biosecurity outcomes.

Overall, Agriculture's performance has been inadequate in applying regulation during the COVID-19 pandemic in Australia. The emergency management powers of states and territories have been the main determinant of human biosecurity risk management for vessels. For example, on 3 September 2020, Agriculture issued Operational Staff Notice 2020-70 about COVID-19 human biosecurity management for vessels, stating (DAWE 2020g):

Where the HBO assessment is YES to a COVID-19 risk on board the vessel, the local port inspection group must alert the ABF, the Port Authority, AMSA, state health and the vessel's agent of the outcome of the HBO's assessment and advice on managing the health risk of the vessel under negative pratique.

Notes:

- The management of the vessel with COVID-19 risk will be managed by state authorities.
- The local port inspection group will be kept informed of the management of the vessel until such time as HBO advises that pratique can be granted.

Chapter 9

Monitoring and adjustments to intervention measures

To ensure effective preventative biosecurity management, the most appropriate biosecurity controls must be applied in the correct situations. They must also be adequately resourced, effective, monitored and adjusted.

Between 2001 and 2010, Agriculture continued with its Increased Quarantine Inspection approach (see [Box 2](#)) to managing quarantine (biosecurity) risks across a number of high-risk pathways, including the Seaports Program (Vessels Pathway). However, in response to the Review of Australia's Quarantine and Biosecurity Arrangements (Beale et al. 2008) the Increased Quarantine Inspection approach was replaced with the risk-based intervention approach for all high-risk pathways, including the Vessels Pathway.

Box 2 Increased Quarantine Inspection

In 2001, Agriculture introduced the Increased Quarantine Intervention approach for several high-risk programs (pathways). Amongst other programs (pathways), this included Seaports Program. Under this program, the approach covered:

- **vessel inspection** – physical inspection of vessels at 100% intervention rate at proclaimed first point of entry when vessel is docked as close to arrival time as practical. The effectiveness target was set at 96% for higher risk and 50% for risk
- **passengers** – inspection regime at 100% intervention rate using X-ray, physical process or detector dog to examine passengers at proclaimed first port of entry when vessel is docked. The effectiveness target was set at 87% for higher risk and 50% for risk.

'Higher risk' were those items that, if released, would cause the most serious quarantine (biosecurity) consequences. Other items that would cause a significant but lower quarantine consequence were classified as 'risk' (Beale et al. 2008, p. 136).

A 100% intervention rate for inspections of vessels and passengers implied that in 2001 Agriculture considered the Vessels Pathway a high-risk pathway; however, 'passenger inspections' did not cover human biosecurity issues.

In 2020 Australia was presented with a very different and unprecedented scenario. Since 27 March 2020, no foreign-flagged cruise ships may enter Australian waters (with limited exceptions). The cruise ship ban was extended to 17 June 2021, but this does not mean the ban will be lifted at that time. The Australian Health Principal Protection Committee reviews the ban regularly.

Non-commercial vessels arriving in Australian territory from an overseas location must be aware of their obligations to keep Australia safe from COVID-19. This includes:

- leisure boats
- yachts
- superyachts
- non-commercial vessels that have been in contact with an international vessel (Department of Health 2021b).

9.1 Human biosecurity policy revisions

Recognising the significant risk posed by the COVID-19 pandemic since February 2020, to manage the response at the border, Health has updated a number of policies that Agriculture is responsible for implementing.

In 2019, Health drafted the National Policy for Reporting and Managing Communicable Disease Events on Cruise Ships. This policy was in the final stages of review when the pandemic struck. Unfortunately, this delayed the release and implementation of a policy that would have been pertinent to the circumstances, as this policy included measures such as:

1. enhanced measures at first point of entry
2. new arrangements between Agriculture, Health and NSW Health to manage human biosecurity at first point of entry
3. an update on how this has helped Australian Government minimise the entry of COVID-19 virus into Australia.

In March 2020, Health implemented the National Protocol for Managing Novel Coronavirus Disease (COVID-19) Risk from Cruise Ships for use by border agencies (Department of Health 2020b). In finalising this protocol, Health consulted key stakeholders, including Agriculture; the Department of Home Affairs; the Department of Infrastructure, Transport, Cities and Regional Development; the Australian Health Protection Principal Committee; Chief Human Biosecurity Officers; and the Cruise Lines International Association. During fieldwork in Sydney, the Inspector-General was advised that a copy of this protocol had not been provided to frontline staff in Sydney until 17 August 2020.

In February 2020, Health released the Protocol for Enhanced COVID-19 Border Measures (Commercial Vessels) and updated it on 4 occasions before July 2020 (Department of Health 2020c). The updates were necessary because, although cruise vessels had ceased entering Australia, commercial vessels continued to enter due to trade and the pandemic response continued to evolve.

In late March 2020, on Health's advice, Agriculture added the following additional questions about COVID-19 to the Maritime Arrivals Reporting System (MARS) for the vessel master to answer in the vessel's Pre-arrival Report:

1. Has the vessel left or transited through a port outside of Australia in the last 14 days?
2. Has any person on the vessel been in a country other than Australia in the last 14 days?
3. Has any person on the vessel been in contact with a confirmed case of novel coronavirus (COVID-19) in the last 14 days?

In May 2020, the Maritime National Coordination Centre began monitoring pre-arrival reporting against questions 1 and 2. As of 22 July there were over 175 vessels where the master or agent had under-reported their last port and arrival date in Australia.

On 22 July 2020, Agriculture sought advice from its Enforcement and Sanctions Branch about longer term enforcement actions to address the issues identified to improve accuracy of information supplied on Pre-arrival Reports. It remains unclear to the Inspector-General what enforcement actions Agriculture has put in place to manage compliance with legislative requirements.

Conditions placed on arriving vessels to manage human biosecurity risks

On 3 April 2020, to prevent entry into and spread of COVID-19 in Australia, Agriculture updated the Biosecurity Status Document by adding a number of conditions. These conditions were applicable either within 14-days after the vessels left their last international port or 14 days after the last person onboard left a country other than Australia, whichever date is later. The new conditions included the following:

- All crew must remain onboard while the vessel is berthed.
- Crew can disembark to conduct essential vessel functions but must wear a surgical mask.
- Crew must restrict their interaction with non-crew to interactions critical to the safe operation and loading/unloading of the vessel.
- Crew must wear surgical masks while non-crew (including biosecurity officers undertaking vessel inspection) are onboard, with a provision of 10 demerit points to the vessel per Biosecurity Status Document per crew member who is found not wearing a surgical mask for failure to follow directions.
- Shore leave may occur after 14 days have elapsed.
- There is specific information for crew leaving the vessel regarding isolation.

In addition, Agriculture added the following to the Biosecurity Status Document:

Conditions outlined in this document include directions issued under a specific section of the *Biosecurity Act 2015* and guidance on how to comply with the department's requirements. Failure to follow these conditions may constitute an offence, which may lead to penalties or prosecution under the *Biosecurity Act 2015*.

The vessel master or agent must notify the department immediately if any individual on board reports a change to their health status or if there is a suspected case of COVID-19 on board.

The requirement to provide Agriculture with updates on the health status of passengers or crew is discussed in section 8.6 (Recommendation 24).

Agriculture communicated the changes to MARS and the Biosecurity Status Document to staff via Operational Staff Notices (OSN) 2020-15 (DAWE 2020d) and 2020-19 (DAWE 2020e).

Furthermore, in the event of sickness onboard a vessel, biosecurity officers administer the Traveller with Illness Checklist as part of the Routine Vessel Inspection and contact the Human Biosecurity Officer for further advice if any human health issues are identified. Where this occurs, the Human Biosecurity Officer can provide advice to the biosecurity officer that the sick person must:

- remain at that place until medical services arrive
- isolate
- go to hospital in an ambulance
- report to a general practitioner for assessment or medical testing.

However, it is unclear what specific powers Agriculture has to impose or enforce any of these conditions, issued either through the Biosecurity Control Document or directly by a biosecurity officer to an ill person, without having issued a Human Biosecurity Control Order.

All conditions on the Biosecurity Control Document, and any directions provided by a biosecurity officer on advice from the Human Biosecurity Officer, are understandable and are aimed at addressing both human biosecurity risk and workplace health and safety concerns of the biosecurity officers. The directions may be appropriate under state or territory health legislation, in which case the directions should be provided by Health or, as a minimum, the source must be referenced. Interestingly, the Inspector-General noted that, around 28 December 2020, Agriculture updated the Biosecurity Status Document template, removing many of the requirements without any notice to frontline officers.

Nevertheless, the Inspector-General noted that frontline staff believed that the powers under the Act about conveyances allow Agriculture to set these explicit directions (conditions). A closer examination of the Act by the Inspector-General confirmed that the powers relating to conveyances specifically relate to movement, treatment or destruction of conveyances (illegal entry into Australian territorial waters) and do not appear to relate to any of the conditions placed on individuals listed above.

In the absence of specific legislative authority, biosecurity officers may be unable to enforce any of the conditions or take action where any of these conditions are breached. For example, if a direction from a biosecurity officer for crew member to wear a surgical mask is not lawful then it seems unreasonable that demerit points are issued to the vessel for the breach and the noncompliance is reported. It also is not clear what, if any, follow-up action arises from the noncompliance report the biosecurity officers are advised to complete.

Noting that these directions were removed from the Biosecurity Status Document template around 28 December 2020, it is vital that the document is reviewed to convey the relevant legislation specific to any conditions applied to the vessel or crew and the consequences of noncompliance.

Recommendation 31

Agriculture should review the Maritime Arrivals Reporting System Biosecurity Status Document to include the legislative basis for any conditions placed on the vessel or crew and the consequences of noncompliance. This change must be reflected in relevant maritime instructional material.

9.2 Enhanced human health screening for COVID-19

In June 2020, in one of the COVID-19 Working Group meeting of Chief Human Biosecurity Officers and the Communicable Diseases Network Australia Committee, Health and Agriculture jointly proposed a revised model to enhance human health screening of commercial vessels for COVID-19 for Chief Human Biosecurity Officers' endorsement. The main features of the revised model included:

- additional questions about symptoms specific to COVID-19 experienced in the last 14 days, as opposed to the other Listed Human Disease questions, which are about symptoms experienced at the time of reporting and not necessarily reflective of symptoms associated with COVID-19
- implementing an assessment by Human Biosecurity Officers for vessels that have persons onboard with symptoms associated with COVID-19 before the vessel arrives at port. This is different from the Traveller with Illness Checklist process that is used for other Listed Human Diseases, which is usually applied after the vessel has arrived at port
- resourcing support by Agriculture.

The committee accepted the proposal and additional COVID-19 questions were developed and agreed by Chief Human Biosecurity Officers.

In July 2020, Agriculture made initial changes to MARS and created instructional materials to implement the enhanced screening process for commercial vessels. Additional changes, including COVID-19 questions in the Pre-arrival Report, are under development.

9.3 Human health reporting digitisation project

In September 2019, Agriculture and Health signed a further MoU to jointly develop a mobile application for human health reporting under the Human Health Reporting Digitisation Project. Human Health Digitisation (HHD) is part of the Agriculture's Travellers and Mail Systems (TAMS) reform and aims to use the resultant mobile application (app) for Travellers Program. The app's specifications and features include:

- recording of relevant traveller details for contact tracing
- capturing travellers' health details consistent with the Traveller with Illness Checklist and Deceased Traveller Report, in a simple format that is easy to manipulate for quick analysis and integration with other datasets
- sharing traveller details on completed Traveller with Illness Checklists and Deceased Traveller Reports with Health in near real time (that is, within 15 minutes).

Ownership of data captured through the app will be jointly shared between Health and Agriculture. To date no staff in the Vessels Pathway (seaports) have had exposure to the app, and this reform is limited to the Travellers Pathway (airports).

The Inspector-General noted:

- In November 2020, Agriculture started using the app at airports.
- In December 2020, Agriculture began work to modify the app for use in the maritime pathway.
- The project team conducted 29 virtual information sessions for vessel inspectors and Maritime National Coordination Centre staff across the country. These sessions provided a practical demonstration of the app and informed officers of the benefits of using the app as opposed to the manual paper form.
- Agriculture established a Human Health Digitisation Maritime Working Group, with participants from the Maritime National Coordination Centre, Inspections Group and Technical Training Services.
- Agriculture continues to provide progress updates on the Human Health Digitisation Maritime project to Health through either the regular assistant secretaries or officer-level meetings.

Agriculture advised the Inspector-General that roll-out of the app in the Maritime Pathway has commenced. Full implementation is expected to be completed in April 2021.

Chapter 10

Staffing and staff competency

It is essential that biosecurity officers who are making crucial decisions – for example, when undertaking human health intervention – are fully competent to know what to do when biosecurity risks are detected and to address them efficiently. Similarly, Maritime National Coordination Centre officers and all immediate supervisors of staff involved with maritime biosecurity matters must be knowledgeable and skilled in the application of relevant provisions of the Act. Earlier sections of this report have highlighted significant issues of availability and relevance of instructional material, staff knowledge, regulatory training and process management.

Before undertaking independent inspections of vessels, a less experienced or junior officer undergoes on-the-job training alongside an experienced officer. After undertaking inspections as an assistant, the officer is required to demonstrate an acceptable level of competence before they are allowed to independently perform important regulatory activities such as completing Traveller with Illness Checklists and making decisions about vessel's pratique.

Biosecurity officers are often under pressure to perform multiple activities requiring judgement, concentration and attention to detail in potentially hostile environments. There is a longstanding practice of having lone officers inspecting commercial vessels at first point of entry. This places these officers in a potentially vulnerable position. It also creates opportunity for 'client capture' and for deliberate deception.

The Inspector-General considers that training provided to biosecurity officers needs to be strengthened. The level of training appears to be driven by tight resourcing constraints and management attempts to optimise availability of appropriately trained and authorised staff across diverse service demands. It is not the sole accountability of frontline officers. This is consistent with the Inspector-General's observation in his latest review of the adequacy of Agriculture's biosecurity operational model in mitigating biosecurity risks (IGB 2021). In this review report, the Inspector-General expressed his concerns about increasing residual biosecurity risk exposure of Australia. He noted a number of issues, including 'inadequate frontline and support personnel training in and knowledge of the relevant details of the complex biosecurity regulatory regime' (IGB 2021, p. 79).

This raises serious concerns, as Agriculture recognises ‘vessel inspection’ to be one of the specialised inspection activities. This means staff must be accredited to undertake such inspections. It is to be noted that:

- staff should only be assigned duties they have been trained or accredited to perform
- accreditations must be recorded so that schedulers, supervisors and managers are aware of the skill set of each frontline staff
- accreditations, which expire and require re-certification, should be managed effectively.

Recommendation 32

Agriculture should, as a priority, ensure that work allocation systems have sufficient controls in place to ensure that duties are not allocated to staff unless they have completed the requisite training and are appropriately accredited.

Recommendation 33

Agriculture should apply a comprehensive training and rotation program to maintain a pool of competent biosecurity officers with expertise in specialised vessel inspection areas and the experience necessary to cope with peaks in inspection demand. This program should be regularly reviewed and adequately resourced.

To tackle this, the Inspector-General recommends that Agriculture procure widely used, off-the-shelf software for scheduling and workload management. Once introduced, the scheduling and workload management system will address this issue, as the system’s inbuilt controls will prevent the allocation of duties to staff who do not have current and relevant accreditations.

Resourcing issues identified in the earlier Inspector-General report (IGB 2021) must also be addressed to enable frontline managers and staff to have the capability and agility to deal with diverse demands, particularly demand surges in specialist areas.

In the case of the *Ruby Princess*, pratique had not been granted by the Maritime National Coordination Centre. The Commonwealth's Voluntary Statement (Exhibit 119, AGS 2020) to the Special Commission of Inquiry into the *Ruby Princess* (Walker 2020) conceded that the human health inspection was completed without examining the vessel's medical log. The failure to check the medical log as part of the Routine Vessel Inspection is contrary to the work instructions as well as the localised work practices that existed in Sydney. Walker (2020) provided this evidence:

- On 17 March, there was a rapid rise in the number of passengers reporting with acute respiratory illness and influenza-like illness. A number of those passengers had tested negative to influenza A and B. If the Acute Respiratory Diseases log had been viewed on the morning of the 19 March, it would have been noted that the log had not been updated since 17 March 2020. This should have prompted contact with the Human Biosecurity Officer. By this stage, 120 persons onboard the ship had been diagnosed during the cruise with an acute respiratory illness, and the number of those with influenza-like illness had risen from 36 (0.94%) to 48 (1.26%).
- If the Acute Respiratory Diseases log had been viewed and the spike in illness identified, it would have been sufficient to change NSW Health's risk rating of the vessel (Walker 2020).

A summary of issues noted about inspection of the *Ruby Princess* cruise ship are listed in [Table 12](#).

TABLE 12 Summary of issues with the inspections of the *Ruby Princess*, 19 March 2020

Issue	Details	Source
Staff training	Training and verification records—records do not confirm that the biosecurity officers had been trained or verified against the specific activities assigned	Agriculture training and verification records
Work instructions	Biosecurity officers did not follow the RVI Work Instruction. The vessel's medical log was not examined but the box marked "satisfactory" on the MARS report was checked	Walker (2020) Agriculture MARS report for the <i>Ruby Princess</i> (19 March 2020)
Traveller with Illness Checklist (TIC)	MARS prompts biosecurity officers to administer the TIC for each sick passenger. This was not completed.	Walker (2020)
MARS online form	Requires the officer to record an 'illness summary'. This was completed as: 'gastro' – number of Travellers affected '6', action taken – 'Doctor on board'	Agriculture MARS Report for the <i>Ruby Princess</i> (19 March 2020)
MARS report	Question "Did the travellers disembark to seek medical attention?" was answered "No". However it is known that 2 travellers were taken from the vessel by ambulance for urgent medical attention	Agriculture MARS Report for the <i>Ruby Princess</i> (19 March 2020) Walker (2020)
Pratique	Grant and recording of pratique	This report (Chapter 8)

10.1 Mandatory training and qualification requirements

On 6 June 2016, the Director of Biosecurity made *Biosecurity (and Biosecurity Enforcement Officers) Determination 2016* under the Act. The training and qualifications requirements for a person to be a biosecurity officer or a biosecurity enforcement officer include completion of 2 training modules:

1. an introduction to the Act
2. an introduction to administrative decision-making.

Biosecurity awareness package

In 2017 Agriculture published an online educational material, [Biosecurity awareness package for first points of entry \(FPoE\) staff](#) on its website to facilitate understanding of biosecurity risk awareness so that industry operators at first points of entry, such as port authorities, berth managers and operators, and shipping industry can meet their regulatory obligations. This biosecurity awareness package:

- provides information about common and emerging biosecurity risks in a port environment and describes how industry can work with Agriculture to minimise the risk of exotic pests and diseases, including Listed Human Diseases, entering Australia
- serves to foster an increase in overall awareness of biosecurity risk in the port environment for the people most likely to observe biosecurity risks.

Soon after the commencement of the Act, as part of the initial first point of entry determination process, Agriculture required all applicants (that is, industry operators at first points of entry) to provide a statement as evidence to demonstrate that their relevant staff had completed the biosecurity awareness package. These statements were received as a good faith measure rather than a binding agreement (or reporting requirement), as no certification was issued and no list of staff who had completed the online awareness package was available.

Agriculture also requires all biosecurity officers (also called ‘vessel inspectors’) working with international arrivals at first points of entry to complete the awareness package to demonstrate they have acquired competence consistent with the *Biosecurity (and Biosecurity Enforcement Officers) Determination 2016*.

The Inspector-General identified several issues with the biosecurity awareness package, including the following:

1. It is primarily focused on risks associated with the arrival of international commercial cargo vessels that potentially serve a pathway for plant and animal pests and diseases for entry into Australia. There is a reference to the risk of human diseases transmitted by vectors (in particular, exotic mosquitoes), which largely covers preventing the entry of mosquitoes into Australia.
2. It does not cover human biosecurity in sufficient detail.
3. Its format does not lend itself to group or public presentation.

There is no means of verification that operators have undertaken the exercise, as no certificate of achievement is generated on completion.

Recommendation 34

Agriculture should, as a priority, update the *Biosecurity awareness package for first points of entry (FPoE) staff* by including:

- a specific topic on human health intervention, with a focus on preventing entry of Listed Human Diseases into Australia via the Vessels Pathway
- a provision to issue certification to industry stakeholders who complete the awareness package.

10.2 National Job Card – maritime vessel inspections

A Job Card is a written list of tasks to be carried out by an officer as part of a standard operating procedure. Agriculture published the first national Job Card for maritime vessel inspections in May 2011. Since then, the Job Card has undergone several revisions. The latest version (version 5) is *Maritime vessel inspection Job Card*, which was published in March 2019.

In August 2020, Agriculture updated the *Maritime vessel inspection Job Card* and rebranded it as the *Maritime Pathway – Commercial vessel inspection Job Card*. The updates reflect machinery of government changes and the change of the title of the Job Card.

A Job Card is a fundamental component of capability development and competency for all biosecurity officers who conduct vessel inspections. It ensures that the officers are competent in performing vessel inspections job function (including associated activities) to the specified standard of performance. To verify officers' competence, the essential components covered by the Job Card include:

1. knowledge of Maritime National Coordination Centre
2. preparation of vessel inspection using the Maritime Arrivals Reporting System (MARS)
3. Vessel Compliance Scheme
4. Pre-arrival Report
5. seasonal pest reporting and inspection requirements
6. crew change reporting and actioning
7. Routine Vessel Inspection
8. ballast water inspection.

Human health assessment is covered as part of 'Routine Vessel Inspection' to verify officers' competence in:

- death/illness/injury requirements
- Traveller with Illness Checklists and Human Biosecurity Officer contact knowledge
- human health queued inspection in MARS.

Not all vessel inspector positions/roles have a Job Card requirement, and there is a trend toward bundling key competencies into Job Cards that cover a range of skills and training requirements that an officer is required to complete as part of their role.

The Inspector-General noted that Agriculture has not developed a Job Card specific to cruise vessel inspections, as an accreditation is not required for human health assessment for the Vessels Pathway. Rather, these competencies appear to be signed off collectively as part of the broader Maritime Vessels Job Card, which is geared for Routine Vessel Inspection of commercial cargo vessels.

Agriculture developed the Maritime Vessels Job Card in May 2011. The last update was applied in November 2018. The Maritime Vessels Job Card is primarily focused on biosecurity clearance processes that relate to commercial cargo vessels in generalised terms. Additional requirements that suitably (consistent with legislation) capture human health issues onboard cruise vessels should be developed and incorporated into training requirements.

There have been outbreaks of several Listed Human Diseases overseas in the recent times, including Severe Acute Respiratory Syndrome (2003), Middle East Respiratory Syndrome (2012) and Ebola (2014). Given the significance of human health and the now demonstrated consequences of the COVID-19 incursion into Australia, in August 2020 Agriculture updated the Maritime Vessels Job Card to cover human biosecurity.

In relation to the arrival of the *Ruby Princess* and subsequent findings, Agriculture has stated in its response that the practice of Agriculture at the Port of Sydney was not to require biosecurity officers to interview the vessel master; rather, biosecurity officers relied on the Pre-arrival Report and Human Health Update forms submitted when completing the human health section of the Routine Vessel Inspection forms.

10.3 Competency framework

The information provided to the Inspector-General about minimum training requirements for biosecurity officers within Agriculture's Inspections Group ([Figure 1](#)) included information about an activity on 'Cruise vessel inspections'. All biosecurity officers who act as vessel inspectors are required to complete this training module within 4 weeks of starting in the role and before they are deployed at the first point of entry for clearance of cruise vessel passengers.

Agriculture developed the competency framework around the same time as the Act commenced. It was last updated in August 2019. It is divided into 4 broad categories:

1. **Core inspection competencies** covers basic competencies, such as documentation review, techniques for inspecting imported goods, sampling procedures, identifying and managing biosecurity risks, application of fees and charges and basic operational knowledge of data/information management systems (for example, the Mail and Passenger System, the Australian Import Management System and the Integrated Cargo System).
2. **Basic Tier 1 inspections** is targeted at low-risk pathways and imported goods – for example, inspections of cruise vessel passengers, international mail and air travellers; and the operation of X-ray machines.
3. **Advanced Tier 1 inspections** is targeted at high-risk pathways and imported goods. Biosecurity officers must acquire competencies for a large range of pathways and imported goods. Examples include inspecting break-bulk machinery, bulk commodities, used vehicles, vector disinsection, plants and fresh produce imported into and exported out of Australia as well as undertaking noncompliance actions end-point surveys in air travellers and mail pathways.
4. **Tier 2 inspections** is targeted at very high-risk pathways and imported goods. Biosecurity officers must acquire competencies for imported live fish, uncooked prawns, food, seeds for sowing, and nursery stock.

The cruise vessel inspections activity, *Conduct cruise vessel passenger clearance*, is listed in the 'Basic Tier 1 inspections' category. It covers staff competencies for cruise vessel passenger clearance.

10.4 Staff competency verification

Verification of staff competence is as important as staff training, as it helps ensure that the right people with the right skills undertake inspections correctly. In June 2017, Agriculture's Biosecurity Inspections Group developed a staff competency verification framework, which aims to:

- provide a level of assurance in the integrity of inspection activities delivered by biosecurity officers through accurate and appropriate use of systems and application of procedures
- complement any learning and development already undertaken and validate how this is applied on the job
- inform improvements in training and support needed for biosecurity officers
- identify continuous improvements in processes and systems.

The Biosecurity Inspections Group initiated the national approach to verifying officers' competence and committed itself to achieve 100% verification across all regions by 30 September 2017, in 2 phases:

- Phase 1 of the verification approach was to verify the most common inspection types in cargo, mail, traveller and vessels pathways. Phase 1 results identified several gaps in skills and knowledge of biosecurity officers, gaps in work instructions and systems issues. During the verification activity, Agriculture provided on-the-job training and support to officers who were then re-verified to ensure new tasks learnt were applied on the job. There were 3 focus areas against which biosecurity officers were verified: knowledge, policy and systems.
- Phase 2, initiated in May 2018, included a review of verification to ensure suitability of verification model.

The Biosecurity Inspections Group formed a Verification Working Group (governance team) that included an EL2 officer (a director, who is the national stream lead for the Travellers Pathway), 6 EL1 officers (assistant directors, representing all states and the Northern Territory) and 19 APS6 officers (managers, representing all states and the Northern Territory).

Team leaders and subject-matter experts in regions are responsible for verifying biosecurity officers' competence in undertaking regulatory activities at border, including first point of entry. Under the verification framework, each biosecurity officer's competence is verified once every 3 months across major pathways (for example, cargo, mail, traveller and vessels pathways).

Between 2018 and 2020 Agriculture completed 384 staff competency verifications for the Vessels Pathway across all jurisdictions ([Table 13](#)). These verifications were targeted at ascertaining officers' competence in undertaking inspections such as for ballast water, seasonal pests, cruise vessels, human health, livestock, ship sanitation and vectors.

TABLE 13 Staff competency verification inspections, by tasks and jurisdiction, 2018–2020

Tasks	NSW	NT	QLD	SA	VIC	WA	Re-verification	Total
Ballast water	7	0	24	0	3	16	3	53
Brown marmorated stink bug	1	6	7	1	2	0	0	17
Cruise vessels	0	0	0	0	0	1	0	1
Human health	1	0	3	0	0	1	0	5
Livestock	0	0	6	0	0	4	0	10
Routine Vessel Inspection	16	0	40	2	11	56	26	151
Ship sanitation certification	20	0	10	0	0	16	1	47
Vector	6	0	1	0	0	5	0	12
Yachts	7	5	6	0	0	1	0	19
Others	16	0	31	1	1	20	0	69
Total	74	11	129	4	17	120	30	384

Source: Department of Agriculture, Water and the Environment

Of 384 verification inspections, only 5 were directly related to human health. The Routine Vessel Inspection covers some human health component. However, just 5 verification inspections specific to human health over 24 months (and only one verification for cruise vessels) across all jurisdictions is certainly not sufficient. This raises concerns about Agriculture's priorities in verifying competence of frontline officers who are at the forefront of protecting Australians against Listed Human Diseases.

The Inspector-General recommends a thorough and independent review of Agriculture's staff competency framework to ensure that the quality of delivery of preventative biosecurity activities is consistent with the legislation. The review should focus on regulatory outcomes, not the process itself. This is consistent with assertions made in a report prepared by an external agency that comprehensively reviewed Agriculture's instructional material:

Task verification should verify that a biosecurity officer can perform the job role effectively to regulate the industry and manage biosecurity risks. ... in many cases, because of the way the work instructions are written, verification only verifies that the biosecurity officer can follow a procedure as opposed to performing a regulatory function and managing biosecurity risks.

Verification activities need to have a greater focus on biosecurity and regulatory outcomes and less focus on process.

In addition, the Inspector-General also emphasises that Agriculture should establish a mechanism for receiving feedback from frontline staff on whether preventative biosecurity controls across the continuum are practical and are achieving the intended outcomes.

10.5 Administering the Traveller with Illness Checklist

In its Voluntary Statement to the Special Commission of Inquiry into the *Ruby Princess*, the Commonwealth of Australia (Exhibit 119, AGS 2020) admitted that localised practices existed within Agriculture about:

1. human health inspection:

The practice of Agriculture at the Port of Sydney was not to require biosecurity officers to interview the Master and was for biosecurity officers to rely on the Pre-Arrival Report and Human Health Update forms submitted in completing the Human Health section of the routine vessel inspection forms (p. 10).

[the officer] completed these aspects of the Human Health Inspection with [another officer] once off the vessel and without regard to the medical log. The Commonwealth considers that it would have been desirable had there been a consistent practice in place at the Port of Sydney whereby biosecurity officers did check the medical logs (p. 10).

2. not administering the Traveller with Illness Checklist to passengers onboard the *Ruby Princess*:

Notwithstanding stipulations in Agriculture work instructions and guidelines, both prior to and after the advent of COVID-19, a practice existed within Agriculture of not administering the TIC to each sick passenger on cruise ships arriving in Australia at the Port of Sydney. While the TIC is well-adapted to the arrival of passenger planes (which typically carry significantly fewer number of passengers and proportionally fewer ill passengers), it was considered that it would take an impractical amount of time to administer on cruise ships, particularly where there had been a significant outbreak of illness on board. In that circumstance, the assumption of biosecurity officers at the Port of Sydney was that the human health risk posed by that outbreak would be managed by NSW Health, as they would attend the vessel in such cases (p. 10).

By granting pratique to the *Ruby Princess*, Agriculture, on advice from NSW Health, allowed sick passengers to disembark. This resulted in the transmission and spread of COVID-19 into the community. If the medical log had been examined and the Traveller with Illness Checklist administered to ill passengers, the biosecurity officer may have been able to establish that a Listed Human Disease risk was likely to be onboard the vessel and escalate the matter to a Human Biosecurity Officer. These tasks are documented in instructional material, yet neither was performed.

To prevent *Ruby Princess* type incidents from occurring in the future, it is important that Agriculture prioritise the development of 2 specific training modules:

1. Human Health Intervention

2. Administering the Traveller with Illness Checklist.

In addition, Agriculture should update the Maritime Vessel Job Card to include these 2 specific topics against which the biosecurity officers' competence would be verified.

10.6 Clarity of role at first points of entry

It is crucial that biosecurity officers at first point of entry understand both their own roles and responsibilities (including legislative powers) and the roles and responsibilities of other agencies involved in regulating entry of international travellers into Australia.

Chapter 8 provides several examples of occasions where biosecurity officers deferred human biosecurity matters to the Human Biosecurity Officers, seeking advice/directions to manage identified (and suspected) risks. The officers then provided those directions to vessels without clear legislative support. Issues have included vessels loading or discharging cargo while in negative pratique status, vessels being directed to remain at anchorage, or specific advice or conditions being placed on crew, restricting their movement. In all of these examples, actions were well-intentioned, and the directions were provided to manage the biosecurity risk. However, there needs to be a clear legislative basis for taking such action.

It is essential that biosecurity officers understand their powers and that, when other regulators or industry parties give them advice, they only follow this to the extent of their delegated and legislated authority. Where a Human Biosecurity Officer provides advice that is outside of this, staff must be able to recognise this discrepancy.

Where appropriate state or territory powers can be utilised to mitigate biosecurity risk, the direction can be provided by the entity with the appropriate authority. Understanding of the Act is generally suboptimal, with instructional material providing insufficient links to the legislation to adequately assist officers in understanding their legislative powers and obligations.

Government expects Agriculture to take a stronger regulatory posture to mitigate biosecurity risk. The messaging to frontline biosecurity officers is that Agriculture must become a more effective regulator. On site visits, staff mentioned that they would like to be able to penalise noncompliance more confidently and effectively. To achieve this, staff must have a clear understanding of compliance management, the legislation, their powers, gathering and documentation of evidence, adequate management, and expert backup. Providing warnings (where required by legislation), questioning and establishing the elements of relevant offences are all areas where there are current deficiencies.

The Inspector-General recommends that Agriculture review and update its training program with emphasis on the quality of assessments to help improve officers' decision-making capability. Incorporating lessons about problem-solving and encouraging officers to seek clarification in any questionable or complex situation would further enable officers in situations where the available information appears to be contradictory or inconsistent.

Recommendation 35

Using the *Ruby Princess* and other vessel incidents as case studies to demonstrate the lessons learnt, Agriculture should revise and update existing training packages to help biosecurity officers improve their capabilities in decision-making and compliance management. In particular, the following specific training modules should be developed and incorporated in the training module:

- Human Health Intervention
- Administering the Traveller with Illness Checklist.

During Inspector-General's fieldwork, biosecurity officers advised that the training and verification of staff is heavily focused on regulatory and administrative processes. Assessment of biosecurity officers' competency is done against 'business as usual' activities managing compliant entities. For example, in training and verifying their competence in conducting Routine Vessel Inspections, staff would have their competence assessed in performing their duties against most common inspection events, where there will not be any noncompliance. Staff must be trained to detect and manage unusual situations and noncompliance with human biosecurity requirements.

For example, if crew left a vessel that was in negative pratique for a shore visit during the night, Agriculture does not have any controls in place to detect this, prevent it from occurring or rapidly remedy the situation. Instructional material also does not provide directions to manage noncompliances associated with human biosecurity matters. The Inspector-General noted that, since the outbreak of COVID-19 in Australia, Australian Border Force, the Australian Maritime Safety Authority and state and territory agencies have taken the lead in preventing the risk of spread of COVID-19 onshore from infected people on arriving international vessels.

Chapter 11

Instructional Material Library

Instructional material contains information intended to direct and guide staff, enabling them to perform their roles effectively and efficiently. Agriculture uses a variety of instructional material across all streams and has 1,961 pieces of instructional material in its Instructional Material Library (IML) – a repository of all instructional material published to date since its inception in 2011.

Compliance by biosecurity officers with work instructions and technical operating manuals underpins the legal and administrative framework for managing biosecurity risks associated with the arrival of international passengers (by air and cruise ships/yachts) at first points of entry. Biosecurity relies entirely on specific instructional material to guide biosecurity officers in inspecting vessels and decision-making.

All instructional material could be one (or a combination) of the following:

- **policy** – a document linked to the legislation stating what must or must not be done
- **work instruction** – a document that describes a sequence of steps that form a procedure
- **user instruction** – a document that describes how to use a system or an equipment. A user instruction usually supports a work instruction
- **guideline** – a document that outlines processes and standards
- **reference material** – contains additional information to support a policy, guideline or work instruction. It includes forms, templates and checklists
- **operational staff notices** – notifications to staff with directions about a temporary or permanent change to an existing instruction; or a new instruction communicated to staff ahead of the development and release of a new work instruction or a guideline. Typically, the operational staff notices are valid for 3 months to allow streams to update an existing instructional material or publish a new one for release in IML.

Agriculture set up the IML as a central, authoritative repository for biosecurity instructional material in response to the Equine Influenza Inquiry findings (Callinan 2008). Key findings of the inquiry included:

- staff were not provided with sufficient training in biosecurity procedures regarding the horse import pathway
- instructions on the procedures for horse importation were confusingly written, not version controlled and not accessible
- there was no central repository for instructional material.

Agriculture expanded the IML to hold all of Agriculture's instructional material.

Agriculture identified a widespread lack of skill in writing instructional material, which resulted in the publication of poor-quality and unclear instructional material. Therefore, it:

- established the Practice Statement Framework, which is a quality assurance framework for the writing and publication of instructional material
- provided training, templates, technical writing and quality editing, and maintenance of the IML through the Practice and Procedural Design Section
- provided oversight of the Practice Statement Framework through the Legal and Regulatory Reform Committee.

11.1 Governance

The roles, responsibilities and interdependencies of various streams (divisions) involved in handling and processing requests for instructional material, including editing and publishing in the IML, are presented in [Table 14](#).

TABLE 14 Governance details for development, production and publishing of instructional material on the Instructional Material Library

Role	Responsibility
Document contact	<ul style="list-style-type: none"> • Coordinates the development, amendment and removal of instructional material from the Instructional Material Library (IML) • The role does not refer to ensuring the content is correct/current or aligns with legislation or engaging with department officers who will use this material to ensure they are able to follow the instructions on the ground
Editor	Reviews and edits content so it: <ul style="list-style-type: none"> • is clear, logically structured and easy to follow • complies with information type and presentation standards • meets government and departmental style guides and digital document accessibility requirements
Instructional material (business) approver	Certifies instructional material to ensure it: <ul style="list-style-type: none"> • has appropriate delegations • contains official departmental information that must be followed • is compliant and consistent with government and departmental policies • does not provide unlawful directions • is appropriate for publication on the IML
Instructional material owner	Certifies that instructional material: <ul style="list-style-type: none"> • is accurate, clear and fit for purpose • reflects legal advice (as relevant) • has been approved by the appropriate officer • will be implemented and communicated to staff • is compliant and consistent with government and departmental policies • reflects requirements identified in applicable workplace health and safety risk assessments
IML Systems team	<ul style="list-style-type: none"> • Assists document contacts to determine the appropriate location of their instructional material on the IML • develops 'landing pages' for IML content • uploads instructional material to and removes from the IML

11.2 Changes to Instructional Material Library

The key issues with the establishment and implementation of the IML and the development of instructional material are outlined in [Table 15](#).

The IML was redeveloped in 2015–16 as a SharePoint® based Controlled Document Management System. The system provides:

- a secure online platform in which instructional material can be developed, tested, approved and published using SharePoint® workflows
- automatic retention and attribution of all input by instructional material drafters
- version control, with all versions remaining in the system and able to be retrieved.

TABLE 15 Key issues with the establishment and implementation of the Instructional Material Library

Key issue	Description
Instructional Material Library (IML) platform	The IML was established as a basic SharePoint® library
Instructional material oversight	Agriculture's centralised oversight in the Practice and Procedural Design (PDD) Section in the Biosecurity Legislation Implementation Branch. The section's role was to provide technical writing and editorial assistance and reviewed instruction material to ensure adherence to publication standards and governance of instructional material
Instructional material templates	Instructional material had to be developed in word templates which were emailed to staff for drafting
Instructional material drafting process	<p>The instructional material template was provided to staff for drafting</p> <p>The PPD section received the drafted instruction material and then edited the material</p> <p>The instructional material would then be sent to an approver for review and approval and then submitted to the IML to be published</p> <p>If an approver required changes, the PDD section had to edit the instructional material</p> <p>The key issues were:</p> <ul style="list-style-type: none"> • it did not provide assurance of version control • it was hard to track contributions to instructional material drafting
Record keeping	Many sections who drafted instructional material did not create records for their instructional material. The PDD section began keeping records on behalf of sections due to the significant volume of requests to provide archived copies of instructional material
Instructional material ownership	When Agriculture's organisation structure changes, at a section, branch or division level, the ownership of the instructional material is not updated. This leads to difficulties in identifying and tracking instructional material including who owns and is responsible for updating the material

11.3 Material published on Instructional Material Library

As of 30 November 2020, Agriculture had published 1,961 instructional material documents on the IML ([Table 16](#)). Of these, about 65% of documents were work instructions (668) and references (601) combined. In addition, there were 222 guidelines, 203 templates and 122 forms, with fewer numbers of checklists, operational staff notices, policy documents, user instructions and Job Cards. However, there were 70 instructional material documents that were outdated and should have been removed and archived.

There are 34 instructional material (documents) specific to maritime (Vessels Pathway) published on the Sea Vessels page in the IML. The Inspector-General noted that several pieces of instructional materials were out of date.

TABLE 16 Instructional material published on the Instructional Material Library, 30 November 2020

Current instructional material	No.
Policy	26
Guideline	222
Work instruction	668
User instruction	17
Operational staff notice	38
Reference	601
Form	122
Template	203
Checklist	54
Job Card	10
Outdated instructional material	No.
Business policy	9
Instruction and guideline	44
Standard operating procedure	16
Plan	1

11.4 Mandatory minimum standards for instructional material

To ensure consistency across all materials on the IML, Agriculture has developed 2 specific instructional material documents to guide its staff who develop new instructional material or amend existing material. These include:

1. ***Writing instructional material***, which ensures that instructional material complies with government and departmental policies and standards, including formatting, styling and accessibility requirements (DAWE 2020h)
2. ***Development, amendment, removal and approval of instructional material***, which provides an end-to-end process to assist staff to develop new instructional material or amend or remove existing material (DAWE 2020i).

Staff are required to send drafts of their work instructions to a ‘technical editor’ within the IML team. Technical editors are professional editors who review and edit draft instructional materials to ensure compliance with Agriculture’s minimum standards for publishing.

The Inspector-General noted that, over time, Agriculture has reduced its technical editing capacity from 4 to just 1 technical editor in the IML team. Due to high demands to publish instructional material (and to revise previously published instructional material), this technical editor typically has a backlog of up to 6 weeks. Since at least 2018, this has resulted in delays in publishing new instructional material and revision of previously published instructional material. Given the criticality of the material for frontline biosecurity officers, who rely on it to deliver biosecurity regulatory activities at the first points of entry, Agriculture must address this bottleneck to enable instructional material to pass through development as soon as practically possible. There have been concerns that strict editorial parameters can compromise the usability of instructional material if the intent of the material is altered as part of the clearance process. Simply changing a few words can unintentionally alter the intent of instructional material for the reader.

As work instructions are shared internally with the workforce directly involved in managing biosecurity risks largely at the border (including at first points of entry), it may not be necessary to mandate such editing. Relevant technical areas must be responsible (and held accountable) for the currency, accuracy and usability of relevant instructional material, particularly in light of Agriculture’s diminished emphasis on provision of a technical editing capability.

During fieldwork at regional centres, the Inspector-General heard from frontline staff and their managers about the difficulties in publishing instructional material on the IML, mainly because of the strict editing requirements and protracted timelines. To tackle this, some of Agriculture’s streams have recruited their own full-time technical editors and undergone an accreditation process formalised through service level agreements – eliminating the need for a full edit by a technical editor within the IML team. The documents still require appropriate approval from relevant delegate(s) for publishing. This approach has provided a lot of relief to Agriculture streams that have undergone massive change in recent years and needed to publish/revise a large amount of instructional material.

11.5 Maritime biosecurity instructional material

In November 2017 Agriculture internally published a comprehensive, 72-page overarching policy framework, *Biosecurity management of maritime vessels*. The framework describes the policy intent that underpins the instructional material for the management of commercial maritime vessels. It covers internal roles and responsibilities but does not delineate responsibilities for Travellers Program and cruise vessel passenger clearance. In addition, it lacks clarity on roles of the Australian Border Force and Health in managing human biosecurity issues encountered at first points of entry.

A list of instructional material used by biosecurity officers in managing maritime human biosecurity risks at first points of entry is presented in [Table 17](#) and [Appendix E](#).

TABLE 17 Maritime instructional material with human health component, 2016–20

Instructional material	Release date	Comments/issues
<i>Standard operating procedures</i>		
Routine Vessel Inspection (version 1)	8 February 2012	<ul style="list-style-type: none"> Phased out
<i>Work instructions</i>		
Undertake a Routine Vessel Inspection (version 0.12)	12 May 2017	<ul style="list-style-type: none"> Not on Instructional Material Library (IML) (submitted to the IML for publishing 22 Feb 2021) Available on the on Maritime Pathway SharePoint® site No formal document control, published date or version history
Undertake a Human Health Inspection on board international vessels (version 0.10)	12 May 2017	<ul style="list-style-type: none"> Not on IML To be published on the IML after the Maritime Arrivals Reporting System (MARS) Phase 2 rollout is complete in April 2021 and the draft work instruction is tested during the Phase 2 testing Available on the on Maritime Pathway SharePoint® site No formal document control, published date or version history
Undertake a Ship Sanitation Certificate Inspection (version 0.12)	12 May 2017	<ul style="list-style-type: none"> Not on IML (available on the on Maritime Pathway SharePoint® site) No formal document control, published date or version history – currently under review for publishing on the IML
Clearing maritime crew leaving a vessel (version 0.8)	12 May 2017	<ul style="list-style-type: none"> Not on IML Available on the on Maritime Pathway SharePoint® site No formal document control, published date or version history – awaiting delegate approval for publication on the IML Ill crew members are out of scope

TABLE 17 Maritime instructional material with human health component, 2016–20

Instructional material	Release date	Comments/issues
Undertake subsequent vessel inspections, including follow-up, general surveillance and verification inspections (version 0.5)	12 May 2017	<ul style="list-style-type: none"> • Not on IML • Available on the on Maritime Pathway SharePoint® site • No formal document control • No published date or version history • The clearance of passengers and day trippers disembarking cruise vessels are out of scope
COVID-19 human health management process for commercial vessels (version 2)	31 July 2020	<ul style="list-style-type: none"> • Draft document • Not on IML • Available on the on Maritime Pathway SharePoint® site • Cruise vessels and non-commercial vessels are out of scope • To be published on the IML after the MARS Phase 2 rollout is complete in April 2021 and the draft work instruction is tested during the Phase 2 testing
Inspecting non-commercial vessels (version 3)	3 September 2020	<ul style="list-style-type: none"> • Requires biosecurity officer to refer to additional instructional material if the inspection is not routine (that is, Guideline: Death or illness onboard an international vessel) • Revised and published on the IML 15 February 2021 with further revision currently underway

Guidelines

Death or illness of a traveller onboard an international vessel (version 2)	26 August 2019	<ul style="list-style-type: none"> • On the IML and the on the Maritime Pathway SharePoint® site
Intervention with cruise vessel travellers (version 1.0)	17 November 2016	<ul style="list-style-type: none"> • On the IML in the Travellers section • No reference to the procedure for ill passengers except the Traveller with Illness Checklist is listed in paperwork • Travellers on commercial vessels, naval vessels and yachts are out of scope

Policy documents

Maritime Pathways Policy Statement – human health and pratique (version 1.0)	14 May 2019	<ul style="list-style-type: none"> • Draft document • Provided to the Inspector-General but does not appear to be on either the IML, SharePoint® or Intranet
Maritime Pathways Policy Statement – Ship Sanitation Certification (version 1.0)	22 August 2019	<ul style="list-style-type: none"> • Draft document • Provided to the Inspector-General but does not appear to be on the IML, SharePoint® or Intranet
Biosecurity Management of Commercial Vessels Policy Framework (version 1)	13 November 2017	<ul style="list-style-type: none"> • Not on IML • Available on the on Maritime Pathway SharePoint® site • Does not include the intervention and process for passengers and day trippers disembarking vessels • Shelved (did not progress beyond drafts)

11.6 Maritime instructional material saved outside the IML

During fieldwork, the Inspector-General received extensive feedback on difficulties in locating instructional material on the IML. This is because several of the key maritime instructional material (including on Routine Vessel Inspections) were not available on the site (Table 18). Vessels Program has consolidated relevant instructional material on the 'Vessels' SharePoint® teamsite. Staff advised the Inspector-General that they referred to this teamsite (not the IML) when seeking instructional material for vessels.

TABLE 18 Human health instructional material developed in 2020

Instructional material (version)	Release date	Issues
<i>Work instructions</i>		
COVID-19 human health management process for commercial vessels (version 2)	31 July	<ul style="list-style-type: none"> Draft document Not on Instructional Material Library (IML) – to be published on the IML after the Maritime Arrivals Reporting System (MARS) Phase 2 rollout is complete in April 2021 and the draft work instruction is tested during the Phase 2 testing Available on the on Maritime Pathway SharePoint® site Cruise vessels and non-commercial vessels are out of scope for this work instruction
MNCC—human Health management process for commercial vessels (version 3)	27 August	<ul style="list-style-type: none"> Appears to be a draft document Not on IML Available on the Maritime Pathway SharePoint® site Cruise vessels and non-commercial vessels are out of scope for this work instruction
Inspecting non-commercial vessels (version 3)	3 September	<ul style="list-style-type: none"> Requires biosecurity officer to refer to additional instructional material if the inspection is not routine (that is, Guideline: Death or illness onboard an international vessel)
<i>Guideline</i>		
Maritime Arrivals Reporting System (MARS) Biosecurity Officer (Internal) User Guide (version 2)	February	<ul style="list-style-type: none"> Published on the IML on 1 March 2021 Available on the on Maritime Pathway SharePoint® site
<i>Workflow charts</i>		
MNCC HHU FPoE option 1 workflow 8e	9 November	<ul style="list-style-type: none"> Not on IML Available on the on Maritime Pathway SharePoint® site
MNCC HHU Subsequent ports option 2 workflow 8e	9 November	<ul style="list-style-type: none"> Not on IML Available on the on Maritime Pathway SharePoint® site
MNCC HHU Information not returned option 3 workflow 8e	9 November	<ul style="list-style-type: none"> Not on IML Available on the on Maritime Pathway SharePoint® site
Inspections Group CoVid-19 workflow for commercial vessels (version 3.0)	July	<ul style="list-style-type: none"> Not on IML Available on the on Maritime Pathway SharePoint® site

TABLE 18 Human health instructional material developed in 2020

Instructional material (version)	Release date	Issues
<i>Operational staff notices</i>		
Coronavirus and enhancements in MARS (2020-06)	14 February	<ul style="list-style-type: none"> • MARS user guide not updated • Expired on 14 May 2020
Updated COVID-19 Changes in MARS to include China, Iran, Republic of Korea and Italy (2020-13)	6 March	<ul style="list-style-type: none"> • Replaces 2020-06 (Coronavirus and enhancements in MARS) • MARS user guide not updated • Expired on 6 June 2020
Updated COVID-19 changes in MARS (2020-15)	20 March	<ul style="list-style-type: none"> • Replaces 2020-06 (Coronavirus and enhancements in MARS) • MARS user guide not updated • Expired on 20 June 2020
Changes to a human health pre-arrival question in the Maritime Arrivals Reporting System (MARS) (2020-16)	25 March	<ul style="list-style-type: none"> • Expired on 25 June 2020
Updated COVID-19 advice for biosecurity officers and how to confirm a vessel's last port of call (2020-19)	2 April	<ul style="list-style-type: none"> • Expired on 2 July 2020
New interim COVID-19 work instruction for commercial vessel inspections (2020-57)	29 July	<ul style="list-style-type: none"> • Expired on 29 October 2020
COVID-19 Human Health management for vessels (2020-70)	3 September	<ul style="list-style-type: none"> • On IML • Expired on 3 December 2020

SharePoint® teamsites do provide a 'work-around' to many of the issues with the IML, but it does not fix the problem. In some ways it creates additional risks (as highlighted in the Callinan report (Callinan 2008)) as it is very simple to upload documents to SharePoint® teamsites and amend and delete them without any version control or indexing, and there needs to be some oversight. Using the SharePoint® teamsites to invite comments on draft documents is a common practice; however, it should be clearly marked as such. This is because it is not always clear to staff that the material is in 'draft' or the reason it has been uploaded. The IML system was implemented to address this risk and provide a controlled environment to develop and review documents to manage the risk that staff could accidentally use a draft document operationally.

For example, the Inspector-General noted that in October 2020 a work instruction, *MNCC – Human health management process for commercial vessels (V.3)* was saved on SharePoint® under 'MNCC new Health Work Instruction 1e (004) 20201109', but it was not available in the IML. The document was not marked as 'draft' and did not have a document ID approval and had not undergone any technical editing required for publishing on the IML. It remained unclear to the Inspector-General whether the document was saved on SharePoint® as a draft for receiving comments from frontline or other officers. There are some serious concerns with the material in the document and some risk should it be utilised by operational staff. This constitutes an almost identical scenario around draft instructional material to that identified in the Callinan report (Callinan 2008) about the 'Operations Manual for Horses at Government Post Arrival Quarantine Station', which led to substantial confusion amongst staff regarding whether the document was for comment or a finalised material for use.

As can be seen from [Table 18](#), some instructional material is available on SharePoint® for operational policy areas that is not available on the IML. This includes key documents such as the Work Instruction *Undertake a Routine Vessel Inspection*.

Follow-up with the IML team revealed that version 1 of the Work Instruction *Undertake a Routine Vessel Inspection* was published on the IML on 8 February 2012 and was deleted on 16 January 2017. The replacement work instruction document was initiated for development in the IML's controlled document management system in September 2017 and has gone through several stages of document review but has not been approved or published on the IML.

The version of the Work Instruction *Undertake a Routine Vessel Inspection* on the Vessels SharePoint® site was created using an IML Work Instruction document template, so at first glance it appears to be an approved piece of instructional material. However, it has no watermark or other indicators that identify it to be a draft document. The IML footer in the document lacks a document ID, classification level and version number, and some fields are still marked as *PPD to complete* (the Practice and Procedural Design was the old section name for the IML team). There is no records management container number in the Document Information table, and the version history table also lists a version 0.12 as being 'PPD approved'; however the IML team has confirmed that they did not approve the document and do not have that role in the development process.

These details point to the possibility that the template was either saved out of the document review workflow at an early stage or was a template saved by the Sea Vessels area from an earlier document development process, which was then used to draft a document outside of the official instructional material development process and system.

In September 2018 Agriculture's Internal Audit Team completed a report examining biosecurity risk through the Vessels Pathway (see section 7.1). This report included a recommendation:

Guidance materials should be:

- Reviewed and updated to include practical inspection considerations.
- Finalised on the Instructional Material Library.

The Internal Audit Team rated this recommendation as 'low' priority and management agreed to complete it by 31 October 2018. Although the 'low priority' rating of this recommendation is arguable, Agriculture did not complete the suggested review of the maritime guidance (instructional) material and it was not finalised on the IML. The Inspector-General noted Agriculture's indecisiveness about the implementation of improvements highlighted by internal reviews is an ongoing (systemic) issue that has been previously highlighted (IGB 2018a).

Recommendation 36

Agriculture should remove the need for mandatory centralised editing of instructional material to meet its standards of publishing, as the material is only used internally by its staff. Relevant policy managers must be accountable for accuracy, utility and currency of instructional material.

Agriculture should have a standard system for handling of all instructional material that includes version control, accountability for content and updating, sign-off and so on. The Instructional Material Library must be routinely searchable, include officer authorisations and subject-matter experts and be available to all biosecurity officers via mobile devices (tablets).

Through training, on-the-job experience and supervisor support, biosecurity officers understand what is required in routine biosecurity operational decision-making while delivering activities at the frontline. During fieldwork in 3 regional centres, the Inspector-General engaged with some of the biosecurity officers who regularly undertook vessel inspections and managed human biosecurity issues at first points of entry. In his discussions with them, the Inspector-General made the following observations:

- The approach taken to instructional material has led Agriculture to become 'process focused', not 'outcome focused'.
- Training, verification activities and instructional material have been largely about checklists and 'ticking boxes'. It appears that regulatory compliance is assumed, and there is a reduced focus on biosecurity or regulatory outcomes, especially on what to do when noncompliance is detected.
- The volume of instructional material that biosecurity officers are required to know is substantial. For example, for vessel inspections alone, staff have to follow about 35 instructional documents, which does not include operational staff notices. Biosecurity officers are required to know an even greater number of instructional material documents, if, as part of Agriculture's drive to developing an integrated workforce, they undertake inspection activities across a range of areas (such as the Cargo and Travellers Programs). In addition, staff are also required to be competent in using IT systems that vary across Agriculture's biosecurity streams.

There are benefits in integrating the workforce in an organisation, as the organisation is then able to flexibly deploy staff across the business on demand. The approach delivers potential efficiencies in an environment where resources are diminishing and demand is increasing. However, there is clear potential for biosecurity officers to become ‘jacks of all trades and masters of none’. There can be a heightened risk of residual biosecurity risks in critical areas that then get less attention. For example, as was the case with the *Ruby Princess*, instructional material did not provide practical advice (or guidance) on managing vessels in negative pratique, pratique withdrawal or the management of noncompliance(s) with pratique.

11.7 Inspector-General of Biosecurity audits and reviews, 2009–20

Since the establishment of the Inspector-General of Biosecurity (interim) role in 2009, the former 3 Inspectors-General of Biosecurity (plus the current Inspector-General) have collectively published more than 45 audit and review reports. In these reports, Inspectors-General identified several systemic weaknesses in Agriculture’s management of biosecurity across the continuum. So far, they have made more than 300 recommendations for improvements to Agriculture’s biosecurity controls for a range of high-risk goods and across pathways. Of these, 10 recommendations specifically targeted strengthening instructional material.

The commencement of the Act required Agriculture to update a suite of operational policies and instructional material. However, ongoing recommendations by Inspectors-General about instructional material – even more than 4 years after the enactment of the new Act – demonstrates an apparent failure to appreciate the importance of instructional material. As instructional materials are important documents used daily by biosecurity officers in delivering biosecurity functions at first points of entry, it is paramount that Agriculture prioritises centralised development, production and publishing of instructional material.

Recommendation 37

Agriculture should review all maritime human biosecurity instructional material saved on its internal repository (Instructional Material Library), SharePoint® document sets for operational areas, and team and other information sharing sites for accuracy, currency, consistency, clarity, usefulness for verification at the border and ease of access.

11.8 Assurance review by an external agency

In August 2020, Agriculture engaged an independent external agency to review its maritime biosecurity instructional material: the Independent Assurance Review of Maritime Human Biosecurity Instructional Material. In conducting the review, the external agency:

- undertook a desktop analysis of selected instructional materials, including policy, guidelines, work instructions and operational staff notices (reviewing more than 30 documents)
- interviewed staff involved in developing and managing instructional material, biosecurity officers, team leaders, regional directors, national stream leaders and staff from the Maritime National Coordination Centre and the IML
- engaged with staff in 3 of Agriculture's regional offices and observed vessel inspections, including the use of the Maritime Arrivals Reporting System (MARS), the IML and the various SharePoint® portals
- validated the findings and preliminary recommendations in a facilitated discussion activity with approximately 50 executive-level staff.

The agency reviewed instructional material to ascertain:

- whether the maritime human biosecurity instructional material is fit for purpose
- how the relevant policy and procedures, and the intended application, is communicated to staff
- whether staff, who are required to use the policy and procedures in operational decision-making, understand what they need to do.

The agency's report highlighted many weaknesses in Agriculture's instructional material ([Box 3](#)).

Box 3 External agency's observations highlighting weaknesses in Agriculture's maritime human biosecurity instructional material

- Multiple users, including very experienced officers, reported that they often cannot find a specific piece of required instructional material. In several reported cases, this has led to staff maintaining offline versions.
- Multiple users reported they are often not informed when changes are made to instructional material.
- Users also reported that, when changes are made, it is often unclear what has changed and how that change impacts upon managing biosecurity risks or task performance.
- Instructional material reviewed and observed in use does not encourage biosecurity officers to adopt a curious mindset when performing regulatory inspections. Rather, it sets out a step-by-step process for users to follow that aligns closely with the Maritime Arrivals Reporting System (MARS). This was variously described by different personnel as a 'paint by numbers methodology' and a 'MARS user guide'. This presentation methodology focuses on following a process rather than identifying biosecurity threats and preventing or mitigating risks when threats are identified.

- There is no evidence of an assessment of the skills required for tasks prescribed in a work instruction which recognises biosecurity officer foundation knowledge or technical training. This leads to either the inclusion of unnecessary material or the absence of necessary material.
- Some instructional material, including the human health material, contains parallel step-by-step pathways with no clear return point, leading to confusion as to which procedure, or part thereof, should be followed.
- The instructional material, including the human health material, contains a combination of policy, guidance and procedure and it is not always clear which is which.
- Multiple personnel reported that the Instructional Material Library (IML) development processes are quite lengthy and that publishing documents on the IML takes considerable time. This has resulted in the creation of 472 operational staff notices since July 2017, of which 296 are currently active. It would appear that operational staff notices are now being written and renewed in preference to updating documents in the IML. This is compounding the publishing delays and exacerbating staff difficulties in finding current information.
- Multiple users reported that the instructional material in its current file format (portable document format) and document format (set out) is too long, weighty and difficult to navigate. It is time consuming to find essential information and cannot be effectively used in the field in either hard copy or e-copy on a tablet or smartphone.
- Instructional material contains unnecessary content that is replicated from other sources, increasing the size of instructional material documents and decreasing their utility. This has led to individuals creating shortened versions, meaning that there is some organisational knowledge in use that has not been codified.
- Multiple users reported that internal and external document links do not function correctly and at times direct users to outdated information.
- Staff highlighted several examples where biosecurity officers' work requirements do not seem to be adequately informed by work health and safety risk assessments.
- Some instructional material directs users to conduct tasks that staff consider to be of limited value in preventing or mitigating biosecurity risks, reflecting inadequate technical design.
- Task verification should verify that a biosecurity officer can perform the job role effectively to regulate the industry and manage biosecurity risks. The external agency's observation, confirmed by users, was that, in many cases, because of the way the work instructions are written, verification only verifies that the biosecurity officer can follow a procedure as opposed to performing a regulatory function and managing biosecurity risks.

The Inspector-General focused on the issue of suitability of the instructional material that is used by frontline biosecurity officers in delivering biosecurity regulatory activities at the first points of entry across Australia. He is satisfied with the comprehensiveness of the external agency's approach in reviewing maritime biosecurity instructional material, so he has refrained from duplicating efforts in reviewing Agriculture's maritime instructional material.

A notable omission from maritime instructional material relates to the management of vessels in negative pratique. The Inspector-General has recommended that the Health–Agriculture MoU be updated to clarify each agency's responsibilities for the management human biosecurity onboard vessels that have been granted negative pratique on arrival at the first point of entry (see Recommendation 12). Once a potential Listed Human Disease is suspected onboard, the vessel represents a public health risk which must be managed. Therefore, Agriculture must put measures in place to ensure compliance with negative pratique and the detection and management of any noncompliance(s). Once the MoU has been updated, and roles and responsibilities agreed upon, the practical management of vessels in negative pratique must be included in all relevant maritime instructional materials.

The Inspector-General concurs with the external agency's observations ([Box 3](#)), which found serious gaps in Agriculture's management of its instructional material; and has used the agency's report in his assessment. It is perplexing that the assessment and a specific recommendation (see section 5.4) in the 2008 Beale review report (Beale et al. 2008) are still relevant today, more than 12 years after the review report was published.

It is likely that the issues that the external agency identified in its report extend beyond the specific area of maritime human biosecurity. The Inspector-General noted that all 11 recommendations in the external agency's report have a wider application. Agriculture must address this as a priority.

Recommendation 38

Agriculture should, as a priority, implement all recommendations included in external agency's report, *Independent assurance review of maritime human biosecurity instructional material*.

Chapter 12

Technical support to frontline staff

Frontline biosecurity officers operate in a fast-paced and pressured environment, where import and export shipping are extensive and critical to the national economy. They are regularly required to make crucial decisions to mitigate biosecurity risks for our nation. Timely access to technical support and advice is essential to support that decision-making.

From the evidence provided to the Inspector-General, it was difficult to verify that the necessary support is available to frontline officers on a timely, consistent basis, as no formal or documented escalation process for issues or seeking technical advice was apparent.

In some instances, it is evident that instructional material does not support the effective delivery of frontline operations because it is inadequate, outdated or incorrect. This has led to local arrangements (or localised practices) and ‘work-arounds’. This in turn has caused inconsistency in decision-making and outcomes.

12.1 Access to experts

The Border Controls Branch within Agriculture’s Biosecurity Operations Division ([Figure 1](#)) is responsible for the development of much of the instructional material relevant to vessels. Travellers, Human Health and Review, and Conveyance and Ports sections within the Border Controls Branch are responsible for the development and administration of instructional material for the delivery by the relevant operational areas. This material is further informed by Plant and Animal Divisions, Inspections Group and Operational Science and Surveillance within Agriculture’s Biosecurity Operations Division. Border Controls Branch was recently moved to the Biosecurity Operations Division from the Compliance Division, as part of Agriculture’s restructure, to better align and connect with the frontline staff who deliver biosecurity regulatory operations consistent with the instructional material.

As the policy areas and technical divisions are considered the technical subject-matter experts, frontline staff and managers look to staff within these streams for high-level advice and decision-making in complex situations when required. Feedback provided to the Inspector-General from operational areas indicates that direct access to technical experts by operational staff is ad hoc and often based on pre-existing relationships. Technical queries can be sent to generic email inboxes for the respective area, but response times vary. The delays in response may result in flawed decisions and outcomes given time pressures to complete tasks in operational areas. The delays in response may also encourage 'answer shopping' and inconsistent advice. Local practices and knowledge are commonly used to solve problems that can lead to inconsistent application nationally.

Agriculture has assigned directors within its Biosecurity Inspections Group as the national operational leads for the delivery of human biosecurity regulatory activities at first points of entry across all regions. These directors are the links between policy and operational areas, providing advice to frontline staff to ensure consistent application of processes, dissemination of policy and instructional material, and oversight of issues escalated to policy areas. They provide a variable degree of technical expertise, as some of them have a very little or no operational experience.

The escalation process for complex issues occurring in the regions is managed locally through line management areas. The Inspector-General did not receive clear evidence to demonstrate that there has been coordination of technical advice at the national level for achieving consistency across regions.

The Shipping Managers' Group and the Traveller Managers' Group are the 2 main forums for regular communication between the policy areas and operations managers to support consistent delivery of regulatory activities in the Vessels Pathway and Travellers Pathway. At these forums, current and emerging risks and technical and operational issues are brainstormed and resolved or escalated, as required. They also review instructional material and provide updates on Maritime Arrivals Reporting System (MARS) issues and improvements.

The dissemination of technical information to operational staff occurs nationally through local managers, assistant directors and directors' forums. This, in turn, is communicated to frontline staff at local operational team meetings (called 'toolbox').

During the review fieldwork, biosecurity officers in one of the regions advised the Inspector-General that Agriculture did not share an important instructional material with them. Similarly, intelligence received before the *Golden Princess* cruise ship's arrival was also not shared with the Maritime National Coordination Centre, as the Maritime National Coordination Centre granted pratique based on the Pre-arrival Report submitted by the vessel (see Chapter 8.5). This clearly suggests that there is a disconnect between central and regional offices and other relevant parts of the business. Agriculture should therefore take prompt measures to improve efficiency of operational delivery, issues resolution and provision of expert advice to biosecurity officers and their supervisors in the regions. It is important that director-level officers within Border Controls Branch and Inspections Group are deployed in regions to gain hands-on experience of issues faced by biosecurity officers in their daily roles.

Furthermore, Agriculture established national stream leads to ensure nationally consistent delivery of biosecurity activities they are entrusted for by resolving policy and operational issues. It appears that these roles are not sufficiently influential and accountable, as several issues highlighted in this report (notably, granting and revocation of pratique, managing vessels in negative pratique, serious gaps in instructional material, lack of availability of expert advice to frontline officers, and ease of updating MARS) are likely to have contributed to the *Ruby Princess* incident in March 2020. To prevent any repeat of the *Ruby Princess* incident, Agriculture should, as a priority, review national stream lead role(s), especially for those responsible for Vessels and Travellers Pathways, to ensure that they are fully competent and committed to the role. Ideally, these leads should be subject-matter experts. They should possess the requisite regulatory knowledge and relevant skills and experience in guiding frontline officers and their supervisors to achieve intended biosecurity outcomes through improved efficiency, effectiveness, and agility of frontline biosecurity delivery. In his latest review report, the Inspector-General noted a number of elements to improve ‘frontline focus’ – a critically important shift for management (IGB 2021, p. 81).

Recommendation 39

To achieve nationally consistent delivery of regulatory activities at first points of entry, Agriculture should identify experts in relevant streams who biosecurity officers can contact to discuss time-critical matters and seek advice for quick resolution.

12.2 Communication mechanisms for expert advice

The complexity of Agriculture’s system for managing human biosecurity risks associated with international vessels was comprehensively highlighted in the Special Commission of Inquiry into the *Ruby Princess* report (Walker 2020). The report concluded that broader significance of the heightening risks was overlooked, and the situation was not actively managed with the urgency it deserved. This was partly a result of poor internal communication between staff operating in frontline inspection, technical standard-setting and policy-making. It was also a consequence of competing priorities, poor understanding of roles and responsibilities of other officers (Human Biosecurity Officers) and agencies (NSW Health), localised practices and protocols and inadequate instructional material. Poor internal communication is likely to have contributed to the breakdown of biosecurity controls designed to prevent COVID-19 from entering Australia.

As noted in Chapter 8, during the peak of COVID-19 pandemic, there was a lot of uncertainty and confusion within the frontline biosecurity officers cohort across regions about granting and revocation of pratique. Some supervisors were also unsure about critical regulatory processes, as communication from central office (Canberra) was inadequate and advice was insufficient. In addition, there were issues with instructional material, as several items were outdated and/or not updated in timely manner, mainly due to lack of updated policy framework and strict editing requirements (Chapter 11).

In his review of the large amount of information provided by Agriculture, the Inspector-General noted that, during the peak of COVID-19, Agriculture directly emailed directions about the grant of pratique to commercial vessels to individual biosecurity officers at first points of entry across the regions. This added further confusion and ambiguity on the current situation for vessels, and this impacted on officers' ability to deliver regulatory activities. The Inspector-General recommends that Agriculture formalise standardised arrangements for information management with frontline staff – for example, by adopting an electronic case management system. This would help improve the visibility for relevant Agriculture executives who are responsible for managing and delivering human biosecurity regulatory activities at the first points of entry.

Agriculture uses operational staff notices to provide advice to biosecurity officers on updates to policies, systems and processes or procedures. However, operational staff notices are issued to allow for regulatory activities to continue based on new requirements or updated (revised) protocols until changes to instructional material are bedded down. All notices carry an expiry date, beyond which they must not be used. Typically, operational staff notices are valid for 3 months from the date of issue. If required, Agriculture can issue an updated operational staff notice to cover for additional period. This may be necessary when the circumstances continually change and evolve, as was the case with the COVID-19 pandemic. However, the Inspector-General noted that some operational staff notices were being used by biosecurity officers past the expiry date, as Agriculture did not issue an update with an extended (or revised) expiry date.

Agriculture commonly uses emails to communicate with biosecurity officers to provide directions and advice. Throughout the COVID-19 pandemic, Agriculture regularly provided updates to biosecurity officers updates from Health, national stream leads and policy areas on the changing human biosecurity requirements.

Given that the biosecurity officers work in varied environments under tight time frames to complete allocated 'jobs' daily, emails should not be used for communicating urgent updates. It is likely that emails are not read in a timely way by all biosecurity officers when they are out in the field undertaking required activities. Also, it would be impractical for them to take time out to read and understand the official announcements within short time frames.

The Inspector-General recommends that Agriculture review its internal communication policy and develop new processes for enhanced risk identification, communication, management and governance. It must undertake a range of actions to address learnings from the *Ruby Princess* incident, such as additional processes for risk identification and resolution, decision-making and information-sharing.

Recommendation 40

Frontline staff should be provided with consistent information through an effective digital communication tool that is easily accessed by operational staff in a variety of work environments.

12.3 Reporting and resolution mechanisms for incidents

The Non-Compliance Assessment and Response team within Agriculture's Compliance Division manages noncompliance referrals and undertakes investigations. Biosecurity officers raise noncompliance cases by submitting a Non-Compliance Reporting Form.

Agriculture's Enforcements and Sanctions Branch within the Compliance Division triages and assesses all noncompliance reports submitted by officers across all areas. After assessment, reports are either referred for action to be managed by the appropriate area or used to identify recidivist activity or for analysing trends. Monthly noncompliance reports are available on request to relevant officers within areas with a business need. Currently, no direct feedback on or outcome of the incident report is provided to the reporting officer. This provides a disincentive for operational staff to submit them.

Agriculture's Biosecurity and Export Risk Tool (BERT) provides staff with an avenue to report existing and emerging biosecurity risks. Staff are encouraged to report issues identified in a range of areas, including policy, pathways, system content, legislation, inspection requirements, sampling regimes, instructional material, training, treatments, communication and client engagement.

Submissions (issues or concerns) received in BERT are given a priority rating and allocated for resolution to appropriate area(s) by Agriculture's stream(s). The submitting officer is advised when the submission was received and finalised. However, the time delay for resolution of issues and concerns is unacceptably long.

In his recent review (IGB 2021), the Inspector-General noted:

Effective feedback loops between program areas and frontline staff and industry are important to the effective running of the biosecurity system. Knowledge of biosecurity compliance outcomes both serves as a motivator and assists officers and industry in understanding the nature of actual risks in their respective activities.

Further, he recommended:

[Recommendation 16] The department should improve the feedback and collaboration between operational, technical and policy areas, which may include establishing community of practice mechanisms, and revamp its use of the Biosecurity and Export Risk Tool (BERT) to drive timely resolution of issues that impede biosecurity delivery and increase residual biosecurity risk (IGB 2021, p. 72).

Implementation of this recommendation would address the longstanding issue of feedback and improve transparency in Agriculture's actions.

12.4 Communication with Human Biosecurity Officers

Efficient management of human biosecurity risk at the first point of entry rests with biosecurity officers and Human Biosecurity Officers working collaboratively. When administering the Traveller with Illness Checklist, the biosecurity officer seeks advice from a Human Biosecurity Officer in the jurisdiction. Biosecurity officers make decisions about granting pratique to vessels where a Pre-arrival Report includes details of an individual onboard who has, or had, signs or symptoms of a Listed Human Disease during the voyage or who died during the voyage; or the Director of Human Biosecurity, a Human Biosecurity Officer or a biosecurity officer, becomes aware that on the vessel has or had an individual on board who has entered, or will enter a port who has or had signs or symptoms of a Listed Human Disease, has been exposed to a Listed Human Disease or who died during the voyage.

As noted in Chapter 8 ('Inconsistent decision-making about pratique'), Agriculture's operational policies and instructional material require biosecurity officers to record observations as well as intra- and inter-agency advice about decision-making into MARS for the grant or denial of pratique to foreign vessels.

In discussing how NSW Health conveyed its advice about human health assessment onboard the *Ruby Princess* cruise ship on 19 March 2020, the Commonwealth, in its Voluntary Statement (Exhibit 119, AGS 2020) to the Special Commission of Inquiry into the *Ruby Princess* (Walker 2020), noted:

Agriculture does not have written policies that provide for the mechanism by which human biosecurity advice is provided by the CHBO and HBOs at NSW Health to biosecurity officers at the Port of Sydney (p. 8).

The Inspector-General considers that it is vital for Agriculture to develop a policy to ensure decisions taken by biosecurity officer, based on observations and intra- and inter-agency advice recorded in MARS, are lawful (Recommendation 25).

Chapter 13

Maritime Pathway business reforms

Most vessels that arrive in Australia are commercial vessels, such as cruise vessels, bulk carriers, tankers, livestock vessels, container vessels and roll-on roll-off (Ro-Ro) cargo vessels. Given the 94 first points of entry are scattered across Australia's vast coastline (Map 1), a review of pre-arrival information about the biosecurity status of an incoming vessel enables Maritime National Coordination Centre officers to assess risks and issue appropriate inspection directions to biosecurity officers on case-by-case basis. This is to ensure that human health risks onboard incoming commercial vessels are addressed adequately to prevent the entry of deadly contagious diseases into Australia.

The level of availability of intelligence before the arrival of the *Golden Princess*, which arrived in Australia in the Port of Melbourne on the same day as the *Ruby Princess* incident in Sydney, meant that there was a different response to the *Golden Princess* (see section 8.5). Health was on hand in Melbourne at the berthing of the *Golden Princess* to test sick passengers and crew, and none were permitted to disembark until test swab results were available confirming that COVID-19 was not present. This approach helped avoid another situation like the *Ruby Princess* incident, where a cruise ship arriving with a mass outbreak of the virus would put significant pressure on our health system.

This is broadly consistent with the 2008 Beale review that emphasised the need for strategic intelligence to underpin the risk return approach to biosecurity:

Australia can only know which risk pathways and commodities are most threatening if it has collected and analysed relevant information. Good strategic intelligence on the animal and plant pest and disease status of neighbouring countries and trading partners is vital. This information ensures that biosecurity agencies can respond appropriately, including possibly modifying import requirements (Beale et al. 2008, p. 161).

Improvements to data capture and quality are critical to improving risk assessment and analysis and intervention strategy by pest, disease, commodity or pathway. Modern, integrated information management systems and practices help capture intelligence to track changes in identified existing and emerging biosecurity risks in individual pathways.

One of the main responsibilities of Agriculture is the efficient and effective biosecurity clearance and surveillance of international vessels, diverse cargo and associated crew and baggage at Australian seaports.

Delivery of these activities is a crucial part of Agriculture's business, which regulates about 18,000 commercial vessels and 500 itinerant yachts per year. However, until 2016, these services, delivered through highly manual processes, often led to inconsistency and inefficiency. This impacted Agriculture's capacity to cope with emerging pressures and unexpected events, with resultant higher risk of reduced compliance and poor client satisfaction.

Agriculture uses several data and information management systems to manage biosecurity risks for the Vessels Pathway.

13.1 Maritime Pathway and business reforms, 2010–2017

Historically, Agriculture managed quarantine (biosecurity) risks in the Vessels Pathway under its Seaports Risk Management Policy. In May 2010, Agriculture reviewed this policy to examine quarantine risks associated with the international shipping (and cruise) Vessels Pathway for effective and efficient clearance at Australian ports. It focused on the allocation of resources through maintaining an acceptable level of risk. The review acknowledged intervention levels needed to be responsive to changing risks, which Agriculture determines through data entered in the Vessel Management System (VMS) as well as leakage statistics.

In October 2014, Agriculture published the *Maritime Arrivals Reporting System risk assessment design specification review* of the risk assessment design specifications, including the risk engine for the Maritime Arrivals Reporting System (MARS). The risk engine uses an algorithm to calculate the risk score assigned to a vessel. The system includes an automated risk assessment and a risk ranking feature. Human health inspections are rated as mandatory. The review identified that future risk factors or combinations could not be included in the simplified model. Between 2014 and 2016, Agriculture developed MARS, which was implemented in 2016.

Agriculture's 2015 summary document, *Maritime Pathway business reforms to MARS and VCS*, elaborates reforms to the Maritime Pathway, including the implementation of MARS and the Vessel Compliance Scheme (VCS) for efficient and effective biosecurity clearance of international vessels. The document acknowledged that previous policies and procedures caused inconsistencies and inefficiencies, which impacted Agriculture's ability to manage emerging and unexpected risks, including infectious human diseases. Reforms to the Vessels Pathway facilitated an appropriate intervention rate as determined by the biosecurity risk level and allocation of resources proportionately.

In 2016 Agriculture launched MARS for use by vessel operators – who, under the Act, are required to complete a Pre-arrival Report and biosecurity vessel clearance at Australian border (see section 13.3).

13.2 Vessel Management System

For about 20 years, the VMS was Agriculture's main receptacle for all information pertaining to incoming international vessels, both commercial and non-commercial. Vessel masters and shipping agents used a combination of SmartForms, email and fax to submit their Pre-arrival Reports for entry into Australia.

Through ongoing feedback from industry and frontline staff, Agriculture identified that the VMS was unable to fully support the requirements of increasing demands of shipping industry and Agriculture's future business processes. However, it is still being used for managing inspections of non-commercial vessels (such as yachts), as it records vessel and visit details and inspection outcomes.

13.3 Maritime Arrivals Reporting System

In 2011, Agriculture initiated a concept proposal for MARS. Necessary endorsements and approvals for funding were sought between 2012 and 2013. Delivery of the MARS system was scheduled for May 2014, but the launch of MARS was delayed by 2 years. After piloting and extensive user consultation in 2016, Agriculture fully implemented MARS from 2017, replacing the VMS.

MARS is an online web portal that enables Agriculture to manage biosecurity risks associated with all commercial vessels entering Australian territory. It offers several advantages over VMS, including:

- significantly improved coverage of vessel biosecurity risk management
- greater data capture capabilities than VMS, which has meant that the number of daily recorded vessel visits monitored jumped significantly as Agriculture transitioned from VMS to MARS
- recording of a vessel's entire itinerary, including all port visits, whereas VMS only recorded a visit to an Australian port if the vessel was inspected.

MARS is administered through the Maritime National Coordination Centre in Adelaide. It allows Agriculture's border biosecurity officers to communicate directly with ship's masters, shipping agents and companies, and other relevant stakeholders. It provides greater transparency for cruise and shipping operators, vessel masters and agents about biosecurity requirements and consequences of noncompliance. Users can go online to:

- submit required pre-arrival information about the biosecurity status of a vessel
- request departmental services, such as ship sanitation certification
- view risk assessments, directions, inspection findings, certificates and compliance outcomes after the vessel is inspected, as entered online by biosecurity officers
- see a summary of charges.

Governance

The Conveyances and Ports Section within Agriculture's Biosecurity Operations Division administers MARS and is responsible for directing and overseeing system changes. The Export Systems Section manages the software development and technical maintenance of MARS. Agriculture only has one full-time officer to undertake these tasks.

Key user groups

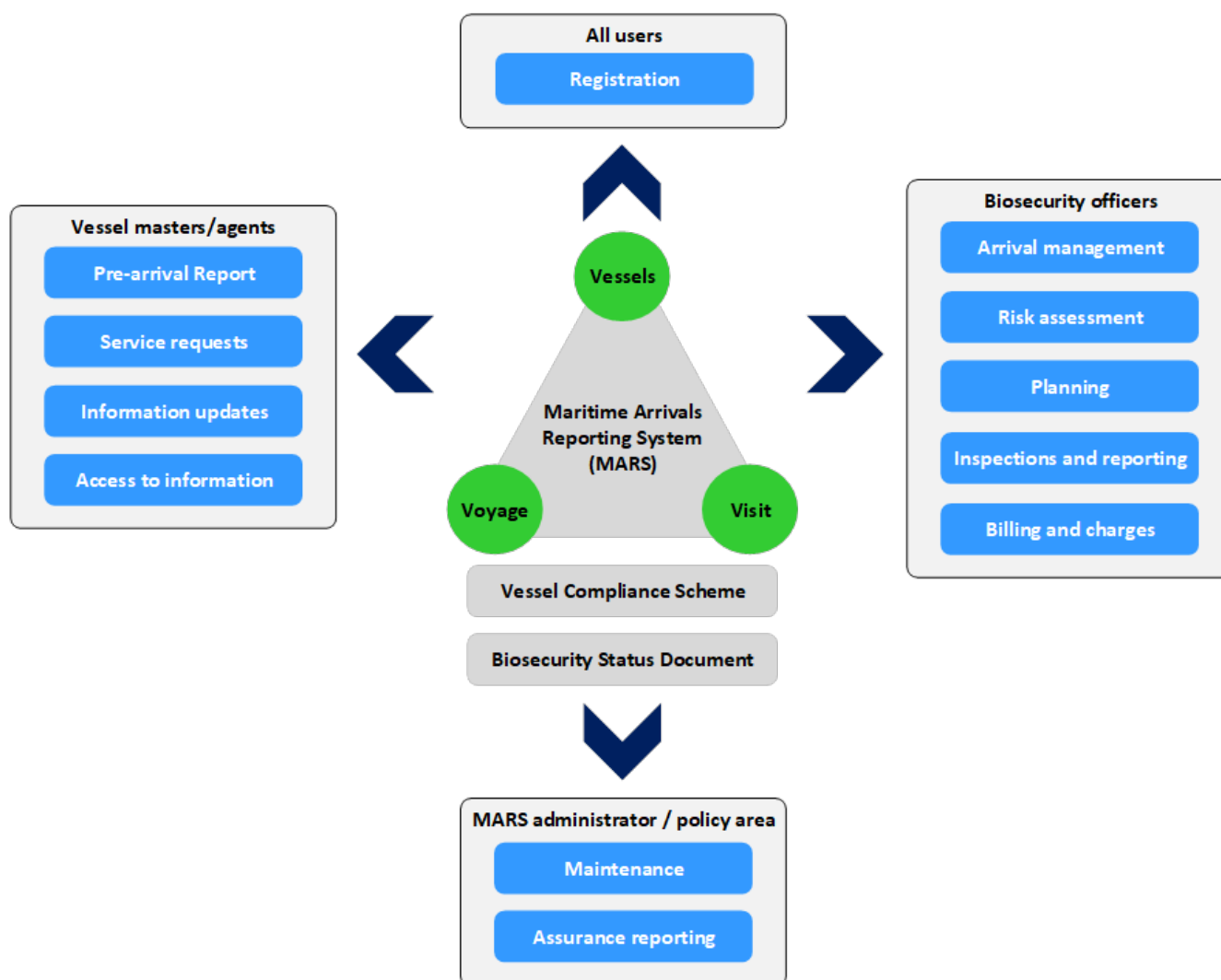
Within Agriculture, the key user groups of MARS include the Maritime Arrivals Reporting System, biosecurity officers (vessel inspectors) deployed at first points of entry and the MARS administrator. Externally, MARS is used by vessel masters and agents who undertake functions to meet Agriculture's reporting requirements and biosecurity vessel clearance activities at the Australian border.

Functionality

Functionalities within MARS include:

- an automated processing of pre-arrival information
- decision support for risk assessments
- client communications and arrival management
- automated charging
- detailed reporting.

MARS user-based functionalities are presented in [Figure 4](#).

FIGURE 4 Maritime Arrivals Reporting System (MARS) – overarching functions and user groups

Source: [Department of Agriculture, Water and the Environment](#)

13.4 Biosecurity Status Document

Before the launch of MARS, Agriculture issued several documents and certificates through VMS to vessel masters and their agents during the period that the vessel was on an Australian voyage. These documents, such as approvals to berth, pratique and ship sanitation certificates, treatment orders, and other directions for action, provided instructions to vessel masters and their shipping agents about their obligations in Australian waters.

After the launch of MARS in 2016, Agriculture started using the Biosecurity Status Document to communicate with its vessel-related clients. Biosecurity Status Documents contains directions and advice for the vessel regarding berthing conditions in first points of entry, berthing conditions in non-first points of entry, pratique and ship sanitation certifications, vessel biosecurity, and ballast water. MARS auto-generates Biosecurity Status Documents.

The Biosecurity Status Document:

- is a single source of information for biosecurity directions and advice for each voyage. It includes Agriculture's information, such as berthing conditions, pratique, ballast water, non-first point of entry and treatment directions
- is version controlled to reflect any reported changes to directions or status occurring during a voyage
- uses a traffic light system as a visual cue to alert the user to the vessel status and any associated directions or advice issued by Agriculture. It is emailed to the vessel master and agent and available in MARS.

Vessel masters and their agents can download the latest version of the Biosecurity Status Document directly from MARS at any time. After the assessment of pre-arrival information and on completion of tasks and inspection, the vessel master and their agent receive the Biosecurity Status Document via email. A new Biosecurity Status Document is issued when conditions change.

Biosecurity officers request vessel masters to demonstrate that they have received the Biosecurity Status Document either electronically or in hard copy form before docking their vessel at an Australian port (first point of entry) and that they comply with all of the directions on the document.

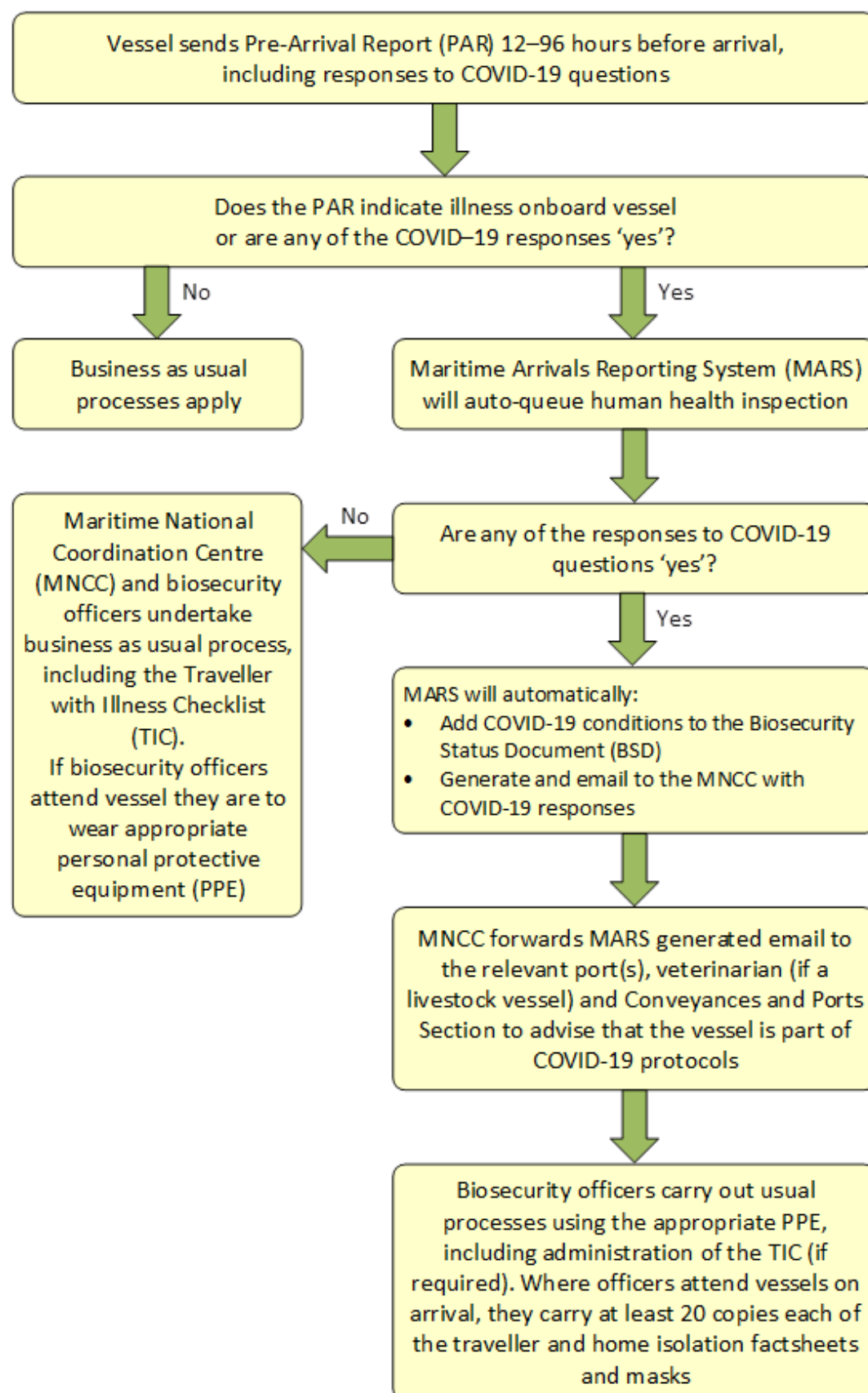
If a vessel declares human health issues (or has requested a ship sanitation certificate), biosecurity officers assess those issues onboard the vessel at the time of inspection. In those cases, the vessel must continue to display the Quarantine Signal (letter Q in the International Code of Signals) until the all-clear is given to the vessel and the Maritime National Coordination Centre issues a new (revised) Biosecurity Status Document.

13.5 Risk calculation in MARS

MARS assists in managing biosecurity and human health risks associated with incoming vessels by assisting in the monitoring of their arrival and determining the level of intervention required. Risk determination is based on information provided by the vessels, compliance history, pre-determined risk factors and physical inspections. None of the 13 risk factors that Agriculture uses to determine the risk score relate to human biosecurity ([Appendix B](#)).

MARS assesses the answers to the questions reported in the Pre-arrival Report. On identifying biosecurity, seasonal pest and human health risks, an applicable risk indicator is set. Upon submission of the Pre-arrival Report, MARS records the application details. It then processes each of the answers to determine risks and sets the applicable risk indicator for the vessel's voyage.

The human health inspection onboard vessels may be standalone or a subset of the Routine Vehicle Inspection. If a human health risk is identified in MARS, a high-risk indicator is set to Y ('Yes') and a human health inspection is triggered ([Figure 5](#)). The flowcharts submitted to this review demonstrate that Agriculture has not updated the flowcharts to reflect the COVID question changes.

FIGURE 5 Enhanced screening of commercial vessels, 19 February 2020

Source: Department of Agriculture, Water and the Environment

Once all the risk indicators are set, MARS generates notices for inspections and tasks based on the assessed risks. Tasks are notified to the Maritime National Coordination Centre for review and finalisation. Maritime National Coordination Centre staff then review the information in the Pre-arrival Report or Human Health Update form and action the task that may either:

1. confirm the risk, which will either keep the inspection in the queue for the port officers
2. downgrade the task, which will remove the queued inspection and change the vessel voyage's human health risk indicator to N ('No').

Where Maritime National Coordination Centre receives a Human Health Update from the vessel master or an agent, a human health inspection for the vessel is scheduled. If the Maritime National Coordination Centre receives an updated Human Health Update from the vessel (before berthing), the already scheduled inspection is updated with the latest details.

The inspection is queued immediately on the Pre-arrival Report or Human Health Update submission, rather than after the Maritime National Coordination Centre review, to cater for situations where the vessel arrives before the risk is reviewed and actioned by the Maritime National Coordination Centre.

The master of a cruise vessel must answer additional questions in the Pre-arrival Report and Human Health Update regarding any gastrointestinal illness onboard. If the number of gastrointestinal illness cases represents 3% or more of the total number of personnel on board (including both passengers and crew), a verification task is created in MARS for the Maritime National Coordination Centre staff to verify. However, this does not queue an inspection.

The additional questions specifically relate to the primary purpose of cruise vessels to carry people and the greatly increased risk of infection or transmission in the event of an ill passenger. However, this differs greatly from vessels that primarily transport cargo, in that such vessels operate with a relatively small crew. They typically have 20 to 25 people whose roles are either to operate the vessel through a variety of specialist skills, such as mechanical and electrical, or as support crew responsible for the galley and other services. Any outbreak of illness or disease would essentially be contained to this small number of crew as long as they remain onboard.

In addition to specialist trades personnel and mariners operating the vessel and its infrastructure, cruise vessels also have many more staff tasked with the hospitality of the patrons. Collectively, staff and patrons can amount to several thousand people, with the passenger to crew ratio varying from vessel to vessel. In the case of the *Ruby Princess*, this ratio was 2.6:1, with approximately 1,200 staff attending to up to 3,114 passengers if the vessel is operating at full capacity.

13.6 Vessel Compliance Scheme

The Vessel Compliance Scheme uses the MARS risk engine and records to reduce inspection rates (down to 40% of voyages over a defined voyage cycle) of vessels.

To qualify for the Vessel Compliance Scheme for reduced intervention, commercial vessel operators must meet the requirements of:

- a minimum of 3 voyages to Australia in a 12-month period
- being below the individual inspection threshold of 10 points for a voyage
- being below the collective threshold of 20 points over 3 voyages.

Other vessels receive a 100% inspection regime. Regardless of the compliance history, Agriculture undertakes risk assessments that may result in targeted inspections being carried out to manage specific risks. All noncompliant vessels (based on their compliance history) are inspected on arrival.

eForms

Agriculture uses eForms for creating and maintaining electronic inspection templates and generating instances of the template for completion during an inspection. eForms are useful to frontline biosecurity officers, as they can be downloaded onto tablets for offline recording of inspection outcomes when internet connectivity onboard vessels is poor. MARS communicates with eForms to generate a new instance for an inspection. On completion, the key information is passed back to MARS.

13.7 MARS human health form

The vessel master or agent will initially declare any human health issues onboard in the Pre-arrival Report through the MARS Human Health form. However, if the vessel master or agent becomes aware of changes to the health status onboard, they must declare it to Agriculture as soon as practicable. If there is a life-threatening situation onboard the vessel, the vessel master or agent is required to contact their local health department contact as soon as practicable for advice on managing the biosecurity risks onboard.

The MARS Human Health form is directed to the Maritime National Coordination Centre for assessment if the master or agent reports:

- a death onboard
- an illness onboard and has answered 'yes' to one or more of the subsequent questions
- an illness onboard and has not answered one or more of the subsequent questions.

The Maritime National Coordination Centre may also contact the relevant state Human Biosecurity Officer or National Vessel Program for further guidance. The Maritime National Coordination Centre will queue a human health inspection if a need is confirmed and will take one of 3 actions:

1. downgrade the risk if the symptoms or additional information do not indicate a human health risk. Usually (but not always) the Maritime National Coordination Centre will downgrade a human health risk in the following circumstances:
 - a. the vessel master has reported illness onboard (they answered 'yes' to question 2 in the Pre-arrival Report) but answered 'no' to all subsequent human health questions in the Pre-arrival Report
 - b. death is due to accident or natural causes (heart attack, stroke and so on).

In this case, the Maritime National Coordination Centre will still ask additional questions (to rule out a possible Listed Health Disease) and notify the port and Health.
2. confirm the risk and not add additional conditions if the symptoms indicate a health risk but the Human Biosecurity Officer has not advised of additional conditions or requirements
3. confirm the risk and, based on the advice of the Human Biosecurity Officer, enter additional conditions (such as raised gangway, personal protective equipment or medical assistance) on the Biosecurity Status Document.

13.8 MARS enhancements – updates to offline form, April–June 2020

Between 11 April 2019 and 16 June 2020, Agriculture applied several [updates](#) to MARS' offline human health form ([Table 19](#)).

TABLE 19 Changes applied to Maritime Arrivals Reporting System (MARS) offline human health form, April 2019 to June 2020

Date	Updates applied to MARS pre-arrival report offline human health form	Import industry advice notice No.
2019		
11 April	<ul style="list-style-type: none"> Additional non-first points of entry added into drop down menus Shipping agency lists updated 	DAWE 2019a
16 August	<ul style="list-style-type: none"> Shipping agency list updated Other revisions included Non-First Point of Entry Application and Port list, ballast water report, pre-arrival report about cargo, clarity of language about other non-human health questions 	DAWE 2019b
2020		
6 February	<ul style="list-style-type: none"> Shipping agency list and port list updated 	DAWE 2020d
14 February	3 additional mandatory COVID-19 questions added to the Human Health section of the Pre-arrival Report (PAR): <ul style="list-style-type: none"> Has the vessel been in mainland China on or before 1 February 2020 and less than 14 days ago? Has any person on the vessel been in mainland China on or after 1 February 2020 and less than 14 days ago? Has any person on the vessel been in contact with a proven case of novel coronavirus infection in the last 14 days? 	DAWE 2020j
21 February	Simplified the language of the questions advised on 14 February: <ul style="list-style-type: none"> Has the vessel left mainland China in the last 14 days? Has any person on the vessel left mainland China in the last 14 days? Has any person on the vessel been in contact with a proven case of novel coronavirus (COVID-19) in the last 14 days? 	Unpublished

TABLE 19 Changes applied to Maritime Arrivals Reporting System (MARS) offline human health form, April 2019 to June 2020

Date	Updates applied to MARS pre-arrival report offline human health form	Import industry advice notice No.
6 March	<p>Mainland China, Iran, the Republic of Korea and Italy added as countries that posed a risk of transmission COVID-19 to travellers arriving in Australia</p> <p>3 additional mandatory COVID-19 health questions revised to:</p> <ul style="list-style-type: none"> • Has the vessel left mainland China and/or Iran and/or Republic of Korea and/or Italy in the last 14 days? • Has any person on the vessel felt mainland China and/or Iran and/or Republic of Korea and/or Italy in the last 14 days? • Has any person on the vessel been in contact with a proven case of COVID-19 in the last 14 days? 	DAWE 2020k
20 March	<p>3 new mandatory COVID-19 questions added:</p> <ul style="list-style-type: none"> • Has the vessel left or transited through a port outside of Australia in the last 14 days? • Has any person on the vessel been in a country other than Australia in the last 14 days? • Has any person on the vessel been in contact with a confirmed case of COVID-19 in the last 14 days? 	DAWE 2020c
25 March	<p>Question 2.1.7 of the PAR updated from:</p> <ul style="list-style-type: none"> • Persistent coughing and difficulty breathing with no apparent cause and no history or similar symptoms (but not persistent coughing and difficulty breathing caused by asthma, heart disease, obesity, chronic bronchitis or emphysema). Yes or No. <p>to:</p> <ul style="list-style-type: none"> • New coughing illness which developed in the past 2 weeks (but not caused by an existing chronic disease e.g. asthma, heart disease, obesity, chronic bronchitis or emphysema). Yes or No. 	DAWE 2020l
17 June	<ul style="list-style-type: none"> • Shipping agency list updated <p>Other changes included:</p> <ul style="list-style-type: none"> • Changes to first point of entry permissions for Lord Howe Island (now a non-first point) • Changes to offline forms to reflect changes in lists of approved ballast water treatment systems so that they mirror the options available in the MARS (online) forms 	DAWE 2020m

Source: Department of Agriculture, Water and the Environment

13.9 MARS performance – issues and mechanisms of resolution

Urgent issues

MARS outages require urgent resolution. During 2019–20, Agriculture estimated that MARS outages amounted to 109 hours. These outages were due to either scheduled upgrades to MARS (that is, change of records and so on) or system error.

Agriculture's Conveyances and Ports Section and Export Systems Section (see section 13.3) are responsible for investigating all outages. A MARS administration officer within the Conveyances and Ports Section logs the issue with Agriculture's service desk for resolution. If needed, the Export Systems Section may escalate the issue to Agriculture's Information Services Division for quick resolution. If an outage is likely to continue for several hours, the MARS administration team manages the stakeholders by:

- informing (via email) Agriculture's Shipping Managers' Group (see section 7.1)
- publishing an outage notice on Agriculture's self-service portal, which all internal and external users use to access MARS
- issuing an import industry advice notice on Agriculture's website, with an email notification to all subscribers of Agriculture's industry advice notices ([Table 19](#)).

The Inspector-General noted that, according to import industry advice notices archived on Agriculture's website, Agriculture published 1 IAN in 2017, 5 in 2018, 30 in 2019 and 19 between 1 January and 13 November in 2020.

Non-urgent issues

Non-urgent issues include defects in and enhancements (system changes) to MARS. Agriculture utilises HP™ Quality Centre (QC) to record defects in MARS as notified by external and internal stakeholders. It also receives requests for enhancements to MARS, which it implements regularly. QC allows the Export Systems Section to triage and plan update(s) to MARS as well as to document development and testing results. The Conveyances and Ports Section and the Export Systems Section contribute to QC as issues and enhancements are identified.

The Maritime National Coordination Centre is the first point of contact for MARS users external to Agriculture and in many cases for internal users, including frontline biosecurity officers and their managers. In its weekly meetings with internal stakeholders, the Conveyances and Ports Section discusses issues and proposes solutions and logs all decisions and action items in QC.

13.10 MARS – connectivity issues onboard vessels

Internet connection on vessels in port is usually provided by satellite services, which may not be as reliable as on-land connections. Consequently, vessels often experience unstable internet connectivity, lack of coverage, lapses in service and long delays as the onboard internet system tries to connect to a satellite.

The 2018 *MARS Post-implementation review* made a finding that there were connectivity outage issues with the current devices/tablets used by Agriculture at the time. The review stated that biosecurity officers, especially in remote locations and below deck in vessels, experienced connectivity issues resulting into increased vessel inspection time. The review team recommended that a system review be conducted once new devices were rolled out to address remote connectivity issues.

MARS has been designed to manage internet connectivity issues onboard vessels. All pre-arrival information required to be submitted by the vessel prior to arrival or during their voyage can be filled out in portable document file (pdf) versions of the forms, which are accessible offline in MARS. These forms can be stored on the vessel's computer and filled out while the vessel is disconnected from the internet service, and with that, MARS. The forms are designed to send a very small file to the vessel's Australian shipping agent via email. The agent can then submit the form to MARS on vessel's behalf.

Similarly, inspection templates (eForms) are built into MARS. The biosecurity officers can use eForms while MARS is disconnected from the internet service. The templates can be downloaded onto the officer's tablet, and they can fill them out while on the vessel. On completing an inspection and getting off the vessel, the officer's tablet would reconnect to the internet (and to MARS) and then upload the inspection outcomes into MARS.

13.11 Improvements to MARS

MARS and VCS are enabling much better management of vessel (mainly shipping) biosecurity risks than was previously possible, and the improvements have been well received by the cruise and shipping industries. Nevertheless, more consistent and thorough risk assessments can be undertaken for cruise vessels as they arrive at Australian ports and before pratique is granted to allow passengers to disembark. Also, since its launch, MARS' educational material has increased biosecurity awareness among shipping companies and ship's masters, enabling them to better understand and comply with Australian requirements.

While MARS captures data on the last port of embarkation before the vessel sailed to Australia, there is no data on previous ports of call. If high-risk countries or ports have been visited, there may be a heightened human biosecurity risk – notably, as demonstrated by the following examples:

- On 6 March Agriculture, through its import industry advice notice 36-2020 (DAWE 2020k), added China, Iran and Korea to the list of countries with elevated risk of COVID-19.
- The risk presented by the recent arrival of commercial vessels – for example, *Patricia Oldendorff* (Birch, Michelmores & Standen 2020), *Vega Dream* (Laschon 2020a) and *Al Messilah* (Laschon 2020b) in Western Australia (detailed list in [Table 10](#)) – could have been better managed if MARS were updated to add functionality to require ships' masters/shipping agents to list up to 5 prior overseas ports of call when submitting the Pre-arrival Report.

Until the *Ruby Princess* incident in March 2020, Agriculture's main focus had been to manage non-human biosecurity risks associated with shipping, as the number of commercial cargo vessels (IGB 2018b and IGB 2019) far exceed the number of cruise ships entering Australia. Since the *Ruby Princess* cruise ship incident, Agriculture has been reviewing its operational policies, processes and systems to focus on the management of human biosecurity risks (especially pandemic diseases) in the Vessels Pathway.

Initial MARS development focused on communication between persons directly responsible for ships and the biosecurity staff responsible for arranging and carrying out inspections and overseeing any necessary treatments before clearance of the ship. Provision for higher level data analysis was given second priority. There is a wealth of data rapidly accumulating in MARS and considerable opportunity for both improved management of operations and better overall risk management. Additional software development is underway to prepare summary reports for decision-makers and operational staff at different levels of Agriculture as well as industry to maximise the usefulness of the system.

The report of the New South Wales Special Commission of Inquiry into the *Ruby Princess* (Walker 2020) highlighted several weaknesses in MARS and recommended a number of improvements:

That human health reporting within MARS be reviewed with a view to:

- a) improving its ability to be readily adapted to novel circumstances and suggested improvements (see, eg, [11.52]);
- b) improving its clarity of expression and the coherence and intelligence of the format of its design and presentation (see, eg, [11.54] to [11.60]); and
- c) improving access to other agencies (such as the Port Authority) with a legitimate interest in receiving the data for their own operations.

MARS' adaptability to improvements

Section 11.52 of the Special Commission of Inquiry into the *Ruby Princess* report (Walker 2020) highlighted unsatisfactory state of affairs relating to MARS and noted:

- NSW Health (including the Chief Human Biosecurity Officer and Human Biosecurity Officers) was not provided with automatically updated human biosecurity information from MARS.
- The Port Authority of New South Wales was unsuccessful in attempts to gain access to MARS data.
- There was difficulty in having the questions in the human health report form updated.

The commission also heard that it was difficult to update MARS by adding additional questions on influenza-like illnesses and influenza test results, as questions are 'hard-coded' in the software and difficult to change.

In its Voluntary Statement to the Special Commission of Inquiry into the *Ruby Princess*, the Commonwealth (Exhibit 119, AGS 2020) noted:

The circumstances of the *Ruby Princess* have highlighted the need to address these matters, which appear to be attributable to:

- some inconsistency between Agriculture's policies and practices that were followed at the Port of Sydney
- technological limitations which in this case (and more generally) result in biosecurity officers not being able to access the MARS System whilst on board a vessel (p. 12).

The time taken to make suggested changes to MARS depends on the complexity of the change and whether the changes affect how the information is used by MARS to

assess risk. Evidence presented to the Inspector-General by Agriculture demonstrated the level of ease with which Agriculture is able to update MARS. For example, in early February 2020, Health asked Agriculture to update MARS with some additional questions. Agriculture successfully completed the requested changes within 2 weeks ([Table 20](#)).

TABLE 20 Typical timeline for completing changes to the Maritime Arrivals Reporting System (MARS)

Date	Activity
3 February 2020	Meeting between staff within Conveyances and Ports and Export Systems Sections to discuss addition of new human health questions to Maritime Arrivals Reporting System for reporting of COVID-19 risk onboard vessels
3 February	Formal Request for Service for changes to Maritime Arrivals Reporting System submitted to Information Service Division for costing
5–6 February	Commonwealth Department of Health requested further questions be added to Maritime Arrivals Reporting System
7 February	Costing for changes to Maritime Arrivals Reporting System provided by an external provider
10 February	Costing approved by delegate under <i>Public Governance, Performance and Accountability Act 2013</i>
12 February	Maritime Arrivals Reporting System updated offline by adding human health questions for reporting COVID-19 risk onboard vessels
13 February	Testing completed by Conveyances and Ports Section and approval given to Information Service Division for implementation
14 February	Operational Staff Notice published on Agriculture’s Instructional Material Library
14 February	Offline forms updated and published on Agriculture’s website
15 February	Changes implemented in Maritime Arrivals Reporting System and released online

The Inspector-General agrees that 2 weeks is an acceptable time frame for the completion of the task presented in [Table 20](#). Agriculture must continue to prioritise all tasks associated with improvements to MARS, especially applying updates to MARS for human health related questions, as and when advised by Health.

MARS – clarity of expression, coherence of design and presentation

The report of the New South Wales Special Commission of Inquiry into the *Ruby Princess* (Walker 2020) recommended that the human health report within MARS be reviewed to improve clarity of expression. Agriculture generally considers the content of the human health report to be outside its expertise. The form of questions in the human health component of MARS forms are taken on the advice of Health, which, in turn, develops questions on the advice of Chief Human Biosecurity Officers. In response to the commission's recommendation, Agriculture has suggested modifications to some of the questions in the human health report. As of 24 September 2020, these suggestions had been considered by Chief Human Biosecurity Officers.

In relation to specific questions referred to in the Special Commission of Inquiry into the *Ruby Princess* report (Walker 2020), it is noted that:

- The questions about disease presence in high-risk countries were being changed regularly, on advice from Health as travel restrictions were updated. The current questions refer to countries other than Australia.
- In early March 2020, question 2.1.7 was changed, at the suggestion of Agriculture, to reflect the form of words used in the Traveller with Illness Checklist.
- MARS is used to capture information for the states about gastrointestinal illness outbreaks onboard cruise vessels. Not all the questions in this section are clearly related to gastrointestinal illnesses (although Agriculture considers them to be so based on their placement in the form and their interaction with pratique decision-making in MARS). Agriculture has suggested to Health and Chief Human Biosecurity Officers that the clarity of these questions be improved or, if they are relevant to an assessment of listed human disease risk, that they be placed elsewhere within the human health report.

The Inspector-General concurs with observations noted in Walker (2020), as human health questions are the only means by which Agriculture assesses human health risks onboard incoming commercial vessels. Further, he recommends that Agriculture pursue these matters with Health as a matter of priority, with regular review, by considering increasing threats from Listed Human Diseases overseas.

Recommendation 41

Agriculture, in consultation with Health, should develop a schedule to periodically review human health questions included in the Maritime Arrivals Reporting System questionnaire to ensure there are no gaps in its efforts to detect and prevent the entry of Listed Human Diseases into Australia via the Vessels Pathway.

MARS' accessibility by other agencies

All vessel operators and shipping agents (where vessel operator uses an agent) seeking access to MARS must:

- first register for a security account by creating a unique user ID and a password
- ensure that their agency is registered in MARS
- ensure that their agency has an approved MARS administrator who can approve their request.

Upon registering an ID, a user can request Agriculture to provide access to MARS.

Similarly, Agriculture's biosecurity officers seeking access to MARS must submit an access request form, which must include an endorsement from their local Shipping Managers' Group manager to ensure the need and appropriateness of the access requested.

Agriculture biosecurity officers who are granted 'vessel inspector' access to MARS may perform functions as a 'cargo inspector' and/or 'passenger (Pax) inspector' depending on their responsibilities and location.

As a 'vessel inspector', a biosecurity officer is able to:

- generate inspection templates for queued inspection and complete and upload the inspection results back into MARS
- apply and adjust inspection demerits for noncompliance in inspections
- add and adjust charges for inspection and assessment services
- remove or add inspections to the inspection queue
- look up vessel, voyage, visit details
- look up shipping agent and agency details
- view historical inspection results.

The 'cargo/Pax inspector' access types provide additional abilities for queueing and completing those inspection types.

The Inspector-General noted that the Port Authority of New South Wales is a registered MARS user. However, the Acting Chief Operating Officer of the Port Authority of New South Wales told the Special Commission of Inquiry into the *Ruby Princess* (Walker 2020):

the pre-arrival questions were developed because the Port Authority did not have standing access to the human health reports and other information submitted by vessels through the Department of Agriculture, Water and the Environment's Maritime Arrivals Reporting System (MARS).

The Port Authority had not been privy to any earlier information regarding the 'medium risk' assessment and the ship's Human Health Report lodged via the Department of Agriculture, Water and the Environment's Maritime Arrivals Reporting System (MARS).

Port authorities across first points of entry play an important role in directing vessel masters and crew to meet Australia's regulatory requirements as well as vessel's movements at and around ports. Difficulties in accessing MARS appear to have prevented the Authority officials from accessing the necessary information – notably, human health reports submitted by vessels through MARS and pratique status before berthing. This prevented the Authority from advising the vessel crew to take necessary action(s) to manage human health risks onboard the *Ruby Princess*. The Inspector-General advises Agriculture to review its processes and mechanisms to ensure that all registered agencies/entities have access to MARS to enable them to assist/guide the vessel master (crew) in taking appropriate measures to manage human biosecurity risks onboard vessels.

Recommendation 42

Agriculture should review its current systems and mechanisms of providing appropriate and uninterrupted access to Maritime Arrivals Reporting System to all registered agencies that have an interest in managing biosecurity (including human biosecurity) risks.

Chapter 14

Overview of findings

Global health crises have occurred periodically over the centuries. The COVID-19 pandemic has been the most devastating health crisis globally since the 1918 Spanish flu.

The decision to allow the *Ruby Princess* cruise ship to dock at the Port of Sydney on the morning of 19 March 2020 had profound consequences for many Australians. The incident had a significant impact on Australia's border biosecurity system and on sections of the shipping, logistics and importing industries. The ship carried a total of 3,795 people on board – 2,647 of those were passengers and 1,148 crew.

The review examined whether an appropriate level of confidence could be had in Agriculture's operational capability for the delivery of biosecurity functions. In particular, the review examined whether there could be confidence in biosecurity areas where the consequences of inappropriate regulatory decisions or actions could lead to high/extreme consequences. The *Ruby Princess* cruise ship incident provides a stark case study where Agriculture's regulatory processes, decisions and the timely and efficient delivery of actions at the first points of entry were tested under pressure.

This review also examined the handling of other cruise ships and cargo / live animal export vessels. This enabled the testing of the overall national operational capability on human health risks associated with commercial vessels, which is dependent upon the Agriculture having in place both appropriate national governance plus sound local regulatory delivery arrangements.

The Review Work Plan established a framework under which the Inspector-General would be able to form a view of the composite arrangements in place for addressing human biosecurity risks associated with commercial cruise ships and cargo vessels. This framework, which provides the structure to this chapter, draws upon long-established 'root-cause analysis' approaches which enable assessment and documentation of the known or likely (visible and underlying) causes of weaknesses in operational capability.

Much of the documentation provided to the Inspector-General did not demonstrate that ongoing and responsive risk assessment is occurring in the Vessels Pathway. The *Ruby Princess* incident clearly demonstrated that Agriculture needs to undertake ongoing assessment of current and emerging threats to effectively manage human biosecurity risks in the Vessels Pathway.

The Inspector-General has made the following observations to provide an overall context to the large number of specific recommendations listed in the body of this report, and for Agriculture to consider in responding to this review.

14.1 National framework and governance

Agriculture has the following national arrangements in place for the management of biosecurity regulation relevant to human health risk on cruise ships and cargo vessels:

- an MoU with Health
- an oversight management through the Compliance Program
- the national programs for Vessels (Canberra based); and Travellers/Passengers (Canberra based)
- a single point of contact for industry and stakeholders and pre-arrival risk assessment of international vessels through the Maritime National Coordination Centre in Adelaide
- Inspections Group directors with national lead roles and business line operations responsibilities (Vessels and Travellers national stream leads are located in Perth)
- operational delivery in each regional port through regionally based staff coordinated via the Inspections Group and managed locally through regional people and place arrangements (including multiskilled staff under the Integrated Business Model)
- the Technical Training Services team, which focuses on Inspections Group biosecurity officers being equipped with the technical skills to do their jobs efficiently and correctly (the National Director of Technical Training Services is based in Melbourne)
- cooperation at national and local levels with other Commonwealth agencies (Australian Border Force, Health and the Australian National Maritime Authority), including Australian Border Force's Maritime Traveller Processing Committee.

14.2 Threat and vulnerability assessment

Agriculture, both from intelligence from other Commonwealth agencies and of its own volition, was underprepared for a cruise ship infection level that was part of 2019 scenario planning. It is perplexing that, in February 2020, the world watched the spread of COVID-19 infection and implications unfold on the *Diamond Princess* cruise ship in Japan, but Agriculture was 'too little and too late' in being prepared to handle potential biosecurity (and pratique) issues for numerous cruise ships steaming to Australian ports soon after the Prime Minister's announcement that Australia's borders would close. Out of 2,666 passengers and 1,045 crew onboard the *Diamond Princess*, 567 passengers and 145 crew members became infected, with 24 out of 164 Australian passengers infected and 8 quarantined in Darwin. Overall, 14 passengers died, including one Australian.

Agriculture did well in preparing for overall business continuity and staff wellbeing under the pandemic threat but appears to have largely overlooked the need to bolster numbers of experienced frontline staff and management/technical support to ensure that the spike in cruise ship risk could be safely addressed. The research for this review has identified the same issues of 'inadequate frontline focus' that were demonstrated in industry and staff feedback to the last Inspector-General review into the adequacy of Agriculture's operational model to effectively mitigate biosecurity risks (IGB 2021).

It now seems clear that Agriculture's focus on the plethora of (technical) animal and plant pest and disease risks has overshadowed adequate ongoing assessment of vulnerabilities from operational weaknesses (for example, inadequate regulatory training) and cooperation weaknesses (for example, untested MoU and shallow desktop exercises). A greater frontline focus will bring Agriculture's diverse biosecurity responsibilities into more rigorous and balanced risk assessment, from biosecurity threat through to ability to deliver biosecurity regulatory functions.

14.3 Coordinated, agile management arrangements with efficient cooperation

The Inspector-General fully acknowledges that Agriculture will always confront significant challenges in delivering its biosecurity regulatory responsibilities – such is the nature of the diverse biology, trade and travel, geography, and business systems and attitudes that prevail internationally and within Australia. However, the business of delivering this vitally important national function is not new – it was established with the *Australian Constitution* in 1901 – and Agriculture’s role has been subject to comprehensive reviews over more than 2 decades.

Agriculture appears to have become the victim of a number of modern trends running temporally across successive national governments and within public sector reforms; and flowing from international and Australian business competitiveness and process reforms running faster than within the public sector and Agriculture. The end result of multiple drivers, which Agriculture has been unable to successfully juggle, is that biosecurity delivery is hampered by a resourcing model not suited to the agility demands; conflicting pressures from demands for ‘stronger compliance and enforcement’ and ‘de-regulation and business facilitation’; engagement of too many managers and staff with ‘generic skillsets’ that have limited regulatory, logistics or business experience; a Canberra-centric culture that is not adequately focused on ‘biosecurity risk mitigation at the frontline’; and too much focus on promotion of new initiatives over the hard grind of delivering training, operational excellence, business engagement, regulatory action, and practical biosecurity outcomes at the frontline.

The complexities of multi-agency cooperation within Australia’s national government, and then multi-agency cooperation at state/territory jurisdictional level, for such massive challenges as COVID-19 have highlighted that the weaknesses result from shallow consideration of the adequacy and functionality of MoUs, inter-agency communication arrangements, and hastily established coordination committees with poorly defined accountabilities. Inadequate communication was a key factor in the *Ruby Princess* biosecurity failure. Confusion around pratique amongst frontline biosecurity staff, which still existed late in 2020, and ongoing debate as to whether state emergency management laws had practically overridden national biosecurity law are further examples of where critical evaluation and communication has been inadequate.

The goodwill and personal commitment of public servants can only go so far: sound governance arrangements, including clarity of authority, focus on critical risks and processes, accountabilities and documented shared understandings and decisions must be routine (regardless of the felt work pressure). On occasions, Agriculture has been poorly equipped to carry out its own regulatory responsibilities; lacking in confidence in terms of its authority and accountability against that of other agencies; and inadequately determined to pursue clarity of roles, responsibilities and accountabilities for human biosecurity delivery.

14.4 Regulatory powers and capability to apply regulation

The COVID-19 pandemic has been a massive ‘pressure-test’ for all governments and their agencies and has highlighted major weaknesses in Agriculture’s regulatory maturity: inadequate knowledge and training in application of the Act; inadequate regulatory instructional material; inadequate management monitoring of frontline issues; and inadequate provision of modified or additional support.

Rather than the various national and state/territory coordination arrangements rapidly resolving and documenting the optimal application of various national and state/territory laws (potentially) applying to mitigation of human biosecurity risk for cruise ships and commercial vessel, ad hoc arrangements have been applied, with different levels of effectiveness and efficiency in each jurisdiction. As the national biosecurity agency acting for Health in delivering human biosecurity related functions, Agriculture has been inadequately assertive in pursuing regulatory and operational clarity. On occasions, Agriculture has appeared to have been most comfortable to ‘take a back seat’ despite its responsibility for the age-old biosecurity (quarantine) tool of issuing or withholding pratique.

The risk-averse tendency within Agriculture to defer decision-making in the areas that it is responsible for to other agencies may avoid an immediate burden of making an operational decision. However, it carries the risk that crucial decisions may go unmade at a critical time, with adverse implications for biosecurity and ultimately for Agriculture. It is essential that Agriculture has a clear plan for effective handling of human biosecurity for vessels when state/territory emergency management responses are scaled back. Agriculture, as a regulatory agency responsible for pratique and working with relevant Human Biosecurity Officers, must play a leading role.

The poor and inconsistent application and misapplication of pratique by Agriculture is a cause for serious concern. Agriculture management sought to clarify pratique handling, too late and with incomplete success. Biosecurity regulatory officers working every day at the frontline interface with shipping agents, captains, crew and passengers (as well as frontline officer and managers from other regulatory agencies) must have leadership and support from their organisation that has a ‘regulatory personality’ and that comes from being heavily infused with ‘experienced regulators’. A strengthening of regulatory capability and leadership is essential.

14.5 Monitoring and adjustments to intervention measures

The fundamental nature of biosecurity, let alone human biosecurity for a rapidly spreading viral pandemic, demands that all parts of the biosecurity system are alert, inquisitive, communicative, (risk-based) decisive, and operationally disciplined.

It seems increasingly clear that Agriculture, with the plethora of animal, plant and human biosecurity risks with which it must deal, the diverse external pressures on it and its insufficient confidence (largely from inadequate regulatory maturity, antiquated resourcing model and weak frontline focus), is too easily distracted by issues of the moment (including political, industry and media commentary). Agriculture needs to reset its behavioural stance as Australia’s critically important biosecurity regulator with a strong focus on delivering the most appropriate biosecurity measures (controls) in all risk pathways. For human biosecurity (including COVID-19) there is a relatively discrete suite of ‘must-do’ frontline biosecurity actions that must be delivered well, in a timely manner, by adequately authorised and skilled regulatory officers, and fully supported by managers and technical resources.

Overall, Agriculture's performance as a regulator has been largely ineffectual in delivering human biosecurity activities to prevent the entry of COVID-19 virus. As noted in this report, clearly, the emergency management powers of states and territories were the main determinants of human biosecurity risk management for commercial vessels.

This reaffirms Agriculture's failures in achieving 2 of the 4 strategic priorities discussed in detail in the Inspector-General's latest review report (IGB 2021):

- *regulatory maturity* stemming from incomplete implementation of training of relevant staff before and after the enactment of the *Biosecurity Act 2015* as well as failure to recognise the need for necessary regulatory powers (by amending the Act) for the frontline staff to deliver human biosecurity activities at the first points of entry
- *operational (or frontline) focus* addressing the core need for a deep understanding across the department of the criticality of frontline regulatory delivery on commercial vessels and in seaports.

These failings go beyond the *Ruby Princess* cruise ship incident, which had devastating consequences for many passengers, crew and other Australians. Thankfully, the biosecurity implications of similar handling for other vessels have been relatively minor, mainly because of the emergency management powers of states and territories. The handling of several commercial vessels in a way that was inconsistent with standard procedures (and slow development of a few new ones, notably due to the Instructional Material Library's strict drafting requirements at the time) may have reduced the COVID-19 risk more than that if the documented procedures had been applied as intended.

14.6 Staffing and staff competency

The Inspector-General has seen no evidence that Agriculture staff have sought to do anything other than their best to protect Australia from COVID-19 risk posed through cruise ships and commercial vessels. However, hard work and commitment are necessary but not sufficient contributors to success in a complex, fast-moving operating environment.

Beginning with the failure of Agriculture to fully implement the Act training and regulatory support program initiated in 2016, frontline biosecurity officers have been left inadequately supported by instructional material, training and expert technical and regulatory advice.

Verification activities that are designed to test biosecurity officers' competency, promote nationally consistent practice and detect gaps in instructional material failed to detect the localised (noncompliant) work practices being applied in Sydney. Similarly, verification processes have not identified to senior management the gaps in vessels instructional material where work instructions do not align with legislation. Verification activities must do more than focus on routine process, both in terms of testing staff against capability to identify and address noncompliance and deliver biosecurity outcomes; and critically important feedback on deficient instructional material and processes.

The root cause of poor decision-making, inconsistent regulatory delivery and tentative compliance action in Australian ports and on cruise ships and commercial vessels appears to be due largely to the inadequacies of the organisational support provided to frontline biosecurity officers. The major changes recommended in the recent Inspector-General report must be implemented if Agriculture is to avoid being a contributor to future major biosecurity failures (whether within the Vessels Pathway or elsewhere). Feedback to the Inspector-General is that both operational staff and industry will rally to the rejuvenation of Agriculture as a more capable, competent, consistent and confident biosecurity regulator – and Australia will benefit significantly.

14.7 Availability of technical support to frontline staff

This report refers to the separate targeted review initiated by Agriculture's biosecurity management to identify and ameliorate major deficiencies in the biosecurity instructional material and tools available to operational staff. This timely work is commended, and the Inspector-General strongly encourages rapid completion of contemporary, accessible regulatory and operational instructional material and the (re-)training of staff to enable a high level of competence and confidence in regulatory delivery. The necessary resources must be applied to avoid a repeat of the earlier missteps that have led to inadequate regulatory maturity across Agriculture's biosecurity functions.

The rapid spread of COVID-19, and necessity for all Australian jurisdictions to become involved at or near the international frontline, has highlighted the criticality of timely access by Agriculture's frontline staff to Human Biosecurity Officers. Dealing with the reality that every jurisdiction has different Human Biosecurity Officer arrangements, differing levels of experience and accessibility and different state emergency management arrangements has been a challenge for Agriculture. Future government reviews of Agriculture–Health cooperation, and of local multi-agency cooperation arrangements, must lead to greater clarity and documentation of the practical arrangements to apply in each jurisdiction in order to ensure readiness, effectiveness and efficiency of future joint responses. Agriculture must be confident in pursuing clarity of operating parameters for its roles and cooperative interfaces.

The Integrated Business Model being implemented by Agriculture has many benefits, including a more agile, multiskilled workforce in all major centres. However, when combined with the pressures from outmoded and inadequate resourcing arrangements, there is a major risk of rapid decline in availability of 'subject-matter expert' biosecurity officers in specialist areas such as biosecurity for commercial and passenger vessels. Reform of the resourcing model is essential if operational managers and staff are going to deliver frontline biosecurity delivery to the standard, efficiency and agility needed by our nation.

14.8 Data and information management

The Inspector-General's research for this review has identified several areas of information management requiring urgent review and remediation, including:

- pre-arrival interaction with vessels, including efficiency, integrity and multi-channel communication without sharing
- MARS being a support tool for good biosecurity outcomes, not driving a process-oriented approach.

The overall impression given by the pre-arrival reporting arrangements for vessels approaching Australia is of outmoded processes and cooperative arrangements working hard to be helpful to vessel agents and captains, rather than ensuring that Australia's biosecurity outcomes are cost-effectively addressed. Sometimes frequent email exchanges between an under-resourced Maritime National Coordination Centre and many vessels, multiple national and state authorities interacting with vessels but not having a platform for sharing critically relevant information and data, and issue of pratique for most vessels appears to be satisfactory if human biosecurity risks are ignored. Development and efficient application of improved systems (for agencies and vessels) is essential if human biosecurity risks are to be effectively mitigated without adding more costs than necessary to Australia's vital international shipping movements. Reforms must include clearer communication of accountability and compliance arrangements for each vessel and its master and/or agent.

The MARS information system is a lynchpin of vessel biosecurity processing. It must support delivery of high-quality biosecurity outcomes and not be the process that drives incomplete delivery of biosecurity-related steps.

Simplification and improved accountability for Agriculture's program, national stream and Maritime National Coordination Centre and information system support, all adequately funded through practical cost-recovery mechanisms, will better equip this critical area of Australia's preventative biosecurity system.

14.9 Continuous improvements

Over time, Agriculture has developed an organisational model based on inappropriately complex management, shared accountability and inadequate frontline focus. National managers for vessel biosecurity must have much-improved end-of-line (for the Director of Biosecurity) accountability for all aspects of vessel biosecurity delivery.

A modified business model is needed that routinely tests, plans and updates biosecurity arrangements based on whether the appropriate measures (controls):

- have been identified or developed
- are being applied in the right places
- are being applied correctly and reliably
- are working
- are unnecessarily impeding travel and/or trade.

National managers should prepare an annual report for independent review and verification that includes threat and risk assessment for the pathway(s); issues identified and improvements made; and priority-based plans for ongoing improvements.

This review has applied significant time to the examination of complex regulatory and processing issues for commercial and passenger vessels. Despite this complexity at the frontline for biosecurity delivery, the root-cause approach taken for this review has highlighted:

- Most major weaknesses in human biosecurity for vessels have not originated at the frontline, where committed staff are doing their best with inadequate tools.
- Underpinning problems identified in the Inspector-General's previous report (especially regulatory maturity and absence of an appropriate funding model) are major drivers for regulatory delivery weaknesses for vessel biosecurity.
- Intra- and inter-jurisdictional goodwill and hard work, not good governance, has minimised the number of major (*Ruby Princess* scale) biosecurity incidents resulting from crew and passengers on arriving vessels.

From within the complexities and specificities of vessel (crew and passenger) biosecurity, this report provides clear directions to Agriculture regarding the underpinning reforms and improvements that are essential to effective, efficient conduct of its vital national biosecurity functions. Agriculture will not achieve the essential improvements in isolation – central agencies and governments of the day will need to provide appropriate support.

Appendix A

Agency response



Australian Government
Department of Agriculture,
Water and the Environment

ANDREW METCALFE AO
SECRETARY

23 April 2021

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 7 April 2021 and for providing your review report, *Confidence testing for at-border delivery of critical human biosecurity functions—Ruby Princess cruise ship incident*, for our response. I appreciate the opportunity to respond to your findings and recommendations.

I note your recommendations largely accord with many changes and reforms we have undertaken during 2020, 2021, and those we will undertake into the future. We have therefore fully agreed, or agreed in principle, to the vast majority of your recommendations.

As I have noted many times over, including in evidence to the Senate Select Committee on COVID-19 hearing on 18 August 2020, my department was part of efforts right across the federation and beyond, to keep people safe from the serious impacts of the global pandemic.

Officers of my department provide services in relation to human health screening, as they are physically present at many ports, and airports. However, it is important that we continue to note, they are not medically trained, and it is appropriate that they rely heavily on advice from medically trained human biosecurity officers.

As you have noted we are not the policy owners of human health under the *Biosecurity Act 2015* ('the Act'), that responsibility belongs to the Director of Human Biosecurity, the Commonwealth Chief Medical Officer (CMO), who has general responsibility under the chapter of the Act which deals with the prevention and management of risks to human health. I am the Director of Biosecurity under that same Act, which has primary responsibility for the assessment and management of animal and plant biosecurity risks.

I note your observations in relation to our relationship with the department of Health and want to assure you my department takes very seriously the importance of our shared responsibility. I and other senior executives, as well as staff of my department

meet actively and regularly with our colleagues in the Department of Health. I very much see this as a productive and equal relationship, noting that final decisions of policy relating to the human health aspects of the Act, belong to the Health portfolio.

Like other sectors DAWE has learnt valuable lessons throughout the pandemic, including through the *Ruby Princess* matter. DAWE is cognisant that while the overall system designed to identify and respond to human health risks onboard international aircraft and vessels has worked well in the majority of occasions, there is room for improvement in some areas.

Reforms in the maritime pathway include implementation of recommendations provided by the NSW Special Commission of Inquiry into the *Ruby Princess*. Reform actions taken to date include:

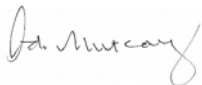
- Institution of regular meetings at ports around Australia with port stakeholders, including state and territory health departments, to improve awareness of roles and responsibilities. These meetings were established with a focus on human biosecurity and COVID-19.
- Engagement of independent experts Noetic Group to redevelop the department's maritime human health instructional materials.
- Engagement of Due Diligence consultancy firm to conduct a Regulatory Design Assessment of pratique.
- Making, and continuing to make, adjustments to human health reporting questions within the Maritime Arrivals Reporting System (MARS).
- Establishing formal protocols for communicating with human biosecurity officers and port stakeholders about human health risks and pratique. These form part of new commercial vessel assessment processes established with Commonwealth Health and agreed with state and territory health departments

DAWE recognises the unique public health risk posed by arriving international vessels will continue to improve its capability to respond to human biosecurity risk and learn from the challenges that COVID-19 has brought to our operations.

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 publicly available.

Please find attached DAWE's response to your report and recommendations.

Best wishes



Andrew Metcalfe AO

Attachment: Department of Agriculture, Water and the Environment – Agency response to IGB report: *Confidence testing for at-border delivery of critical human biosecurity functions—Ruby Princess cruise ship incident*

AGENCY RESPONSE (Overview):

Like other sectors the Department of Agriculture, Water and the Environment (DAWE) has learnt valuable lessons throughout the pandemic, including through the Ruby Princess experience, and is cognisant that there is room for improvement in many areas. DAWE recognises the unique public health risk posed by arriving international vessels and throughout the COVID-19 response has refined many of its processes through continuous business improvement. Key actions taken to date include but are not limited to an assurance review of the maritime human biosecurity pathway and subsequent reform of instructional material for biosecurity officers, a regulatory design assessment of pratique, and new pre-arrival risk assessment processes for arriving international vessels.

The Australian Government's leadership in human biosecurity is critical to manage the risk of Listed Human Diseases entering through our international borders and establishing in the community. Throughout the COVID-19 pandemic, Australia has been the envy of many other nations with over 3 million lives lost globally as of 19 April 2021. Australia's human biosecurity processes and systems at our international airports and seaports have largely contributed to our success.

The shared relationships for managing human health risks at the border between DAWE, Commonwealth Department of Health (Health) and states and territories are complicated, with the overall system designed to identify and respond to human health risks onboard international aircraft and vessels working well in the vast majority of occasions.

DAWE's partnership with Health is key, with joint responsibility for administering the *Biosecurity Act 2015* (the Act), Health leads on human biosecurity policy, and provides guidance to the department on operationalising these policies. Health through the Chief Medical Officer authorises state and territory public health doctors as Human Biosecurity Officers (HBOs) under the Act to provide guidance to biosecurity officers based upon their medical risk assessments and clinical judgement. Biosecurity officers rely on real time access to this advice from HBOs, as biosecurity officers are not medically trained. This important and collaborative relationship with Health is managed under a Memorandum of Understanding and associated forums that meet on a regular basis.

The department remains cognisant of the importance of cruising to the tourism industry in Australia, estimated at contributing almost \$5 billion per year to the Australian economy pre-COVID. The department is working closely with other Commonwealth Government agencies, states and territories and industry to ensure the safe and staged restart of the sector when the public health risk is deemed acceptably low.

Before the restart of international cruise operations into Australia, DAWE together with Health and states and territories, will implement a new pre-arrival reporting and risk assessment process unique to cruise vessels. This new process for cruise vessels will include stronger pre-arrival health assessment and screening processes, supported by enhanced pre-arrival human health reporting requirements. This will be supported by a robust legislative framework, revised instructional material and training for frontline staff.

AGENCY RESPONSE (Thematic against recommendations):

No.	Recommendations	Department Response
Memoranda of Understanding between DAWE and other Commonwealth agencies		
1.	Agriculture should regularly engage with Health to review the Health–Agriculture Memorandum of Understanding (MoU) to implement identified roles and responsibilities of each agency for human biosecurity function delivery at first points of entry, including by either operating the Human Biosecurity Forum as stipulated in the MoU, or alternative formal high-level, technical interactions already occurring between the 2 agencies	<p>Agree</p> <p>DAWE and Health maintain a close working relationship, reinforcing our shared objectives through regular consultation and scheduled meetings at all levels from the Secretary to APS Officer level contacts.</p> <p>The Memorandum of Understanding (MoU) governs the high-level arrangements for human biosecurity between the departments. The MoU is supported by a range of detailed policies, protocols, guidelines, standard operating procedures and instructional materials. These supporting documents are developed jointly between Health and DAWE and provide a more granular level of policy and operational level information than can be expressed through the MoU.</p>
4.	Agriculture should regularly engage with Health to review roles and responsibilities as stipulated in the Health–Agriculture Memorandum of Understanding; and clarify expectations in managing vessels that are in negative practise and in detecting and managing non-compliances related to human health matters. Clarity of responsibilities for the management of non-compliance must be achieved.	DAWE agrees that regular reviews of the MoU is necessary to ensure the roles and responsibilities articulated remain fit for purpose. While the MoU should ensure both departments' roles and responsibilities are set out, the detail of each activity may be articulated by supporting material.
5.	The Director of Biosecurity should ensure biannual, independent review of the operation of the Health–Agriculture Memorandum of Understanding to ensure effective human biosecurity management onboard all incoming vessels, with prescribed human biosecurity requirements for Listed Human Diseases. The review reports to the Director of Biosecurity should include verifiable evidence that agreed actions have been completed.	<p>The MoU is negotiated between the departments and any future changes must be mutually agreed and reflect each department's roles and responsibilities for assessing and managing human health risks under the <i>Biosecurity Act 2015</i>.</p> <p>The Human Biosecurity Schedule (3) under the MoU is due for renewal in November 2021.</p>

6.	<p>Agriculture should ensure that all biosecurity memoranda of understanding with all Commonwealth agencies are renewed before their expiry dates.</p> <p>Agriculture should update its current Memorandum of Understanding with Health to align with the 2007 Memorandum of Understanding, as the 2007 memorandum provided clarity of each agency's roles for:</p> <ul style="list-style-type: none"> • human biosecurity surveillance • border measures specific to travellers • border measures specific to seaports, including the management of vessels in negative pratique. <p>Agriculture should rigorously review its responsibilities under the Memorandum of Understanding (and other inter-agency memoranda as appropriate) to ensure that there is adequate inter-agency functional rigour and that Agriculture delivers on its responsibilities under those memoranda.</p>	
12.		
13.		
Instructional Material and Access to Information		
2.	<p>Agriculture should work collaboratively with Health to ensure instructional material for human health management in the Travellers Pathway is consistent with Health's policies. It should clearly identify any separation of issues unique to either the air or sea Traveller Pathways if these are known to exist. It should take a 'ground up' approach rather than attempting to update or repurpose existing instructional material to include broader questioning techniques when there is a known concern regarding human biosecurity or possible outbreak scenarios, such as was seen with COVID-19.</p>	<p>Agree</p> <p>As noted by the IGB, to assure the appropriateness of instructional materials available for our staff, in August 2020 DAWE engaged Noetic Group to perform an assurance review in the Maritime Human Biosecurity Pathway.</p> <p>Key recommendations of Noetic's review were:</p> <ul style="list-style-type: none"> • Review and update the guidance for developing instructional material; • implement a formal change impact assessment process to support the creation and/or modification of any instructional material; and

<p>23.</p>	<p>Biosecurity officers who are responsible for administering pratique should be provided with the information they require to administer it correctly. Clarity on pratique must be included within instructional material used by biosecurity officers as a matter of urgency. Subject to the Memorandum of Understanding with Health being updated, a work instruction covering the management of vessels in negative pratique is required.</p> <p>Agriculture should make necessary improvements to Maritime Arrival Reporting System (MARS) and relevant instructional material to ensure all correspondence between biosecurity officers and stakeholders relating to key decisions (such as the revocation of pratique) is recorded by notes in MARS. This would include any advice, discussions or directions from the Human Biosecurity Officer or the Maritime National Coordination Centre or specialist regulatory advice.</p>	<ul style="list-style-type: none"> • establish a program of work to review and update all maritime human biosecurity instructional material. <p>Within DAWEs Biosecurity Operations Division, an Instructional Material Library Taskforce has been formed in partnership with Noetic Group. Work is underway to:</p> <ul style="list-style-type: none"> • Conduct a pilot program contemporising decision support structure and governance processes to develop and trial a new instructional material framework for enduring use by the department; and • Develop a new suite of maritime human biosecurity instructional material, including guidance on managing pratique. <p>The new instructional material framework will include an overarching policy statement that provides biosecurity officers with the policy context and overarching objectives of the activity. This will give more guidance to inspections managers to inform regulator decisions. Escalation points for further advice where required by biosecurity officers will be considered as part of the instructional material review.</p> <p>The project is expected to be completed by May 2021.</p> <p>The development of the instructional material is informed by Department of Health human biosecurity policy and is done in collaboration with staff from the frontline to ensure that it provides the right information to staff and supports the role of biosecurity officers to fulfil their important role at the border.</p> <p>DAWE continues to explore system improvements and digital solutions to provide easy and intuitive access to instructional material for biosecurity officers in the field.</p>
<p>25.</p>	<p>Agriculture should remove the need for mandatory centralised editing of instructional material to meet its standards of publishing, as the material is only used internally by its staff. Relevant policy managers must be accountable for accuracy, utility and currency of instructional material.</p> <p>Agriculture should have a standard system for handling of all instructional material, that includes version control, accountability for content and updating, signoff and so on. The Instructional Material Library must be routinely searchable, include officer authorisations and subject-matter experts and be available to all biosecurity officers via mobile devices (tablets).</p>	
<p>36.</p>		

37.	Agriculture should review all maritime human biosecurity instructional material saved on its internal repository (Instructional Material Library), SharePoint® document sets for operational areas, and team and other information sharing sites for accuracy, currency, consistency, clarity, usefulness for verification at the border and ease of access.	
38.	Agriculture should, as a priority, implement all recommendations included in the external agency's report, <i>Independent assurance review of maritime human biosecurity instructional material</i> .	
39.	To achieve nationally consistent delivery of regulatory activities at first points of entry, Agriculture should identify experts in relevant streams who biosecurity officers can contact to discuss time-critical matters and seek advice for quick resolution.	
40.	Frontline staff should be provided with consistent information through an effective digital communication tool that is easily accessed by operational staff in a variety of work environments.	
Pratique		
17.	Agriculture should ensure that, where pratique is granted orally, biosecurity officers make contemporaneous notes of the event- specifically, the time and to whom the advice was provided. Instructional material should be updated to reflect this requirement. The Maritime Arrival Reporting System should also be updated to record details of the granting of pratique.	<p>Agree</p> <p>DAWE acknowledges that adequate systems to record the basis of regulatory decisions are critical to being an effective regulator. In July 2020, the department made a suite of significant changes to MARS to better facilitate the recording of pratique decisions by biosecurity officers. This includes updating inspection e-forms for vessels arriving in negative pratique to require:</p>

		<ul style="list-style-type: none"> the date and time that decisions to orally grant pratique are made; and details of advice obtained from human biosecurity officers to support pratique decisions. <p>The ongoing review of maritime human biosecurity instructional material will build on these changes, ensuring that the supporting work instructions support officers to make appropriate regulatory decisions that are supported by appropriate evidence and justification.</p>
18.	<p>Agriculture should seek Health's support to amend the <i>Biosecurity Act 2015</i> to include provision for biosecurity officers to withhold pratique for vessels that have been assessed to pose higher risk for potential listed human diseases based on the Pre-arrival Report and other intelligence, such as whether vessels have visited high-risk port(s) within the previous 14 days before arrival at an Australian port.</p>	<p>Agree-in principle</p> <p>Together with the Department of Health, the department is considering legislative changes to the pratique framework under the <i>Biosecurity Act 2015</i> to address issues identified during the COVID-19 pandemic and the NSW Special Commission of Inquiry into the Ruby Princess. The department will work with Health to consider the Inspector General's recommendations as part of this process.</p>
19.	<p>The provisions within the <i>Biosecurity Act 2015</i> relating to pratique should be reviewed to provide greater flexibility in managing pratique based on human biosecurity risk- in particular, to allow for aircraft and vessels to load and unload cargo and stores where this represents an acceptably low level of risk. The loading of provisions for crew onboard commercial cargo vessels and cruise ships in negative pratique should be incorporated in relevant instructional material</p>	<p>DAWE notes that any legislative change is ultimately a matter for parliamentary scrutiny.</p>

Modifications to MARS	
16.	<p>Agriculture should collaborate with Health to review human health related questions in the Maritime Arrival Reporting System form for the pre-arrival reporting, to:</p> <ul style="list-style-type: none"> • require reporting of symptoms as opposed to illness • consider making the Pre-arrival Report form available in both English and other languages. <p>Agriculture should review the Maritime Arrival Reporting System Biosecurity Status Document to include the legislative basis for any conditions placed on the vessel or crew and the consequences of noncompliance. This change must be reflected in relevant maritime instructional material.</p>
31.	<p>Agriculture, in consultation with Health, should develop a schedule to periodically review human health questions included in the Maritime Arrival Reporting System questionnaire to ensure there are no gaps in its efforts to detect and prevent the entry of Listed Human Diseases into Australia via Vessels the Pathway.</p>
41.	<p>Agriculture should review its current systems and mechanisms of providing appropriate and uninterrupted access to Maritime Arrival Reporting System to all registered agencies that have an interest in managing biosecurity (including human biosecurity) risks.</p>
42.	<p>DAWE is working with Health to continue to refine pre-arrival reporting systems in response to COVID-19.</p> <p>The department has implemented a new human health screening protocols for all commercial vessels. Where a COVID-19 risk is flagged through the mandatory pre-arrival reporting requirements, this new protocol engages a state and territory human biosecurity officer to conduct a risk assessment and provide management advice pre-arrival, rather than on-arrival.</p> <p>As part of the protocol, the department has also clarified communications protocols for biosecurity officers. In particular, to ensure that relevant port stakeholders are advised when a vessel is identified that may represent a human biosecurity risk.</p> <p>Further changes include modifications to questions in pre-arrival reports in response to issues identified by the NSW Special Commission of Inquiry into the Ruby Princess, and automation of reporting and assessment processes related to COVID-19. These changes have been approved by Chief Human Biosecurity Officers and were deployed into MARS on 9 April 2021. The changes also improve alignment with the Biosecurity Act by preventing MARS from revoking pratique.</p> <p>DAWE will continue to regularly engage with Health through the established forums, including those with Chief Human Biosecurity Officers, to review pre-arrival reporting questions and requirements.</p> <p>DAWE will also provide port authorities limited access to MARS. This was also a recommendation of the NSW Special Commission. A specific user profile will be applied to port authority staff. This provides a subset of MARS information that includes pratique status. Broader access will require investment in changes to</p>

		<p>MARS. The department will engage with NSW Ports and other port authorities about the scope of access before making system changes.</p> <p>DAWE will review the Biosecurity Status Documents in MARS including relevant references to the supporting legislation.</p>
Powers of Biosecurity Officers and Legislative Framework		
20.	<p>The provisions within the <i>Biosecurity Act 2015</i> should be reviewed with a view to providing biosecurity officers with broader powers that will assist them in managing large numbers of passengers and crew with potential Listed Human Diseases onboard foreign commercial vessels.</p>	<p>Agree in-principle</p> <p>DAWE and Health hold joint policy responsibility for administering the <i>Biosecurity Act 2015</i> (the Act) and its subordinate legislation.</p>
21.	<p>The <i>Biosecurity Act 2015</i> should be amended to provide biosecurity officers with greater powers to enforce negative pratique, to provide for penalties to be applied to individuals who breach negative pratique, and to make the 'person in charge' (and operator) of a conveyance, defined in section 22 of the Act, also responsible for any noncompliance with negative pratique. This includes provision for issuing Infringement Notices for pratique breaches.</p>	<p>DAWE and Health are currently reviewing and considering options to amend the Act in relation to:</p> <ul style="list-style-type: none"> • powers to manage groups of passengers • pratique; and • pre-arrival reporting obligations. <p>These reforms to the Act are being developed in consultation with DAWE and with consideration of recommendations from:</p> <ul style="list-style-type: none"> • The NSW Government Special Commission of Inquiry into the Ruby Princess; • A DAWE commissioned independent regulatory design assessment of pratique; and • Lessons learnt through the pandemic response to COVID-19. <p>The amendments recommended by the IGB to the Act are consistent with the above. They will be considered by DAWE and be provided to government for consideration, noting that any legislative change is ultimately a matter for parliamentary scrutiny.</p>
22.	<p>The <i>Biosecurity Act 2015</i> should be amended to provide biosecurity officers with clear powers to revoke pratique, including where either incorrect or inaccurate information is supplied by the vessel operator or there are changes to the vessel's human biosecurity risk status over time.</p>	
24.	<p>The <i>Biosecurity Act 2015</i> should be amended to require vessel operators to report updated biosecurity information, including human biosecurity information, if there are any</p>	

<p>changes to the information required under section 193 between the time that the Pre-arrival Report was submitted and the time of the vessel's departure from Australia.</p> <p>29. Under section 532 of the <i>Biosecurity Act</i> 2015, Agriculture should apply civil penalty provisions across the business, including to masters of arriving vessels who provide false or misleading information and people who breach negative pratique. Further, Agriculture should consider the application of demerit points against individuals who are noncompliant as well as against the conveyance that they arrived on.</p>	<p>Any proposed changes to legislation must be commensurate with the risk, be consistent with Australia's international and human rights obligations and are ultimately subject to Government scrutiny through the parliamentary process.</p> <p>DAWE notes based on the current pratique framework under the Act, once a vessel has arrived at the port precinct at the first point of entry, and has been granted positive pratique, it cannot be revoked. While the primary aim continues to be the identification of human biosecurity risks pre-arrival, through legislative reform DAWE and Health are considering alternatives that will provide additional provisions to manage any human biosecurity risk on conveyances that are discovered after pratique is granted.</p>
<p>Training</p>	
<p>3. As outlined in the Health–Agriculture Memorandum of Understanding, Agriculture should work with Health to ensure that, before deployment, all officers have received appropriate training in assessing human health. This training must be regularly refreshed to remain up to date. This should include:</p> <ul style="list-style-type: none"> • thorough review of the training material and refresher schedule to determine their appropriateness, currency and robustness • retraining of officers to ensure clarity of their responsibilities regarding the use of the Traveller with Illness Checklist (TIC), including when TIC must be administered. <p>26. Agriculture should review maritime training, Job Cards and all instructional material to ensure that staff have a clear understanding of their powers under the <i>Biosecurity Act</i> 2015. When acting on advice provided by Human Biosecurity Officers using state or territory powers, it should</p>	<p>Agree</p> <p>DAWE recognises the positive outcomes that can be realised through use of systems and technology. The Human Health Digitisation (HHD) App has been developed for use by Biosecurity Officers at Australia's first points of entry. The HHD App provides an electronic workflow for the assessment of ill travellers and clearance of deceased travellers, replacing the current paper-based process.</p> <p>This solution addresses data deficiencies, enables streamlining of processes, improves data quality, and enables seamless immediate updates as required. It allows for electronic dissemination of information to all relevant Health jurisdictions and enhances data sharing capability and access to data for analysis and reporting.</p> <p>The App can be used on departmental iPhones or tablets (depending on officer circumstances).</p> <p>The App can be updated quickly to address emerging human health border risks, improving the department's capability to manage ill travellers and national health emergencies. The App was rolled out in the air traveller pathway in</p>

27.	<p>be clear that this is the case. Any directions provided by biosecurity officers should be directly referenced to their powers under the Act.</p> <p>Agriculture, as a priority and in consultation with Health, should develop modern, on-tablet workflow and searchable documentation system for use in the field to enable biosecurity officers to make sound, lawful decisions. This workflow system should include phone/video links that allow frontline officers to access subject-matter experts directly to seek advice on complex matters when needed.</p>	<p>November 2020. Work commenced in December 2020 to bring the App to the maritime pathway, with the roll out due to be completed by mid-May 2021.</p> <p>Work allocation systems will be further enhanced through the introduction of the Scheduling and Workload Management System (SWMS) which will only allocate inspections to officers who have successfully undertaken job card assessments and are deemed competent. This is an automatic workflow and will link to re-certification of job cards as required.</p> <p>DAWE has also taken several key steps towards improved training for frontline biosecurity officers. These include development of training packages and/or eLearning sessions on:</p>
30.	<p>Agriculture should consult with Health about the need to:</p> <ul style="list-style-type: none"> • update its training and instructional material to specify appropriate legislative powers available to be used • consider options to ensure Chief Human Biosecurity Officers and Human Biosecurity Officers in each jurisdiction are adequately aware of the statutory regime used to manage human biosecurity at first points of entry, the responsibilities of each agency and the correct use of powers. 	<ul style="list-style-type: none"> • Human Health Intervention, including PPE and process for ill and deceased travellers (in place) • Human Health Digitisation App – use of the electronic Traveller with Illness checklist (in place) • Pratique training package (in draft) • Building Legal Organisational Capability training (to be piloted in April 2021) • Regulatory training package (in draft) • Maritime Pathway – Commercial Vessel Inspection training (in place) • Maritime Pathway – Non-Commercial Vessel Inspection training (in draft - due April 2021) • Administrative law and decision making (in place) • Non-Compliance Reporting and Intelligence Reporting (in development, with timing for roll-out to take into account the imminent deployment of a new non-compliance reporting system)
32.	<p>Agriculture should, as a priority, ensure that work allocation systems have sufficient controls in place to ensure that duties are not allocated to staff unless they have completed the requisite training and are appropriately accredited.</p>	
33.	<p>Agriculture should apply a comprehensive training and rotation program to maintain a pool of competent biosecurity officers with expertise in specialised vessel inspection areas and the experience necessary to cope with</p>	<p>DAWE is reviewing the Biosecurity Operations Division Workforce Strategy to ensure alignment of attracting and retaining a workforce with a regulatory posture and culture, complemented with ongoing learning and development, and assurance.</p>

<p>peaks in inspection demand. This program should be regularly reviewed and adequately resourced.</p> <p>34. Agriculture should, as a priority, update the <i>Biosecurity awareness package for first points of entry (FPoE) staff</i> by including:</p> <ul style="list-style-type: none"> • a specific topic on human health intervention, with focus on preventing entry of Listed Human Diseases into Australia via the Vessels Pathway • a provision to issue certification to industry stakeholders who complete the awareness package. <p>35. Using the <i>Ruby Princess</i> and other vessel incidents as case studies to demonstrate the lessons learnt, Agriculture should revise and update existing training packages to help biosecurity officers improve their capabilities in decision-making and compliance management. In particular, the following specific training modules should be developed and incorporated in the training module:</p> <ul style="list-style-type: none"> • Human health Intervention • Administering the Traveller with Illness Checklist. 	
Matters pertaining to MNCC	
<p>7. Agriculture should review the workload of biosecurity officers working in the Maritime National Coordination Centre to ensure that the centre:</p> <ul style="list-style-type: none"> • is adequately resourced with the required capacity and agility to reprioritise and allocate resources during significantly increased workload and pressure ('surge' periods) 	<p>Agree</p> <p>In parallel with the various reviews being undertaken related to the maritime human biosecurity pathway, the Biosecurity Operations Division within DAWE has a review underway that includes the governance, structure and operating hours of the MNCC, along with the broader purpose of improving national management, effective decision making, and coordination of the national operational maritime pathway.</p>

	<ul style="list-style-type: none"> • is able to look beyond its day-to-day workload to respond to industry changes and demands • is following standards and operating directions to enable operational managers to tactically allocate resources within their jurisdictions for vessel inspections • staff are adequately trained and competent in providing professional advice that is consistent with the legislation to biosecurity officers and industry agents/vessel masters when requested. 	
8.	Agriculture should consider introducing a dedicated hotline to the Maritime National Coordination Centre operated by experienced staff (preferably, either a subject-matter expert or an expert in regulation) as an escalation point for urgent enquiries that meet agreed criteria.	
9.	Agriculture should consider adjusting the current line of reporting by making the Maritime National Coordination Centre part of the national Vessels Program (preferably, Conveyances and Ports Section). This should increase the efficiency in the way the Maritime National Coordination Centre manages its delivery of policy and operational advice to shipping industry and vessels inspectors.	
Risk Assessment		
10.	<p>Agriculture should streamline and improve internal transparency of processes for short- and long-term tracking of implementation of decisions and actions arising from other audit and review processes (such as internal audits and Australian National Audit Office and Inspector-General of Biosecurity reviews).</p> <p>Risk owners should be responsible for planning, overseeing implementation, technical advice and issues resolution,</p>	<p>Agree</p> <p>The department is establishing more robust internal tracking arrangements to monitor progress and report on the implementation of decisions and actions. This includes the use of existing corporate reporting systems to provide improved transparency with responsibility assigned for action(s) against each recommendation to the relevant departmental risk owners.</p>

	when required. Progress should be visible to Agriculture's senior risk managers, the Inspector-General of Biosecurity and other audit bodies as appropriate.	The department will seek to streamline and improve the internal transparency of documenting the progress of action implementation to a specific position or section, with access to these records by other relevant areas.
11.	<p>Agriculture should engage the Centre of Excellence for Biosecurity Risk Analysis to undertake separate risk assessments for:</p> <ul style="list-style-type: none"> • Vessels Pathway • Travellers Pathway. <p>Recommendations from these reviews should be implemented as a priority.</p>	<p>Noted</p> <p>DAWE is actively reforming the maritime human biosecurity pathway and the Biosecurity Operations Division operating model.</p> <p>The implementation of this reform work is a priority for DAWE. The additional review and risk assessment processes recommended by the IGB will be considered post completion of this reform program.</p> <p>Verification of biosecurity officer's competency in the maritime pathway is part of the current operations nationally. This has been expanded to include the verification of officers in human biosecurity, including PPE requirements, which commenced in March 2021.</p> <p>DAWE is working with Noetic Group on desktop exercising which includes all stakeholders to test the new business processes in place for maritime arrivals. The exercises include vessel inspections and cruise liner inspections and are due to commence in late April 2021.</p>
14.	<p>Agriculture should develop and implement a schedule of 'pathway verification surveys' to ensure Health's policies on the detection and management of Listed Human Diseases at first points of entry are being followed and that they remain operationally appropriate and effective.</p>	
15.	<p>Agriculture should develop and implement a standard alert and preparedness system for application whenever there is credible intelligence that a major incident is likely to occur so that all relevant managers (from the relevant frontline areas to the Director of Biosecurity) are aware of the emerging incident characteristics.</p>	
28.	<p>Information held by vessels and company agents relevant to the human biosecurity risk onboard international vessels should be examined by Agriculture and an improved process put in place that will allow assessment of the information for human health risk before vessels' arrival.</p>	

Appendix B

Factors considered in MARS for assessing risks in the Vessels Pathway

Risk factors considered in MARS for assessing risks in the Vessels Pathway are:

1. Vessel risk history
2. Vessel master history
3. First time master
4. Last overseas port of call
5. Vessel type
6. Number of Australian ports since last inspection
7. Time since last inspection
8. Expiring ship sanitation certificate
9. Year built
10. Inspection risks
11. Not intending to discharge ballast
12. Shipping company
13. Sampling spike.

Appendix C

Artania cruise ship – chronology of events, 26 February–18 April 2020

Date	Vessel movement	Intervention by Agriculture and relevant details
26 February 2020	Approaching Australian waters	[section 247] Conditional approval for the vessel to moor at Airlie Beach (QLD), as Airlie Beach is not an approved first point of entry and has no Agriculture presence at the location
27 February 2020	Human Health Update	Human Health Update received from the vessel agent indicating no illness onboard the vessel
27 February 2020	Approaching Australian waters	Pratique granted automatically as no illnesses were reported onboard in the Pre-arrival Report (PAR). The vessel is notified of pratique via Biosecurity Status Document (BSD) V.2
29 February 2020	Arrival at Darwin Port	762 passengers onboard
1 March 2020	Docked at Darwin Port	Routine Vessel Inspection conducted. Informed vessel operator and agent about 18 demerit points accrued by the vessel for failing to report percentage of cases of gastrointestinal illness onboard and failing to update their illness report
1 March 2020	Human Health Update	A Human Health Update is lodged by the vessel indicating 1 passenger with gastrointestinal illness, muscle aches, diarrhoea, severe headaches or vomiting (but not vomiting caused by inebriation or motion sickness)
2 March 2020	Human Health Update	A Human Health Update is lodged by the vessel indicating 4 passengers with gastrointestinal illness. Two with muscle aches, diarrhoea, severe headaches or vomiting (but not vomiting caused by inebriation or motion sickness)
4 March 2020 (11:40 am)	Human Health Update	A Human Health Update is lodged by the vessel indicating 4 passengers with gastrointestinal illness. Two with muscle aches, diarrhoea, severe headaches or vomiting (but not vomiting caused by inebriation or motion sickness)
4 March 2020 (1:00 pm)	Human Health Update	A Human Health Update is lodged by the vessel indicating 4 passengers with gastrointestinal illness. Two with muscle aches, diarrhoea, severe headaches or vomiting (but not vomiting caused by inebriation or motion sickness)
5 March 2020	Human Health Update	A Human Health Update is lodged by the vessel indicating 4 passengers with gastrointestinal illness

Date	Vessel movement	Intervention by Agriculture and relevant details
6 March 2020	Cairns Port	Inspection of landed goods and human health inspection
6 March 2020 (8:36 pm)	Human Health Update	A Human Health Update is lodged by the vessel indicating 4 passengers with gastrointestinal illness
7 March 2020	Human Health Update	A Human Health Update is lodged by the vessel indicating 4 passengers with gastrointestinal illness. BSD V.9 is issued
8 March 2020	Arrival at Airlie Beach	Airlie Beach is not an approved first point of entry, so under section 247 of the Biosecurity Act conditional approval was provided to moor there and disembark passengers and crew for shore excursions
10 March 2020	Arrival at Port of Brisbane	Inspection of landed goods and human health inspection
10 March 2020	Human Health Update	A Human Health Update is lodged by the vessel indicating 4 passengers with gastrointestinal illness. BSD V.11 is issued
11 March 2020 (11:04 am)	Human Health Update	An updated human health report received from the vessel operator advising: <ul style="list-style-type: none"> • 13 passengers with body temperature over 38°C • 5 passengers with muscle aches, diarrhoea, severe headaches or vomiting (but not vomiting caused by inebriation or motion sickness) • 5 passengers with gastrointestinal illness
11 March 2020 (5:13 pm)	Human Health Update	An updated human health report received from the vessel operator advising: <ul style="list-style-type: none"> • 14 passengers with body temperature over 38°C • 5 passengers with muscle aches, diarrhoea, severe headaches or vomiting (but not vomiting caused by inebriation or motion sickness) • 5 passengers with gastrointestinal illness
12 March 2020	Arrival at Sydney Harbour	Human health inspection, and crew change and waste inspection
13 March 2020	Remained docked at Sydney Harbour	607 passengers embarked
14–15 March 2020	Remained docked at Sydney Harbour	Approximately 153 passengers disembarked, 832 passengers and 503 crew onboard
15 March 2020	Human Health Update	An updated human health report received from the vessel operator advising: <ul style="list-style-type: none"> • 14 sick passengers (some with multiple symptoms) within the past 14 days, • 9 passengers with body temperature over 38°C • 7 passengers with muscle aches, diarrhoea, severe headaches or vomiting (but not vomiting caused by inebriation or motion sickness) • 8 passengers with gastrointestinal illness
21 March 2020	Email received from Australian Border Force advising Fremantle arrival	Advice received from Australian Border Force's Maritime Traveller Processing Committee (MTPC) that the vessel would arrive at Fremantle Port on 25 March 2020 'as a domestic voyage' with 832 passengers and 505 crew, of which none were Australian

Date	Vessel movement	Intervention by Agriculture and relevant details
24 March 2020	Human Health Update	An updated human health report received from the vessel operator advising: <ul style="list-style-type: none"> • 29 sick passengers (some with multiple symptoms) within the past 14 days, • 23 passengers with body temperature over 38°C • 6 passengers with muscle aches, diarrhoea, severe headaches or vomiting (but not vomiting caused by inebriation or motion sickness) • 7 passengers with gastrointestinal illness
25 March 2020	Arrival at Fremantle anchorage	Shipping Manager (at Fremantle) contacted Public Health Emergency Operations Centre (PHEOC – WA Health department). PHEOC official boarded the vessel at Fremantle with Australian Border Force personnel to conduct COVID-19 testing on passengers onboard vessel at anchorage
26 March 2020	Berthed at Fremantle Port	The vessel was permitted to berth by Western Australian State authorities to discharge a critically ill passenger
29 March 2020	Fremantle disembarkation of passengers	A large number of passengers disembarked at Fremantle Port to travel direct to Perth Airport to depart on chartered flights
18 April 2020	Vessel departed Australia	Vessel departed Fremantle for Indonesia and the Philippines

Appendix D

Provisions in the human biosecurity control order

Under section 60 of the Biosecurity Act, a Chief Human Biosecurity Officer, a Human Biosecurity Officer or a biosecurity officer may impose a Human Biosecurity Control Order on an individual:

- who has one or more signs or symptoms of a listed human disease
- who has been exposed to the disease or someone who shows signs or symptoms of the disease, or
- who has failed to comply with a requirement for entry into Australia, in relation to the disease.

A Human Biosecurity Control Order may require an individual to comply with certain biosecurity measures, including:

- providing contact information for any individual with whom the person has been in close proximity
- requiring the individual to report specified signs or symptoms of the Listed Human Disease
- requiring a person to go to, and remain at, the individual's intended place of residence for a specified period
- requiring the person to wear specified clothing or equipment
- decontamination of an individual and/or their personal effects
- undergoing an examination of a specified kind at a specified medical facility to determine the presence of a Listed Human Disease
- requiring body samples for diagnosis
- receiving a vaccination or treatment, including medication
- remaining isolated at a specified medical facility for a specified period of no more than 28 days and not leaving Australian territory on an outgoing passenger aircraft or vessel.

Appendix E

Maritime biosecurity policies and operational documentation

Commonwealth Department of Health

Document title (release date)	Description
Protocol for enhanced COVID-19 border measures (Commercial vessels) (V 5.0 July 2020)	This protocol was implemented in February 2020 to describe the enhanced screening processes due to COVID-19 for non-cruise commercial vessels and crew arriving in Australia. It stipulates that all vessels are subject to pre-arrival and ill traveller reporting and individuals may be screened via a questionnaire by a biosecurity officer or Human Biosecurity Officer (HBO). Under this protocol the crew are permitted to disembark to conduct essential vessel functions
National protocol for managing novel coronavirus Disease (COVID-19) risk from cruise ships (March 2020)	This protocol was developed for border operations for cruise vessels, including the cruise ship industry, border agencies and port health authorities, to articulate the responsibilities and actions in responding to COVID-19. The escalated border control measures involve enhanced identification and assessment such as non-automatic pratique, traveller screening by public health officials on disembarkation and exit screening
Assessing ill travellers at Australia's international border (May 2019)	This policy describes the requirements for meeting the obligations under the International Health Regulations (2005) (IHR) to control the international spread of disease by minimising the entry of Listed Human Diseases (LHDs) through the assessment of ill travellers at the border. Health is responsible for developing policies to manage human biosecurity risks at the international borders and provide support and advice to border agencies. Agriculture is responsible for managing human biosecurity at the border and providing biosecurity officers with policies and instructional material to undertake this work. The state and territory health departments are required to provide Chief Human Biosecurity Officers (CHBOs) and Human Biosecurity Officers under their respective jurisdictions
Human Biosecurity Compliance Policy (June 2018)	This policy describes the strategies and priorities used by Health to enforce the <i>Biosecurity Act 2015</i> and is applicable only to compliance with human health measures. It recognises the existing processes and systems Agriculture has in place and details the joint administrative approach

Commonwealth Department of Health

Document title (release date)	Description
Managing Human Remains and Deaths in Transit Policy (February 2018)	This policy describes the procedures and responsibilities for Agriculture, state and territory health departments and other government agencies to manage deaths in transit and the repatriation of human remains. Health is responsible for assessing the risk and providing permission for human remains into Australia. Human biosecurity measures are necessary because human remains can potentially introduce exotic, communicable diseases to Australia
Ship Sanitation Certification Scheme Policy (2018)	This policy provides advice to Agriculture in line with the IHR for issuing Ship Sanitation Certificates (SSC) under the Ship Sanitation Certification Scheme (SSCS). The SSCS is an internationally recognised scheme to prevent the spread of disease through the control of vectors on vessels. Agriculture is responsible for conducting SSC inspections and issuing the SSC on behalf of Health
Human Biosecurity Control Orders Policy (no date)	The purpose of this policy is to articulate the circumstances for imposing Human Biosecurity Control Orders (HBCOs). An HBCO is considered to be an extreme measure and must meet general protection principles before it is applied. Ill travellers entering Australia, or individuals suspected of having an LHD, for the purpose of minimising the entry, establishment and spread of LHDs. The Director of Human Biosecurity has specified powers in relation to the implementation and review of an HBCO.

Commonwealth Department of Agriculture, Water and the Environment

Document title (release date)	Description
MARS COVID-19 enhanced screening of commercial vessels (19 February 2020)	This document is an updated flowchart advising the Maritime National Coordination Centre of the process for managing the changes to the Pre-arrival Report in the Maritime Arrivals Reporting System for COVID-19
Maritime Pathway Policy Statement – ship sanitation certification (22 August 2019)	Outlines requirements for managing human health risks onboard vessels before travellers disembark through conducting pre-arrival assessments on and limiting the movements of potential carriers of LHDs, inspecting for and controlling vectors, preventing discharge of untreated ballast water and checking certification for potable water and sewerage
Maritime Pathway Policy Statement – human health and pratique (14 March 2019)	Outlines requirements for managing human health risks onboard vessels before travellers disembark. Pre-arrival assessment is conducted and directions to goods or passengers applied to protect Australia from LHDs and mitigate risks to human health
Biosecurity Management of Commercial Vessels Policy Framework (October 2017)	Outlines requirements for policy and operations staff for the biosecurity management of commercial maritime vessels. This policy does not cover procedures for intervention and clearance of passengers disembarking vessels

Glossary

ABF	Australian Border Force
aetiology	The cause or manner of causation of a disease
Agriculture	Australian Government Department of Agriculture, Water and the Environment
AMSA	Australian Maritime Safety Authority
ANAO	Australian National Audit Office
Anchorage	An offshore location suitable for a vessel to anchor
Australian first points of entry (FPoE)	All commercial vessels, including international cruise ships, entering Australian territory are subject to biosecurity control and must enter Australian territory at a designated FPoE, unless Agriculture grants permission to enter a non-FPoE
Australian Health Protection Principal Committee	The Australian Health Protection Principal Committee is the key decision-making committee for health emergencies. It is comprised of all state and territory Chief Health Officers and is chaired by the Australian Chief Medical Officer
Australian Health Sector Emergency Response Plan for Novel Coronavirus	Australian Health Sector Emergency Response Plan for Novel Coronavirus guides the Australian health sector response
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
berthing	When a vessel arrives at a location in a port
<i>Biosecurity Act 2015</i>	The <i>Biosecurity Act 2015</i> (Cth). Commenced 16 June 2016 and replaced the <i>Quarantine Act 1908</i> (Cth)
Biosecurity and Export Risk Tool (BERT)	The Biosecurity and Export Risk Tool provides staff with an avenue to report existing and emerging biosecurity risks
biosecurity officers	Biosecurity officers are trained to undertake a range of inspections onboard vessels to prevent entry of exotic pests and diseases into Australia, including frontline assessment of human biosecurity risks. They rely on the advice of Human Biosecurity Officers before imposing their powers under the <i>Biosecurity Act 2015</i>
biosecurity risk	Refers to the 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 Status Document (BSD)	A single document to communicate Agriculture's biosecurity conditions and expectations during the period a vessel is on an Australian voyage. It replaces much of Agriculture's documentation such as approval to berth (ATB), Certificate of pratique (PTQ), permission to discharge ballast water, non-proclaimed port arrival approvals and treatment directions. It is auto generated by MARS and is made available electronically to the vessel master and agent. The document is versioned to reflect any changes to conditions or status during the voyage
Centre of Excellence for Biosecurity Risk Analysis (CEBRA)	The centre works to deliver practical, rigorous solutions and advice related to the assessment, management, perception and communication of biosecurity risk
Chief Human Biosecurity Officers (CHBOs)	Chief Human Biosecurity Officers are appointed under the <i>Biosecurity Act 2015</i> by states and territories to provide advice and national leadership for actions about human biosecurity activities at the border. They manage all human health matters in their jurisdiction and provide directions to Human Biosecurity Officers
commercial vessels	Commercial vessels include commercial cruise, general and break bulk cargo, vehicle carriers and livestock vessels, tankers, barges and tugs
COVID-19	COVID-19 is the disease caused by a novel coronavirus that emerged in China in late 2019. 'CO' stands for corona, 'V' stands for virus, 'ID' stands for infectious disease, and '-19' refers to 2019 – the year that this disease was first reported
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
Director of Human Biosecurity	Also Australia's Chief Medical Officer. Under the <i>Biosecurity Act 2015</i> the Director of Human Biosecurity provides policy direction and guidance to Agriculture and state and territory health department communicable disease representatives (Chief Human Biosecurity Officers)
eForms	Agriculture uses eForms to create and maintain electronic inspection templates and generate instances of the template for completion by biosecurity officers during an inspection
Health	Australian Government Department of Health
Human Biosecurity Control Order (HBCO)	A Human Biosecurity Control Order is an order that can be issued by authorised state and territory biosecurity officers in relation to a person who may have a Listed Human Disease
Human Biosecurity Officers (HBOs)	Under the <i>Biosecurity Act 2015</i> , Human Biosecurity Officers are qualified medical practitioners who work closely with biosecurity officers in delivering human biosecurity services at first points of entry
Human Health Update	A Human Health Update is completed by a vessel master or agent if the health status onboard the vessel changes after the Pre-arrival Report is submitted
Inspector-General of Biosecurity	The <i>Biosecurity Act 2015</i> defines the Inspector-General's role, authority and independent powers of review. This includes reviewing the Director of Biosecurity's performance of functions and exercise of powers
instructional material	Instructional material contains information intended to direct and assist staff to perform their role effectively and efficiently
Instructional Material Library (IML)	The Instructional Material Library is a repository of all instructional material published by Agriculture

international cruise ship	An international cruise ship is a foreign vessel that has the capacity to carry 100 or more passengers and is on a voyage from a port outside Australian territory
International Health Regulations 2005 (IHR)	The International Health Regulations 2005 were adopted by the World Health Assembly in 2005 and have been in force for 196 countries since June 2007. They establish a minimum standard for public health prevention, preparedness and response; and include activities and functions such as ship sanitation and points of entry (pratique)
International Maritime Organization	The International Maritime Organization is a specialised agency of the United Nations responsible for regulating shipping
Listed Human Disease (LHD)	A Listed Human Disease is a human disease that is communicable and may cause significant harm to human health. Listed Human Diseases are determined in the <i>Biosecurity (Listed Human Diseases) Determination 2016</i> , enabling a range of powers and measures to become available to manage the risk under the Biosecurity Act
Maritime Arrivals Reporting System (MARS)	The Maritime Arrivals Reporting System is an online web portal that enables Agriculture to manage biosecurity risks associated with all commercial vessels entering Australian territory
Maritime National Coordination Centre (MNCC)	Agriculture established the Maritime National Coordination Centre in the Adelaide regional office in 2010. Its role is to: <ul style="list-style-type: none"> • assess the risk of impending arrivals • provide documentary risk assessment of all pre-arrival information • determine and coordinate appropriate inspection activities, while providing a single interface for shipping agencies, vessel masters, shipping agents and frontline staff across the country • communicate assessment outcomes and raise associated charges
master	Person (other than a ship's pilot) in charge or command of the vessel. The master is legally responsible for pre-arrival reporting to Agriculture and for complying with biosecurity directions
Memorandum of Understanding (MoU)	A written agreement between 2 or more parties that defines the working relationship, expectations and responsibilities. MOUs are usually not legally binding on the parties
New South Wales Special Commission of Inquiry into the Ruby Princess	On 15 April 2020 the Governor of NSW, the Hon. Margaret Beazley referred a Special Commission of Inquiry into the voyage of the <i>Ruby Princess</i> from 8 to 19 March 2020 and subsequent efforts to diagnose and treat, and to contain the community transmission of COVID-19 by, <i>Ruby Princess</i> passengers The NSW Government appointed Barrister Bret Walker SC as Commissioner for the inquiry. On 14 August 2020 Commissioner Walker submitted his report to the NSW Government
non-commercial vessels	Non-commercial vessels include leisure boats, yachts and superyachts
operational staff notices	Operational staff notices provide advice to biosecurity officers on updates to policies, systems and processes or procedures
outbreak	Outbreak in relation to COVID-19 refers to 2 or more cases (who do not reside in the same household) among a specific group of people and/or over a specific period of time where illness is associated with a common source (such as an event or within a community). Some states and territories may report a single case associated with a residential aged care facility as an outbreak

pandemic	An epidemic on a global scale
pratique	Pratique is the permission granted by Agriculture for goods to be loaded or unloaded from, and persons to embark or disembark from, vessels or aircraft
Pre-arrival Report (PAR)	The Pre-arrival Report is the report completed by a vessel master or agent to notify Agriculture of impending vessel arrivals. It includes information about the vessel, the itinerary, human health risks, biosecurity risks and so on. All commercial vessels must submit a Pre-arrival Report 96 to 12 hours before the estimated time of arrival at the first Australian point of entry
Routine Vessel Inspection (RVI)	Routine Vessel Inspection is a mandatory inspection activity undertaken by biosecurity officers on vessel's arrival to confirm correct reporting on the Pre-arrival Report by the vessel master. This includes verifying human health issues, inspection of ballast water records and physical inspection of vessel spaces for any biosecurity risks
RRRA	Risk Return Resource Allocation
SARS-CoV-2	SARS-CoV-2 is the virus that causes the disease COVID-19. It is a betacoronavirus genetically related to the 2003 severe acute respiratory syndrome coronavirus (SARS-CoV)
Ship Sanitation Certificates (SSC)	A Ship Sanitation Certificate controls the spread of diseases by controlling any vectors of these diseases that could potentially be carried on a vessel. Agriculture is responsible for conducting Ship Sanitation Certificate inspections and issuing certificates on behalf of Health
Ship Sanitation Certification Scheme (SSCS)	The Ship Sanitation Certification Scheme is an internationally recognised scheme to prevent the spread of disease through the control of vectors on vessels
surveillance	An official process which collects and records data on pest occurrence or absence by surveying, monitoring or other procedures
Traveller with Illness Checklist (TIC)	The Traveller with Illness Checklist is a questionnaire developed by Health to assist biosecurity officers in identifying travellers, who may be carriers of a Listed Human Disease. It is used for both sea and air travellers
vessel agent	The agent representing the master and the vessel in Australia. Vessel agents include port, billing and crew agents as defined in MARS
Vessel Compliance Scheme (VCS)	The Vessel Compliance Scheme is the new reduced intervention scheme based on the principle of capturing the compliant behaviours of vessel masters and crew. It utilises a demerit point system to improve consistency in decisions and outcomes. It is visible to internal and external clients VCS replaces the PDC (Pratique Documentary Clearance) system
Vessel Monitoring System (VMS)	The Vessel Monitoring System is Agriculture's main receptacle for all information pertaining to incoming international vessels, both commercial and non-commercial. The system manages inspections of non-commercial vessels (such as yachts)
WHO	World Health Organization

References

- ANAO 2010, [Effective cross-agency agreements](#), Audit report 41 2009–10, Australian National Audit Office, Canberra, May.
- 2017, [The Australian Border Force's use of statutory powers](#), Audit report 39 2016–17, Australian National Audit Office, Canberra, February.
- ABF 2019, [Requirements for cruise ships and superyachts entering Australia](#), Australian Border Force, Canberra, December, accessed 6 April 2021.
- Australian Associated Press 2020, [‘Al Kuwait ship crew cleared of virus in WA’](#), WA Today, June, accessed 6 April 2021.
- AGS 2020, [Exhibit 119 – Voluntary Statement of the Commonwealth of Australia to the Special Commission of Inquiry into the Ruby Princess](#), Australian Government Solicitor, Commonwealth of Australia, Sydney, July.
- AMSA 2020, [About the Maritime Labour Convention 2006](#), Australian Maritime Safety Authority, Canberra, September, accessed 6 April 2021.
- Beale, R, Fairbrother, J, Inglis, A & Trebeck, D 2008, *One biosecurity: a working partnership. The independent review of Australia's quarantine and biosecurity arrangements*, Quarantine and Biosecurity review panel report to the Australian Government, Canberra, September.
- Birch, L, Micheltmore, K & Standen, S 2020, [‘Coronavirus outbreak among Patricia Oldendorff crew in Port Hedland prompts call for new “green lane” system’](#), ABC News, September, accessed 6 April 2021.
- Callinan, I 2008, *Equine influenza: the August 2007 outbreak in Australia*, report of the Equine Influenza Inquiry, Commonwealth of Australia, Sydney, April.
- Chang, SL, Harding, N, Zachreson, C, Cliff OM & Prokopenko M 2020, [‘Modelling transmission and control of the COVID-19 pandemic in Australia’](#), Nature Communications, vol. 11, no. 5710, November.
- Cruise Lines International Association 2019, [2019 Cruise trends and industry outlook](#), n.d., accessed 6 April 2021.
- *Department of Agriculture 2019, *Australia's biosecurity checklist for commercial vessels*, November.
- DAWR 2016, [Vessel compliance scheme](#), Department of Agriculture and Water Resources, Canberra, July, accessed 6 April 2021.

- DAWE 2019a, [48-2019 – Maritime Arrivals Reporting System \(MARS\) offline forms updated](#), Department of Agriculture, Water and the Environment, April, accessed 6 April 2021.
- 2019b, [134-2019 – Maritime Arrivals Reporting System \(MARS\) and offline forms updated](#), Department of Agriculture, Water and the Environment, August, accessed 6 April 2021.
- *—— 2020a, *Maritime Arrivals Reporting System (MARS): biosecurity officer (internal) user guide*, Department of Agriculture, Water and the Environment, February.
- 2020b, *57-2020 New interim COVID-19 work instruction for commercial vessel inspections*, Department of Agriculture, Water and the Environment, July.
- 2020c, [41-2020 – Maritime Arrivals Reporting System \(MARS\) pre-arrival reporting changes for novel coronavirus \(COVID-19\)](#), Department of Agriculture, Water and the Environment, March, accessed 6 April 2021.
- 2020d, [15-2020 – Maritime Arrivals Reporting System \(MARS\) offline forms updated](#), Department of Agriculture, Water and the Environment, February, accessed 6 April 2021.
- *—— 2020e, *19-2020 Updated COVID-19 advice for biosecurity officers and how to confirm a vessel's last port of call*, Department of Agriculture, Water and the Environment, April.
- *—— 2020f, *Regulatory design assessment: pratique*, Due Diligence Australia, Department of Agriculture, Water and the Environment, November.
- *—— 2020g, *70-2020 COVID-19 human health management for vessels*, Department of Agriculture, Water and the Environment, September.
- *—— 2020h, *Work instruction – writing instructional material*, Department of Agriculture, Water and the Environment, April.
- *—— 2020i, *Guideline – Development, amendment, removal and approval of instructional material*, Department of Agriculture, Water and the Environment, November.
- 2020j, [24-2020 – Maritime Arrivals Reporting System \(MARS\) Pre-arrival Report \(PAR\) offline form updated](#), Department of Agriculture, Water and the Environment, February, accessed 6 April 2021.
- 2020k, [36-2020 – Maritime Arrivals Reporting System \(MARS\) Pre-arrival Report \(PAR\) offline forms updated to include mainland China, Iran, the Republic of Korea and Italy](#), Department of Agriculture, Water and the Environment, March, accessed 6 April 2021.
- 2020l, [46-2020 – Changes to a human health pre-arrival question in the Maritime Arrivals Reporting System \(MARS\)](#), Department of Agriculture, Water and the Environment, March, accessed 6 April 2021.
- 2020m, [86-2020 – An update to the Maritime Arrivals Reporting System \(MARS\) offline forms](#), Department of Agriculture, Water and the Environment, June, accessed 6 April 2021.
- Department of Health 2017, [Protecting Australia's health through human biosecurity](#), Department of Health, Canberra, October, accessed 6 April 2021.
- 2018, [Australia's human biosecurity portal – national public health emergency response planning at Australia's border](#), Department of Health, Canberra, August, accessed 6 April 2021.

*— 2019, *National policy for reporting and managing communicable disease events on cruise ships 2019*, Department of Health, Office of Health Protection, Canberra, n.d.

— 2020a, [Australian health sector emergency response plan for novel coronavirus \(COVID-19\)](#), Department of Health, Canberra, February, accessed 6 April 2021.

*— 2020b, *National protocol for managing novel coronavirus disease (COVID-19) risk from cruise ships*, Department of Health, Canberra, March.

*— 2020c, *Protocol: enhanced border measures at the Australian border (commercial vessels) during the novel coronavirus (COVID-19) outbreak*, Department of Health, Canberra, May.

— 2021a, [Australian Health Protection Principal Committee \(AHPPC\)](#), Department of Health, Canberra, January, accessed 6 April 2021.

— 2021b, [Coronavirus \(COVID-19\) advice for international travellers](#), Department of Health, Canberra, January, accessed 6 April 2021.

Higgins-Desbiolles, F 2020, '[This could be the end of the line for cruise ships](#)', Stuff, April, accessed 6 April 2021.

Hunt, G 2020a, [First confirmed case of novel coronavirus in Australia](#), media release, the Hon. Greg Hunt MP, Minister for Health, Canberra, January, accessed 6 April 2021.

— 2020b, [Extension of the human biosecurity emergency period](#), media release, the Hon. Greg Hunt MP, Minister for Health, Canberra, September, accessed 6 April 2021.

IIGB 2016, [Effectiveness of biosecurity controls for importation of tomato and carrot seeds](#), Interim Inspector-General of Biosecurity, Department of Agriculture and Water Resources, Canberra.

IGB 2017, [Uncooked prawn imports: effectiveness of biosecurity controls](#), Inspector-General of Biosecurity, Department of Agriculture and Water Resources, Canberra, December.

— 2018a, [Implementation of Interim Inspector-General of Biosecurity recommendations](#), Inspector-General of Biosecurity, Department of Agriculture and Water Resources, Canberra, September.

— 2018b, [Military biosecurity risk management in Australia](#), Inspector-General of Biosecurity, Department of Agriculture and Water Resources, Canberra, July.

— 2019, [Effectiveness of biosecurity measures to manage the risks of brown marmorated stink bugs entering Australia](#), Inspector-General of Biosecurity, Department of Agriculture and Water Resources, Canberra, May.

— 2020a, [Adequacy of preventative border measures to mitigate the risk of African swine fever](#), Inspector-General of Biosecurity, Department of Agriculture, Water and the Environment, Canberra, March.

— 2020b, [Biosecurity risk management of international express airfreight pathway for non-commercial consignments](#), Inspector-General of Biosecurity, Department of Agriculture, Water and the Environment, Canberra, July.

— 2021, [Adequacy of department's operational model to effectively mitigate biosecurity risks in evolving risk and business environments](#), Inspector-General of Biosecurity, Department of Agriculture, Water and the Environment, Canberra, February.

- Iteraera, R 2009, [Infectious diseases and maritime law](#), The United Nations – Nippon Foundation Fellowship Programme 2009–10, accessed 6 April 2021.
- Laschon, E 2020a, [‘Coronavirus outbreak on ship off Port Hedland, the *Vega Dream*, sees six more crew members test positive’](#), ABC News, October, accessed 6 April 2021.
- 2020b, [‘Coronavirus outbreak on Al Messilah livestock carrier at Fremantle Port sees 24 more crew members test positive’](#), ABC News, October, accessed 6 April 2021.
- Millman, AJ, Kornlyo Duong, K, Lafond, K, Green, NM, Lippold, SA & Jhung, MA 2015, [‘Influenza outbreaks among passengers and crew on two cruise ships: a recent account of preparedness and response to an ever-present challenge’](#), *Journal of Travel Medicine*, vol. 22, no. 5, September–October.
- Morrison, S 2020, [Coronavirus measures endorsed by National Cabinet](#), media release, the Hon. Scott Morrison MP, Prime Minister, Canberra, March, accessed 6 April 2021.
- Mouchtouri, VA, Nichols, G, Rachiotis, G, Kremastinou, J, Arvanitoyannis, IS, Riemer, T, Jaremin, B & Hadjichristodoulou, C 2010, [‘State of the art: public health and passenger ships’](#), *International Maritime Health*, vol. 61, no. 2, July.
- National Geographic 2021, [Mapping the global spread of the coronavirus](#), accessed 6 April.
- Nogrady, B 2020, [‘What the data say about asymptomatic COVID infections’](#), *Nature*, vol. 587, p. 534.
- Parliament of Australia 2020a, [COVID-19 Australian Government roles and responsibilities: an overview](#), Canberra, May.
- 2020b, [COVID-19 legislative response – Human Biosecurity Emergency Declaration Explainer](#), Canberra, March.
- 2020c, COVID-19 Economic response—delegation by the Director of Human Biosecurity, Canberra, April, accessed 6 April 2021.
- Smith, A & Ward, M 2020, [‘NSW Premier apologises “unreservedly” for Ruby Princess disembarkation’](#), *Sydney Morning Herald*, August, accessed 6 April 2021.
- Thomas, S & Reddie, M 2020, [‘Global coronavirus cases linked to the Ruby Princess rise, ship’s first international fatality confirmed’](#), ABC News, April, accessed 6 April 2021.
- Walker, B 2020, [Report of the Special Commission of Inquiry into the Ruby Princess](#), Sydney, August, accessed 6 April 2021.
- WHO 2016, [International Health Regulations \(2005\) Third Edition](#), World Health Organization, Geneva, January, accessed 6 April 2021.
- 2020a, [Statement on the second meeting of the International Health Regulations \(2005\) Emergency Committee regarding the outbreak of novel coronavirus \(2019-nCoV\)](#), World Health Organization, Geneva, Switzerland, January, accessed 6 April 2021.
- 2020b, [Virtual press conference on COVID-19](#), World Health Organization, Geneva, Switzerland, 11 March, accessed 6 April 2021.
- 2021, [WHO Coronavirus \(COVID-19\) Dashboard](#), World Health Organization, Geneva, accessed 6 April.
- Zhou, N 2020, [‘Drill on cruise ship pandemics before Ruby Princess debacle found authorities’ communications “robust”](#), *The Guardian*, May, accessed 6 April 2021.

* internal documents

